A practical treatise on the diseases of the uterus and its appendages / translated from the French of Mme. Veuve Boivin ... and A. Dugès ... with copious notes, by G.O. Heming.

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A

PRACTICAL TREATISE

ON THE

DISEASES OF THE UTERUS

AND ITS

APPENDAGES;

TRANSLATED FROM THE FRENCH OF

MME. VEUVE BOIVIN,

SAGE-FEMME SURVEILLANTE EN CHEF DE LA MAISON DE SANTÉ, ETC.

AND

A. DUGÈS,

PROFESSEUR A LA FACULTÉ DE MÉDECINE DE MONTPELLIER, ETC.

WITH COPIOUS NOTES,

BY

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CONSULTING ACCOUCHEUR TO THE ST. PANCRAS INFIRMARY, ETC.

LONDON:

SHERWOOD, GILBERT, AND PIPER,

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TO

MARSHALL HALL, M.D. F.R.S.

&c. &c. &c.

TO WHOSE TALENT AS A PHYSICIAN

AND KINDNESS AS A FRIEND

HE IS SO GREATLY INDEBTED,

THIS VOLUME IS INSCRIBED

BY

THE TRANSLATOR.

PREFACE.

INTRODUCTORY REMARKS,

BY THE TRANSLATOR.

It was my first intention to lay before the British Physician a close translation of the valuable work of Mme. Boivin and M. Dugès. But I had scarcely begun my task when I perceived that the peculiarities, and especially the diffuseness of the Authors' style, would be totally unsuited to the English reader, and particularly the English medical practitioner. I, therefore, resolved to preserve all the valuable facts of the original work, and to translate its more practical parts literally; and then to condense the numerous and valuable *Cases* with which it is stored, but especially its theoretical details.

My readers will still perceive many passages, many pages of this work, impressed by the style of writing and of thinking of its Authors; he will feel, as I have done, disappointed with some of

these ; but if he carefully peruse and study the *whole* work, he will rise from that task better informed on the diseases of females, and deeply impressed with the valuable practical knowledge of its Authors, conveyed through its pages ; as a work for *consultation* on this department of physic, I believe it will be found invaluable.

Having thus endeavoured to convey to my reader a just idea of the real degree of merit and value of the present work, I shall now proceed to state what would, in my view of the subject, constitute a proper course of study of the diseases of the female sex ; and, in doing this, I shall endeavour to give to each author his just meed of praise for the part he may have had in recent discoveries and improvements in this department of physic.

The diseases of females may be aptly divided into those of the *young*, those of the *married*, and those of the *later periods* of life. This division is nearly that adopted by Dr. Marshall Hall, in his "*Commentaries on some Diseases of Females.*" The work of Dr. Hall is that from which I have derived the information of greatest utility to me in practice, in regard to the *constitutional* diseases of females. The work of Sir Charles Clarke has appeared to me of the greater value, the more I have perused its pages ; it is, as is well known, chiefly confined to the *inflammatory* or *organic* diseases of the uterus and its appendages, and is the

best which can be consulted upon this part of the subject. The work of the late Dr. Gooch is also of great value, especially in the diagnosis of pregnancy, polypus, and irritable uterus.

These are the works which I think may be viewed as essential to the library of every medical practitioner engaged in the general practice of the profession, or that peculiar to the diseases of females. I now proceed to speak of a class of those diseases of the highest importance, and most intense interest,—that of *puerperal* diseases.

And, first, I think it important to point out the difference between studying puerperal diseases, in the course of epidemics, in hospitals, and in low and crowded districts,—and in the more serious cases to which our attention may be called by friends, and in the ordinary range of private practice. In the former circumstances, we meet with the formidable diseases described in the text; in the latter, with a series of cases of a totally different description: in the former we see cases in their most exasperated forms and stages; in the latter, in their fainter shades and their incipient stages.

I know of no such practical division of the cases which occur in private practice, and in the respectable ranks of life, as that which is proposed by Dr. Marshall Hall, in his treatise on this subject*.

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* *Commentaries on the Diseases of Females*, 1st edit. Part II.

This division comprises—1, *metritis and peritonitis;* 2, *stomachal and intestinal irritation;* 3, *the effects of loss of blood;* and 4, *mixed cases, comprehending the puerperal mania;*—in addition to the severer and more terrible forms of puerperal disease described by our authors.

It is impossible to comprehend, in the space of this preface, a view of subjects so interesting to the physician actually engaged in visiting patients in the respectable and higher ranks of life, in whom we are called upon to detect the very *dawn*, and the slighter shades of difference, of these diseases. I can only refer, for the diagnostics of these cases, to Dr. Hall's work, and to a recent edition of the Diagnosis. But I must add one remark: it is my full conviction, from multiplied trial, of the importance, in a diagnostic point of view, of the plan proposed by Dr. Hall in the use of blood-letting; viz. to open the vein, to raise the patient gently into the erect position, with the eyes fixed upon the ceiling, and to allow the blood to flow to incipient syncope: the quantity of blood thus taken, denotes the nature and the degree of the disease, and the powers of the patient. I am astonished, indeed, that the value of this proposition, the protection it affords against the dangers of the insufficient and undue detraction of blood, and, in the diagnosis of disease, of inflammation, of irritation especially, has not been more speedily and

generally appreciated. I may hereafter give the result of my experience upon these points as a mere practitioner, engaged in visiting patients in a respectable sphere of life.

But I must now proceed to another part of this subject,—that which has most engaged the attention of physicians in the recent works upon puerperal diseases: it comprises—1, *phlebitis*; 2, *inflammation of the lymphatics*; 3, *softening of the uterus*.

I shall occupy the remainder of these introductory Remarks by stating the progress of discovery in regard to the first of these diseases.

Dr. J. Clarke (*Practical Essays on the management of Pregnancy and Labour, and on the Inflammation and Febrile Diseases of Lying-in Women*; published in 1793) was undoubtedly the first to notice inflammation of the veins of the uterus in puerperal metritis: in the chapter on inflammation of the uterus and ovarium, page 69, he observes:—"the uterus will commonly be found very firm in its substance, but larger than when naturally contracted; upon cutting into the substance of the uterus, pus is often found, which, in all the cases I have met with, is situated in the large veins of that part:" and, in a work previously published in 1788, and entitled *An Essay on the Epidemic Disease of Lying-in Women of the years* 1787 and 1788, page 34, this author remarks—"I have in two cases

found an appearance like pus in the cavity of the veins."

Dr. J. Clarke has also noticed the complication of thoracic inflammation with that of the abdominal and pelvic viscera; in the work last mentioned, page 34, he states—"I have paid great attention to the state of the thorax many times, but in one instance only, have found any thing unnatural in that cavity. In that case, the right side was covered with the inflammatory crust or exudation on every surface, both of the lungs and of the pleuræ."

In the chapter on the affection which he calls the *low fever of child-bed*, the same author observes:—"Sometimes one or both sides of the thorax will be found containing a quantity of fluid of the same kind with that which has been described, and a solid part floating in it and attaching itself to the surfaces of the pleuræ." "In the pericardium too, I have found a large quantity of water, with some floating pieces of coagulable lymph apparently in it." *Essays*, page 137.

This latter circumstance was observed by MM. Col. de Villars and Fontaine as early as 1746, in the epidemic in lying-in women, prevailing at that time in Paris: these writers state "qu'à l'ouverture des cadavres de ces femmes ils avoient vu du lait caillé et attaché à la surface externe des intestines; et qu'il y avoit une serosité laiteuse épanchée dans

le bas ventre; ils ont même trouvé aussi de cette serosité dans le poitrine de quelques unes, et lorsqu'on en coupoit les poumons, ils degorgoient une lymphe laiteuse et pourrie."—*Dr. J. Clarke.*

Mr. Wilson was the next who observed inflammation of the veins of the uterus: his paper was read to the *Society for the Improvement of Medical and Chirurgical Knowledge*, on June 4th, 1805, and published in 1812, in the 3rd volume of the *Transactions* of that society. In the case related by that gentleman, the coats of the principal veins of the uterus were thickened, and their cavities partially obliterated. The common iliacs, the external and internal iliacs, and their largest branches, especially those which convey the blood from the uterus, were thickened, and their cavities obliterated by lymph or coagula. The tissue of the vena cava was at least three times thicker than ordinary*. Mr. Wilson observes, page 74: "I have also frequently met with such a state of the veins of the uterus, in cases of inflammation of that organ. Some years since, a number of women were attacked with puerperal fever, in the Store-street Hospital, and many died in a few days after delivery. I inspected the bodies with Dr. Clarke: in all these bodies the peritonæal coat and substance of the

* In this case there was a small abscess in the lobulus Spigelii.

uterus appeared to have been inflamed, and pus was often found, sometimes in large quantities, in the veins."

The next publication on this subject was that of a paper by Dr. Davis, entitled *An Essay on the proximate Cause of the Disease called 'Phlegmasia Dolens'*, which was read to the *Medico-Chirurgical Society* on the 6th of May, 1823, and published in the 12th volume of its *Transactions*. This author observed, as early as the 6th of March, 1817, that the occurrence of inflammation of the iliac and femoral veins was the proximate cause of Phlegmasia Dolens: this is proved by Mr. Lawrence's letter, bearing that date, and giving a description of the post-mortem appearances of a patient whom he examined for Dr. Davis; and Dr. Davis states that this view was made the subject of a public debate or conversation, at the Bartholomew's Society, in the spring of the same year, and adds, "since that time I have myself constantly made it the subject of discussion in my lectures." The treatment adopted by Dr. Davis, in the second case, bearing the date of September 2nd, 1819, shows that he had profited by the first dissection.

This author alludes to M. Bouilland's paper, published in the *Journal de Physiologie*, January 1823, and observes:—"It will be seen that the phenomena of the last case, which was the only case of true puerperal phlegmasia dolens, were attributed

to a circumstance probably purely adventitious; in one the veins were supposed to be obliterated by the pressure of a diseased ovary; and in the other, by the pressure of the iliac portion of the colon distended with a large mass of indurated fæces*."

Dr. Davis alludes to the late Mr. Wilson's case, and states that the original locality of the disease

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* M. Bouilland published a second paper, entitled *De l'oblitération des veines et de son influence sur la formation des hydropisies partielles; considération sur les hydropisies passives en général:* in the *Archives Générales de Médecine*, Juin 1823, tome ii.

In a third paper, published in the same work (tome v, Mai 1824), page 94, and entitled, *Observations et considérations nouvelles sur l'obliteration des veines regardée comme cause d'hydropisie*, the same writer observes:—"In a paper published in this journal (tome ii, page 188), I attempted to prove, by numerous facts, that most of the dropsies termed *passive*, the cause of which had been attributed by the writers to a general debility,—to *atony* of the lymphatics, really depended on obstruction of the venous circulation." At page 103, he observes: "In the lectures which I have given since the publication of my first paper, I have seen several passages which tend to establish this fact. Morgagni (*Ep.* xliii, page 80, &c.) attributes hydrocele to obstructed circulation in the spermatic veins. Dr. Hodgson has observed, in some cases of very advanced tubercular affection of the lungs, that the branches of the pulmonary veins were filled with coagula—a circumstance which might explain some cases of hydrothorax, related in a mémoire on Phlegmasia Dolens of the puerperal state. Dr. D. Davis, of England, has shewn that this last affection consists of inflammation of the crural veins, the cavity of which, being filled with coagulated blood and pus, could not sustain the circulation of the limb; and infiltration of that part ensued. I myself related two cases, in my first paper, of œdema of this kind, and I observed that MM. Chaussier, Meckel, and Travers had collected some of the same sort. I was not at that time aware of the cases of Dr. Davis."

in that patient (which was probably the inferior portion of the vena cava) may account for phlegmasia dolens not being present. But he further adds :— "on the other hand, we have no evidence that the patient had not been the subject of phlegmasia dolens during the first weeks of her confinement."

A paper of Dr. Marshall Hall and J. Higginbottom, Esq. entitled *Cases of destructive Inflammation of the Eye and of suppurative Inflammation of the Integuments, occurring in the puerperal state, and apparently from constitutional causes*, was read in March, 1825, and published in the 13th vol. of the *Medico-Chirurgical Transactions*.

I am not aware that any of the continental writers on phlebitis have mentioned this remarkable affection of the eye, as occurring in the puerperal state, or as a consequence of phlebitis in general; and it was not till some years after the date of this paper that any case of the kind was noticed in England.

It is to be regretted that, in the cases published by Dr. Hall and Mr. Higginbottom, no post-mortem examination could be obtained. But it scarcely admits of a doubt that four of them were those of uterine phlebitis; in the third case, the vein, in which the patient had been bled during her labour, was observed to become inflamed, the inflammation pursuing its course along the vein, increasing rapidly, being attended by pain, tenderness on pressure,

swelling, and a watery discharge from the punctured orifice. The constitutional symptoms in all the cases were those which occur usually in inflammation of veins.

M. Dance published his *Essai sur la Métrite Puerpérale*, on the 14th of February, 1826, and, subsequently, three papers on *Phlebitis* in the *Archives Générales* for December, 1828, and January and February, 1829. In his first paper, he names Clarke, Wilson, Schwilgué, Chaussier, and Ribes, as having recognized uterine phlebitis at about the same period, and alludes to Breschet (in his notes to the translation of Hodgson's work, *Traité des maladies des Artéres et des Veines*), as having been the first to collect the facts necessary to demonstrate the existence of this affection.

M. Dance has remarked that the veins situated at that part of the uterus where the placenta is attached, and where they open directly into the uterine sinuses, are most exposed to inflammation, and are ordinarily the first, and sometimes the only ones, which present traces of it. He observes that inflammation more rarely follows the direction of the uterine veins coming from the hypogastric ;—principally because they communicate less directly with the uterine sinuses than the ovarian veins; for the placenta is generally inserted at the fundus of the uterus where the ovarian veins terminate. He states

that inflammation of the veins of the uterus is a distinct disease from inflammation of the tissue itself of this organ, and that it ought to be considered in the same point of view as Phlebitis showing itself in the external veins.

M. Dance has accurately traced the frequent connection between the typhoïd symptoms of puerperal fever and phlebitis, and has pointed out those complications, or secondary affections of this disease, named by other authors,—as the frequent deposits of pus in the various joints, in the muscles, in the cellular substance, and in the different viscera; the softening of the different organs, &c. He is of opinion that the pus is conveyed with the blood from the affected veins, and that it is deposited by a process of secretion in the various, and often remote, organs where it is found. The subject of abscess of the liver, as a complication of wounds of the head, is fully discussed in these papers, and the author believes these deposits to be dependent upon inflammation of the veins or sinuses; or that pus, formed at their orifices, penetrates into their cavities, either by the simple effect of the position or direction of these vessels, or by absorption.

From a careful perusal of M. Dance's papers, I am distinctly of the opinion expressed in the *Edinburgh Medical and Surgical Journal*, vol. 34, p.

333 :—" Since M. Dance* wrote, Mr. Arnott and Dr. Lee have contributed observations of the same nature. But it is to M. Dance that the honour is due of having first made an extensive and connected set of inquiries on the subject, and of having traced, first in his *Inaugural Dissertation* in 1826, and afterwards in a series of papers, the close relation which subsists between inflammation of the uterine veins and the typhoïd symptoms, which are conceived by some to characterize the true puerperal fever, but which, in reality, characterize its worst forms."

Mr. Arnott's paper *(a Pathological Inquiry into the Secondary Effects of Inflammation of the Veins)* was read before the *Medico-Chirurgical Society*, October 14th and 28th, 1828, and published in 1829. That gentleman has examined the opinions of the various writers on the subject,—Hunter, Abernethy, Hodgson, Travers, Carmichael, Breschet, Bouilland, Ribes, Guthrie, and Sir A. Cooper. He concludes, that it is by the introduction of pus or other inflammatory secretion from the surface of the vein into the circulation, that the

* It will be observed that Dr. Lee's paper on the present subject was read some months after the publication of those by M. Dance. The merit of tracing the origin of Phlegmasia Dolens to the *uterine* veins is indisputably due to Dr. Lee, Dr. Davis's examination having been confined to the *iliac* veins. M. Bouilland does not appear to have identified the disease which he witnessed, as *Phlegmasia Dolens*, at all, in the first instance.

secondary effects of Phlebitis are produced. He ascribes to M. Ribes the merit of being the first to have thrown out the opinion that the veins and venous blood are primarily affected in the fièvres adynamiques, but states that M. Ribes has not traced the connection between the local and constitutional affections in Phlebitis. Mr. Arnott quotes a case from the Medical Gazette, in which the destructive process in the eye took place, described by Dr. M. Hall and Mr. Higginbottom, to whose paper he alludes in another part. He has, like M. Dance, fully entered into the subject of cases of wounds of the head, complicated with abscess in the liver, and quotes cases from various authors where other viscera have been affected from the same cause, ascribing these effects to Phlebitis.

Dr. Lee mentions the memoirs of M. Bouilland, Dr. Davis, and Velpeau, in a paper entitled *Contributions to the Pathology of Phlegmasia Dolens*, published in the 15th vol. of the Medico-Chirurgical Transactions for May, 1829, the first part of which was read December 23d, 1828.

In another paper, entitled *Pathological researches on Inflammation of the Veins of the Uterus, with additional observation on Phlegmasia Dolens*, read on the 13th and 27th October 1829, and published in the 15th vol. of the Medico-Chirurgical Transactions, Dr. Lee observes :—" subsequent dissections have enabled me not only to confirm the

accuracy of my former observations, but have led me to discover, that, in Phlegmasia Dolens, the inflammation commences in the uterine branches of the hypogastric veins, and subsequently extends from them into the iliac and femoral trunks."

Although it appears highly probable that, in two cases related by Dr. Lee, the inflammation began in the uterine branches of the hypogastric vein, yet they by no means prove that this is always the case; and we may reasonably doubt it, when we refer to Dr. Davis's case, which was examined by Mr. Lawrence, who could scarcely, as Dr. Lee supposes, overlook the affection, since that gentleman states,—" the uterus, which had contracted to the usual degree, at such a distance of time from delivery, its appendages and blood-vessels, and the vagina, were in a perfectly natural state;"—and more especially when we read the case so very carefully examined and related by Tonnelé*.—(*Archives*, t. xxii, p. 336.)

In a paper, entitled *Pathological and practical Researches on Uterine Inflammation in Puerperal Women*, by Dr. R. Lee, read on the 8th and 22d of

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* M. Tonnelé's four papers *Sur les Fièvres Puerpérales*, &c. are inserted in the *Archives Générales de Médecine*, for March, April, May, and June, 1830. In regard to Phlebitis, he states :— " It rarely existed at the point of insertion of the placenta, where, on the contrary, it was most frequently found by M. Dance." T. xxiii, p. 356.

March, 1831, and published in the 16th vol. of the Medico-Chirurgical Transactions, this author observes, that the result of his observations is decidedly opposed to the opinion, so generally prevalent in this country, that there is a specific fever which attacks puerperal women, and which may arise independently of any local affection in the uterine organs, and prove fatal without leaving any perceptible change in the organization of the different textures.

Dr. Lee observes, that purulent fluid in the veins of the uterus, after parturition, was pointed out some years ago by Meckel, Schwilgué, Wilson, and J. Clarke; but that none of these authors appear to have been aware that the larger proportion of the cases, usually termed low child-bed fever, arise from inflammation and suppuration of the uterine veins.

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BY THE TRANSLATOR.

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ERRATA.

Page
74, last line but three, *for* month *read* months.
108, line 2, *for* into *read* as far as.
150, line 7, *for* intestines *read* intestine.
204, line 4, *for* cervix *read* os.
206, last line, *before* become *insert* this latter has.
320, first line, *before* peritonæum *insert* uterine.
353, line 14, *for* questionable *read* unquestionable.

INTRODUCTION.

I. GENERAL OBSERVATIONS UPON THE GENERATIVE ORGANS OF THE FEMALE.

THE organs of generation in the female form a system, all the parts of which are united together, and seem to be a continuous substance; but, upon examining them separately and anatomically, they are found to possess as much difference in their organisation and texture, as in their form and functions. These differences naturally lead to similar differences in their pathology, to the necessity of studying them singly, and suggest the principle of arrangement adopted in this work.

Our arrangement is not therefore founded on similarity of texture, or even of diseases. Connected, as their functions are, by anatomical relation, the organs of generation are liable to the action of similar or analogous causes of disease; and situated, for the most part, at a certain depth, they frequently require a common means of diagnosis, and ought to undergo the same kind of examination; their diseases may otherwise be confounded in consequence of their proximity. It is therefore proper to present them to the study of practitioners altogether, or, at least, in a comparative point of view.

Another reason, equally cogent, though less scientific, is found in the conduct daily adopted by females when indisposed or alarmed: a natural feeling on the one hand, and a certain confidence (almost exclusive, at times) in the skill of

the practitioner of midwifery on the other, induce them to apply to him in every case of disease affecting parts peculiar to the sex. It is right, therefore, that such practitioners should find, in a judicious arrangement, all those varieties of disease which will engage their daily attention.

Although the mammæ are connected, to a certain degree, with the organs of generation, they form no part of the uterine system, properly so called; none of the preceding observations applies to them; and, in reference to our last remark, every one knows that diseases of these parts are commonly entrusted to the care of ordinary practitioners, especially of surgeons, and that they are described, with all necessary detail, in surgical treatises. We have therefore chosen to confine our whole attention to what we shall call the uterine system, comprehending the uterus and its appendages, external and internal.

If it be true, as we suppose, that the texture of a part gives a specific character and form to its diseases, and if its functions expose it to peculiar derangements, the advantage of a succinct account of the natural condition, both anatomical and physiological, of organs whose pathology is our principal object, such as the uterus, the Fallopian tubes, the ovaria, the vagina, and the pudenda, will be admitted without further demonstration.

II. OF THE UTERUS, CONSIDERED EXTERNALLY.

Although the form, situation, dimensions, weight, and consistence of the uterus cannot be estimated in the living subject with the same accuracy as when a careful dissection of the body has removed all the surrounding parts, it is still possible to form an opinion, to a certain extent, of these several conditions by various modes of examination; and, in order to render these effectual, the natural condition, in its essential details, should be distinctly before the mind's eye.

The uterus presents, in the case of adults, the form of a pear, flattened on two sides, and abruptly narrowed below the middle of its length. The fundus, somewhat round in

form, and situated upon the median line, or slightly inclined to the right, turned upward and forward when the female is erect and the bladder somewhat distended, reaching a little backward—that is to say, as far as the capacity of the rectum and the extension of the round ligaments permit—when she is in the supine position, does not extend beyond the level of the brim of the pelvis, and cannot be felt through the abdominal parietes, excepting when these are extremely thin and lax : the top of the finger then reaches it, and experiences the resistance, sometimes very obscure, of a body of round form, moveable and yielding to pressure, and pretty hard, the volume of which it is therefore difficult to determine, yet such as not to admit of being felt by more than two fingers at once*. The cervix uteri projects into the vagina, as represented in the *Atlas* (plate I, fig. 1 and 2).

The cervix uteri, resting upon the posterior part of the vagina, and supported by this canal, which is in its turn supported by the rectum, is situated further back than the fundus, most frequently, at a short distance from the inferior part of the sacrum, or its articulation with the coccyx, especially in cases where the vagina is large and flabby ; the consequence of this is, that the uterus, placed in the pelvis, has its long diameter nearly in the same direction as the axis of the upper brim ; the anterior surface looking, at the same time, downward and forward, the posterior, upwards and backward, the fundus, upward and forward, and the os uteri, downward and backward.

The os uteri, which is nearly circular and very small in the virgin state, presents to the touch a slight depression in the centre of a projection, which is rounded, even, and of little volume. (See pl. II, fig. 1). In married women this projection is more considerable, and its orifice larger ; it then becomes a transverse cleft, bordered with two prominent lips. The anterior of these seems shorter and thicker, sometimes it even appears to be obliterated, in

* The latter part of this description appears to me to be a little imaginative.—TRANSLATOR.

consequence of being confounded with the anterior paries of the vagina, owing to the general inclination of the uterus. The posterior lip, more distinct, seems longer and thinner; but very often the anterior lip becomes longer, broader, and thicker than the posterior, and may be in a manner concealed by it; so that the orifice turns more backward than would be the case if it were exactly at the inferior extremity of the axis of the uterus. The os uteri seems, accordingly, to be cut in the shape of the mouth-piece of a flute, at the expense of the posterior part. (See plate I, fig. 3.) This orifice is therefore, in some cases, felt with difficulty, and only on bending the finger. Cases have been known in which, after repeated labours, the projection of the cervix uteri has entirely disappeared, and the orifice has formed the fundus of the vagina, in the form of a funnel*. We have met with several such cases; but it is much more common to find this orifice large, partly open, so as to admit the end of the finger, extending backward and to the left by an oblique fissure, with rounded, inverted, and irregular edges. These are common results, however absent sometimes, of the most natural labour. Minor fissures and cicatrices sometimes disfigure the cervix uteri, and its extreme edge not unfrequently presents little rounded projections, formed by vesicular follicles, resembling those which are more generally met with in the cavity of the cervix.

It is worth remarking also that the os uteri becomes congested immediately before the catamenial period; it is then said to be larger and more open, with greater disposition for conception. It is unquestionable that the whole organ appears also more voluminous and heavy at that period. (Pl. II. fig. 1, 2, 3, 4 and 5, and their explanation.)

The cervix uteri is also more highly coloured at this period, as we have observed by means of the speculum; at all other times it is of a pale rose-colour in early age, more florid in the married, and even red where the person is of the sanguineous temperament, and greyish or pale in ad-

* Such a state of the cervix uteri is exceedingly common in advanced years.—Tr.

vanced years. Always moist, and coated on its exterior with a light layer of mucous matter of little density, the os uteri, on the contrary, contains in its orifice a glairy matter, very adhesive and thick, half transparent, or slightly clouded, which is sometimes spread over the adjoining portion of the vagina, and appears to be secreted by the vesicular follicles.

We will conclude this anatomical sketch with a few words upon the temperature and sensibility of this part of the uterus. The variations of temperature in the natural state of the os uteri, whether the term of the catamenia be near or distant, whether there be pregnancy or otherwise, are too inconsiderable to be easily ascertained. But the sensation imparted by the pressure of the finger upon the os uteri is more important to be noticed: in the healthy state a gentle pressure is scarcely felt, even the nail causes but little pain: a more forcible pressure displaces the whole uterus, and occasions a sensation of shock: every feeling of pain, pricking, or dragging, induced by careful examination of the os uteri, is morbid.

III. OF THE UTERUS, CONSIDERED INTERNALLY.

A vertical section of the uterus discloses but a small space in its centre, the anterior and posterior parietes of which being contiguous, or nearly so; especially in the unmarried. Viewed in its longitudinal direction, the uterus is naturally divided into two portions: the upper portion is that of the body, and answers to the cornua in most mammalia; whence the common term *ad uterum* has been given both to the body of the human uterus, and to the uterine cornua of this class of quadrupeds, by M. Geoffroy Saint-Hilaire. The other portion, or the cervix, answers to the body of the uterus, properly so called.

A contraction, in many cases slight, especially after one or more labours, separates these two portions; it is called the *os internum* or *cervico-uterine*, in order to distinguish it from the os uteri, properly so called.

The cavity of the uterus is triangular; one of the angles

answers to the cervico-uterine orifice, the other two are lateral and superior, funnel-shaped, and very narrow, and merge into the Fallopian tubes. Of the sides, containing the triangle, the two lateral ones are nearly right lines, slightly convex, the upper one is curved considerably downward, or inward, in the unmarried state. This convexity is effaced, and the line becomes concave, after one or more labours. The parietes, again, are flat or slightly concave, smooth, moistened with a sero-mucous fluid, and of a whitish or yellowish rose-colour; but, at the period of the catamenia, they are red from the exuding blood, which may be made to flow in little streams, by pressure, or immersion in warm water, as we have remarked elsewhere[1]; the softened tissue seems saturated with it (plate I, fig. 4); there is even, at times, an appearance, at least, of ecchymosis in crowded spots, on its superficies[2].

Nothing of the sort is seen in the interior of the cervix; for we have observed, with the distinguished anatomist above quoted, and many others, that the catamenial blood, in the healthy state, is furnished solely by the body of the uterus; hence the cervix is comparatively less red, soft, and vascular; its body, scarcely larger than its two orifices, even in cases where parturition has occurred, is more decidedly elliptic in its outline, in the unmarried. Flattened, and almost closed from before to behind, it has, like that of the uterus, only two distinct parietes, one anterior and one posterior. Upon both of these are follicles, which sometimes become vesicular, transparent, and filled with viscous fluid; their function is doubtless to secrete the adhesive matter mentioned above, and which seems to occupy the whole cavity of the cervix, especially at the beginning of pregnancy.*

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[1] Madame Boivin, *Mémorial de l'Art. des Accouchements*, 3e ed. p. 66.

[2] *Morgagni, adv. anat.* t. i, p. 46: *Mauriceau, observat.* 49.

* The development of these vesicles is too uniformly observed in pregnancy to be considered morbid. It is observed in cases of extra-uterine pregnancy, and is, indeed, quite as constant as that of the decidua itself, and as the gelatinous matter which closes the cervix uteri. They are, on the contrary, rarely seen in diseases of the uterus, and their occurrence may therefore be useful in a diagnostic

Numerous lines are sculptured, as it were, within the cervix uteri, and have been designated arbor vitæ. These appearances, minutely described by Haller[1], seem formed by muscular fibres, variously combined into fasciculi, as is seen in the heart, with the smallest of the columnæ carneæ of which they are in every respect comparable. (Pl. I, fig. 4, pl. II, fig. 6.)

IV. OF THE UTERUS, IN REGARD TO ITS TEXTURE.

In comparing certain portions of the uterus and of the heart together, we have observed an analogy capable of being established anatomically, in several other respects. In each of these organs we find an exterior serous membrane, a dense muscular tissue, yet in many cases very distinct, consisting of several layers ; and perhaps an internal membrane, comparable, to a certain degree. We proceed to speak, first of the fundamental tissue of the substance composing the mass of the uterus, and, afterwards, of its membranes.

A fleshy, but firm substance, nearly fibro-cartilaginous in appearance and consistency, more compact and pale at the cervix, and somewhat reddish in the body, imparts a greater

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point of view. It is to these vesicles that the irregular and expanded, softened and elastic condition of the cervix uteri, in pregnancy, is principally owing. This condition of the cervix uteri deserves scarcely less consideration than its shortening.

Those vesicles of Naboth sometimes become enlarged, their parietes thickened, and their contents augmented, independently of pregnancy. Dr. Bright has related a case in which a tumor of this kind projected from the os uteri ; and M. Andral describes a case of " a polypus in an elderly woman as large as a walnut, composed of a white semicartilaginous substance divided into a great number of cells, which contained another substance, resembling colourless jelly. It was attached to the uterus by a very narrow stalk. The cervix was full of small cells containing the same jelly-like substance." (Translation by Townsend and West, vol. ii, p. 675.) I have preserved a uterus, in the posterior part of the cervix of which a small tumor of this kind exists, apparently consisting of enlargement of these vesicles.—Tr.

[1] *Opera minora*, t. ii, p. 32.

density to this viscus than to the generality of the other hollow organs: hence it maintains its erect position by its own firmness, and, admitting of no partial impression, simply yields, 'en masse,' to the pressure of the finger: hence it effectually resists distension, and is only enlarged by a considerable effort of slow and regular operation, such as the accumulation of the catamenial blood in cases of imperforation, the growth of the fœtus and its appendages during gestation, &c. This substance is traversed by numerous arteries and veins, freely anastomosing together, which is proved by injecting the uterus, while distended by pregnancy, or soon after delivery. This is the only condition in which a distinct notion of the texture can be formed; the vascular net-work is then sufficiently developed to admit of being easily traced, and the contractile fibres are displayed with all their distinctive properties. It could not be ascertained, previously, whether the minute orifices, through which the catamenial blood issues into the uterus, were actually given off from veins connected with arteries, nor whether the fibre composing the mass of the organ, were really muscular. Hence it was that authors had disbelieved that this was the texture of the uterus; and the most respectable, whilst they acknowledged that such was the case after parturition[1], thought that, in its empty state, it could only be compared with an elastic arterial texture. (*Lobstein*, &c.).

It may indeed be thought that, in the unimpregnated state of the uterus, the fibre is scarcely capable of fulfilling the muscular functions; but the changes, which fit it for these functions, do not necessarily involve a change of its nature; they simply distribute it into fasciculi, till then indistinct, and impart to it its due pliability and power.

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[1] Others had denied it even then; the violence of the uterine contractions during labour did not convince them. This circumstance, together with a simple inspection, was nevertheless sufficiently conclusive, to remove all necessity of a comparative examination by the microscope, like that of Rœderer, or of the chemical analysis by Schwilgue, who has proved the existence of a large proportion of fibrine in this part.

We may nevertheless discern in the uterus, even in its empty state, when a little obstructed by the catamenia—1, some longitudinal fibres, forming under the peritonæum, a slip reaching longitudinally, before and behind, upon the median part of the viscus—of its body at least—and, 2, some oblique fibres converging from the whole exterior part of the body towards the super-pubic ligaments, the Fallopian tubes, and the ligaments of the ovaria. (Pl. I, fig. 1 and 2.)

In the posterior and middle part, the peritonæum descends lower than the neck of the uterus, since it covers a portion of the vagina (see the figures of plate I, and their explanation); but, a little laterally, it covers two muscular fasciculi, the utero-sacral bands, which raise it, and proceed to form two falciform folds, known by the name of posterior ligaments. In front, it descends only to the neighbourhood of the cervix; thence it passes over the bladder; so that the two organs are connected together, lower down, by cellular tissue. Two folds, of less size than the posterior, are called anterior or utero-vesical ligaments. According to Meckel, they also contain fleshy fibres. Laterally, the fold which covers the anterior surface is attached to the posterior, so that it may be considered as forming, across the pelvis, a large fold in the way of partition, in the midst of which the uterus is placed; on each side, lower down, are the vessels; and above, in three other folds, the super-pubic ligaments, the Fallopian tube, and the ovarium with its ligament. These lateral portions of the broad transverse fold, which we shall call *utero-iliac*, have been termed the *broad ligaments*.

The question as to the existence of an internal membrane, is answered in the negative, from an examination of numerous preparations, especially of uteri recently emptied of the ovum, by Méry, Morgagni[1], Assoguidi[2], Chaussier[3]; it is, on the other hand, answered affirmatively by most other anatomists.

We now proceed to the lymphatic vessels, which complete

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[1] *Adv. anat.* iv. [2] *Obs. ad uteri constr. pertinentes.*

[3] Letter to Madame Boivin, inserted in the translation of the *Traité des Hémorrhagies de l'utérus, de Rigby et Duncan,* Paris, 1818, 8vo.

the texture of the uterus. Of these, several remarkable trunks arise, following the course of the ovarian veins and arteries. We shall add a few words upon the nerves, which, according to the exquisite plates of Tiedemann, spring in small number from the renal plexus, but in greater number from the lumbar ganglions. The first portion descends to the ovaria, and proceeds thence to the fundus uteri; the second forms a large median plexus, which is soon subdivided into two lateral ones, the branches of which follow the course of the artery: the hypogastric plexus, anastomosing with the preceding, is formed, in the lowest part, of bands directly springing from sacral nerves, and uniting with those of the great sympathetic, for the specific purpose of supplying the cervix uteri, the vagina and the bladder*.

V. OF THE CHANGES WHICH THE UTERUS UNDERGOES IN ITS FORM AND FUNCTIONS, AT DIFFERENT AGES.

Towards the period of puberty, the body and the neck of the uterus, previously exceedingly small, increase considerably in dimensions. We proceed to state the measure both of the volume and weight, in the case of an unmarried female, twenty-five years of age, with regular catamenia and of moderate height: the person was epileptic and nearly an idiot.

Total length, 26 lines, that of the cervix exactly half.
Breadth of the fundus, 17 lines.
Thickness of the fundus, 8½ lines.
Breadth of the cervix, 9½ lines.
Thickness of the cervix, 7 lines.
Contraction somewhat less than the cervix.

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* I have inserted *all* that is *practically* useful in the minute and prolix description of the original. That description is rendered further unnecessary by the accompanying plates (plates III, IV, V, VI, and VII), in which the complex distribution of the muscular fibres of the uterus, and of the folds of the peritonæum, with the relative position of the uterine appendages, will be better studied than in the most laboured verbal account of them.—Tr.

Thickness of the parietes of the body { Superior $5\frac{1}{2}$ lines, Lateral 5, Posterior $4\frac{1}{2}$, Anterior 4.

Thickness of the parietes of the cervix { Lateral $3\frac{1}{2}$, Posterior 3, Anterior 4.

Total weight, without appendages, 5 drams.

In the case of one, who has had several children, the dimensions and weight of the uterus are very different; its body, especially, is more swelled and irregularly globular (Meckel). Its average dimensions, where there is no disease, are the following[1].

Total length, from $2\frac{1}{2}$ to 3 inches.
Length of the cervix, from 13 to 15 lines.
——— of the body, 2 inches.
Breadth of the cervix, 18 lines.
——— of the contraction, 15 lines.
Thickness of the body, 14 lines, and sometimes much more.
——— of the cervix, from 8 to 10 lines.
——— of the contraction, 8 lines.
——— of the parietes of the body, 6 lines.
Breadth of the vaginal orifice, 6 lines.
Weight, from one ounce and a half to two ounces.

We shall only say, in regard to the catamenia, as much as is necessary for the description of the causes and symptoms of uterine diseases; the usual period of their commencement in our climate is from the twelfth to the eighteenth year, the average being the fourteenth[2]. In persons of phlegmatic

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[1] See Rœderer, *ad loc:* it is seen, in his tables, that these dimensions are liable to considerable variation, even from two inches and a quarter to more than three inches in length.

[2] The fifteenth year at Gottingen, according Osiander's calculations. The period is much earlier near the equinoctial line, and occasionally in our climates. Clarke speaks of a case in which the catamenia began at the age of nine months, and which presented, after two years, all the other signs of puberty.

temperament they generally commence in the seventeenth or eighteenth year, but they continue to flow for a longer time at each return (seven or eight days), than in the case of persons of sanguineous temperament (two or three days). They are preceded and accompanied by certain physical and moral changes, among which we would particularly note those resulting from an universal excitement indicated by lassitude, heat, sudden and repeated flushings, palpitations of the heart, &c. as well as those induced by plethora of the uterus and its connections, which is proved, not only by post mortem examination, but also by a sense of weight in the loins, groin, thighs, and hypogastrium, sometimes even of pain in this region, and by the swelling and moisture of the pudenda. This excitement is relieved by the exudation of drops of blood; this is repeated in about a month, or even two or three months, when a more copious discharge follows, and then the catamenia return regularly. Some of these signs, as well as certain sympathetic changes in several other parts, such as the swelling of the mammæ, a bluish circle round the eyes, &c. appear at each return ; others appear no more, if the catamenia be regular in time and quantity. It has been said that the returns of the catamenia are nearly simultaneous, and corresponding in many persons with the beginning or ending of the lunar month. There is no doubt that many women are several days *in advance* of the solar month ; many are tolerably regular to this period ; whereas in others the period is quite exact, recurring not at every fourth week, but at every thirtieth day, without any reference to the beginning or the end of the month.

The blood which is thus discharged varies in appearance*. Sometimes, and commonly in phlegmatic persons, its flow is preceded by a white or sero-mucous fluid, which gradually assumes the colour of pure though incoagulable blood, and then

* I noticed, in a person aged 35, very pale and feeble, a monthly discharge, of four or five days' continuance, of colourless serous fluid, which appeared, during twelve months, to supply the place of the catamenia ; previously to this period the catamenia had been of the usual appearance in health. Dr. Marshall Hall has noticed this fact as occurring in some cases of incipient chlorosis.—Tr.

as gradually resumes its former white or colourless appearance; the whole continuing for a week, or nearly so. At other times it is pure blood, flowing in drops, and even in large interrupted clots, occasionally in soft, blackish, and inodorous, or fetid coagula. It is obvious that part of the blood remaining in the vagina may coagulate, unless mixed with the muco-serous secretion, when it will remain liquid, and become blackish; the nightly discharge is also thinner and more deeply coloured, in general, than that which flows during the day. If, in short, it flow easily and without mixture, it is not only inodorous, but as red as the blood taken from the arm, or even more so. We have examined it in the vagina, and found it in every respect similar, if not to the blood proceeding from the arteries, certainly to that which escapes from the surface of a mucous membrane; and this is precisely the way in which it exudes from the internal surface of the body of the uterus; and, if it flow from venous orifices, these veins receive it too directly from the arteries to allow of its losing its natural characters.

The quantity of blood discharged on these occasions has been extravagantly estimated at twenty ounces: we should think from six to eight a profuse evacuation, the usual quantity being four, and sometimes not even one; if it exceed half a pint, it is irregular.*

Derangements of the catamenia, whether as causes or effects, very frequently occur in the early period of life, and it does not appear to us that the time of their cessation abounds in diseases[1].

This early decay of the generative organs is sometimes so rapid that it is hardly suspected, even when already com-

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* In cases of *menorrhagia* I have repeatedly observed that the os uteri is so dilated, even in unmarried persons, as to admit the finger; it closes after the discharge has ceased. Even at the period of the healthy catamenia, it is more dilated than at other times.—Tr.

[1] We merely remark that this influence has been exaggerated. M. Benoiston of Châteauneuf, has proved, by numerous extracts from burial registers, that mortality is not more considerable, from the fortieth to the fiftieth year, in women than in men.

plete; the catamenia may have appeared but once at the most, in unusually small quantity, before their final discontinuance. Sometimes irregularities occur, indicating approaching cessation. The catamenia may be, for once, insufficient in quantity, and fail shortly after; then, at some indefinable period, a copious and continuous flow may ensue: these evacuations will sometimes occur twice in a month, then several months will pass without any appearance. Some persons who have been subject to these irregularities for three or four years, have grown thin and have been alarmed, but have afterwards perfectly recovered their health. The constitutions, tastes, and habits change with the body. It is said that there have been cases in advanced age in which the catamenia have reappeared, without occasioning any inconvenience, or imparting any of the peculiar qualities of youth (*Haller*, *Physiol.* t. vii). A case of this kind has very lately been brought to our notice (*D*), in which the cause of the periodical (? Tr.) discharge was found to be a large tumor, formed between the bladder and the uterus, by which the latter organ was displaced, compressed, and irritated.

VI. OF THE CHANGES WHICH THE UTERUS UNDERGOES DURING PREGNANCY AND LABOUR.

Minute details of this subject belong exclusively to midwifery; we shall treat of it here only as it relates to the diagnosis and the theory of moles. The most remarkable change in the uterus, induced by pregnancy, is its increased volume, and its altered form. After the second month, its body becomes rounded, and may be felt, by examination, above the cervix, having acquired an unusual size and weight, which carry it down a little into the vagina.

After the third month the fundus may be felt above the pubes, and from that time it rises higher and higher into the abdomen, until it reaches, in the eighth month, the epigastrium, in cases at least of first pregnancies. It is then of an oval form, inclined forward, and often twisted a little upon

itself towards the right, so that the Fallopian tube and ovarium are more forward on the inclined side than on the other: its consistence is pliable and elastic, its fluctuation very indistinct, and often very imperceptible; but its form and consistence are frequently modified by the solid, rounded, and angular projections of the fœtus, which are prominent and moveable, continually changing, and consequently distinct from those of irregular tumors. This elastic pliability of the body of the uterus may be felt per vaginam, and we further ascertain the presence of a moveable body, which is raised by an impulse of the finger, upon which it immediately falls back: this motion is called *ballottement**. At the same time the cervix uteri becomes shorter and shorter after the sixth month, is obliterated in the ninth, and becomes very thin, and the orifice finally opens as labour comes on†. The increased dimensions of the uterus are not occasioned exclusively by the increasing size of the fœtus. The first effect of impregnation is a sympathetic action, communicating from the ovarium to the uterus, with increased determination of blood. (*Kuhn, de causis uterum imprægnatum distendentibus, in Syll. Schleg.* t. i, p. 500.) This is so correct, that the uterus becomes greatly enlarged, even in extra-uterine pregnancy; we have often seen it, in such cases, at least of twice its usual dimensions. At a later period there is, no doubt, distension; but the mass continues to grow by real hypertrophy, so that the parietes become little thinner. They even augment in thickness where the placenta is attached, (six lines); in every other part, the parietes

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* We shall hereafter use the term REPERCUSSION, to express this phenomenon and important sign of pregnancy.—TR.

† It may be useful to add in this place, the other parts of the diagnosis of *pregnancy*. They may be enumerated thus:

1. The cessation of the catamenia.

2. The changes in the mammæ: these consist in—1, darkness of the areola; enlargement of the sebaceous glands; 3, shooting pains; 4, general tumidity; 5, the flow of milky fluid from the nipple on pressure.

3. Sympathetic morning sickness.

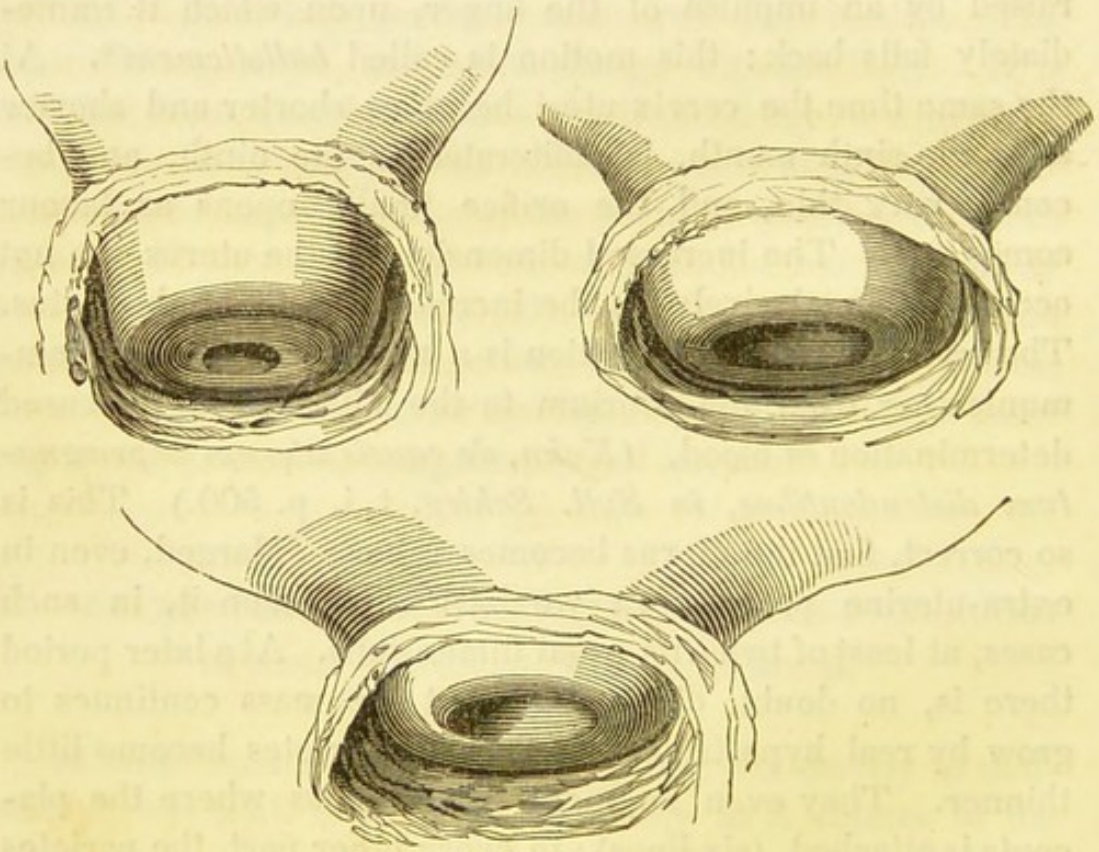
4. First slight flattening, then tumidity, and then distinct tumor of the hypogastrium, gradually and regularly rising beyond the umbilicus.

of the uterus present only from three to four lines in thickness, and the cervix is much thinner (about one line and a half), when it has fully yielded to the distension. The whole substance, in short, increases to such a degree, that

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5. Alterations in the cervix: 1, its low and backward position, and elongation so early as the second or third month; 2, its expansion; 3, its irregularity after the fifth month; 4, its progressive shortening.

The changes are represented in the subjoined cut from Maygrier; the first figure shews the state of the os uteri at the third month; the second, at the sixth; and the third, at the ninth.



6. Protrusion of the umbilicus. This is not so invariable an event in pregnancy, however, as Dr. Gooch's observations would lead us to suppose.

7. Movements of the fœtus, felt first by the patient, then by the physician.

8. Repercussion, or "ballottement," on throwing up the fœtus by the end of the finger introduced in vaginam in the direction between the anterior part of the cervix and pubes, and waiting until it falls. Such at least is the usual mode of this phenomenon. But I am now engaged in an investigation of this sign of pregnancy, as obtained without a vaginal examination, by placing the patient upon the side, or in the prone position, and applying the fingers to receive the body of the uterus, and using them precisely as in the other mode, to procure repercussion. The advantages of this plan over the other, are, I believe, incalculable, both in reference to the patient's feelings, and to the information obtained. The result of my inquiry will shortly be made public.

9. To these means of diagnosis may be added those afforded by the stethoscope. See p. 33.—Tr.

the uterus, which weighed but two ounces, at most, before impregnation, weighs from a pound and a half to two or three pounds, when gestation is complete, as has been ascertained in cases of death immediately after labour[1]. It thus acquires from twelve to twenty-four times its natural volume; every part partakes of the increase: the nerves (*Chaussier and Tiedemann*), the lymphatics (*Mascagni*), the vessels, and especially the veins (*Hunter*, &c.), acquire an enormous volume.

After labour, the uterus resumes its smaller size. This reduction is much more rapid than the preceding hypertrophy; it requires, however, about two months for its completion. Immediately after labour, the uterus is felt in the hypogastrium: its parietes are from half an inch to an inch in thickness. Eighteen hours after a hard labour, we have found the uterus still weighing, together with the Fallopian tubes, the ovaria, and three fourths of the vagina, two pounds and three ounces. At the end of seven or eight days, it is raised little, or not at all, above the brim[2]. The body of the uterus contracts in every direction; its cavity gradually

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[1] See particularly Madame Lachapelle's *Pratique des Accouchements*, t. ii, p. 487. The following is a note taken from my papers:

"The uterus of a woman who died in *the middle of the eighth month* of pregnancy, weighed, together with half the vagina, the Fallopian tubes, and ovaries, one pound and ten ounces."

[2] The rapidity of this reduction in size varies considerably in different persons, and this remark explains the contrary statements of different writers; thus, Riolan says that, twenty-four hours after labour, the volume of the uterus is only as large as that of the fist, and its parietes two fingers in thickness; whilst Rolfinck compares the size of the uterus, on the second day after delivery, to that of a child's head, two years of age. Tiedemann repesents (*Icones nervor. uteri hum.*) the uterus, after six days, as being about six inches and a half in length, and four in breadth. Deventer says he has found the uterus reduced to its ordinary volume on the eighth or ninth day; on the other hand, Ruysch has drawn the uterus, after three weeks and a half, five inches in length and four in breadth. Lastly, Bartholin considers it, in the sixth week, as large as an apple.

We add some more precise details from Rœderer, proving this diversity in different persons: on the third day, the length of the uterus is seven inches and a half; the breadth of the fundus four inches and a half; on the seventh day, the length was seven inches and nine lines, the breadth five inches; in three weeks, the length was seven inches and a half, and the breadth four and a half.

reassumes the flattened triangular form, always retaining a slight curvature outward, in contradistinction from that presented in the case of the *unmarried*.

It is not until the uterus is nearly reduced to its natural volume, that it recovers its firmness, and becomes capable of resisting any considerable effort. In the first weeks, and especially in the first days, the uterus, though contracted, is yet so dilatable, that internal hæmorrhagy might reproduce the dimensions which existed during pregnancy, or nearly so; and the mere inflation of the organ, after death, leads to nearly the same result, on the second or third day after parturition*.

The peritonæum also resumes its former relations; the ligaments acquire nearly their former length, though they are generally thicker, especially on the side to which the uterus had inclined.

The cervix and cervico-uterine orifice contract a few hours after labour, the os uteri remaining widely open; its labia, soft and flabby, resume their firmness on the following days, approach closer and closer, and, at last, upon the cessation of the lochia, recover their natural form.

VII. OF THE APPEARANCES PRESENTED BY THE UTERUS IN DIFFERENT INDIVIDUALS.

At a certain period of fœtal life, it is supposed to be difficult to distinguish the sexes; the resemblance sometimes continues up to birth, and even to mature age; hence we find supposed cases of *hermaphrodites*.

A great many of these were, no doubt, cases in which the

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* This interesting fact appears to afford the explanation of that peculiar form of hæmorrhagy described by Dr Gooch, in the Medico-Chirurgical Transactions, vol. xii, p. 152: after the uterus has been ascertained to be fully contracted, after labour, it may again become expanded, and, its sinuses being opened, the blood may flow, and again distend it and give origin to frightful exhaustion. In *every* case, therefore, in which the patient turns pale, the hand should be applied upon the hypogastrium, even although the uterus may have been felt, immediately before, in its fully contracted state.—Tr.

clitoris, largely developed, resembled the penis; or the urethra and scrotum, being cleft, resembled the pudenda. Certain equivocal appearances have also been remarked in the interior organs; thus, in the cases recorded by Akermann (*Inf. Androgyni Hist.*) and by Steglenher (*De Hermaph. Naturâ*), the urethra furnished a vent not only to the bladder, but also to a large sac situated behind it,—a sort of imperfect uterus, or single seminal vesicle of great size, from which arose two canals, terminated by two glandular bodies, difficult to pronounce either as Fallopian tubes and ovaria, or as vasa deferentia and testes. There are cases more rare, both of men and other animals[1], of which we have a collection, in which the organs of generation assumed partly a *male* and partly a *female* form; this seemed to be the case, at all events, in the subject described by Pinel[2] and Maret. In the case quoted by the latter, half the uterus, together with its Fallopian tube and ovarium, had protruded into a hernial sac, by the right groin; at the left was a testicle, with its canal and vesicle, in its usual position. The urethra, very large and short, and opened at the base of a recurved body in a cleft scrotum, presented a tolerable resemblance to an imperfect vagina, with malformed pudenda and a voluminous clitoris.

Many examples of double uterus are known, in which the division has been seen externally along the uterus, or in which there has been a complete separation of two uteri with two vaginæ[3]; sometimes only one cervix (*Palfyn*, *Steglenher*, *Ollivier*, *Cassan*, *Cruveilhier*[4], *Joly*[5]); and, lastly, no external division. In every case there is but one Fallopian tube and one ovarium on each side, and never a double uterus, but semi-uteri. We have both of us seen instances of these formations in cases of new-born infants, and many others have been quoted by M. Cassan, from ancient

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[1] *Mémoire sur l'Hermaphrodisme, Ephém. méd. de Montpellier,* mai 1827.

[2] *Soc. méd. d'Emul.* t. iv, p. 342.

[3] *Meckel. Descr. monstr. nonnul.* tab. vi, fig. 2.

[4] *Anatomie pathologique du corps humain,* Paris, 1830, livraisons 4e, 11e, 13e, fol. fig. col.

[5] *Journal hebdomadaire de Médecine,* 1829. See t. iii, p. 108.

and modern authors; an excellent drawing may be found in his work[1], and others in the dissertation of Eisenmann. The double uterus may have occasioned certain cases of superfœtation[2], and given rise to doubts as to the existence of pregnancy, according as the finger has been introduced into one half of the vagina or the other. It has, lastly, been the cause, occasionally, of uterine rupture[3].

Sometimes there is only a simple bifurcation of the fundus uteri. This bifurcation may also have admitted of a superfœtation in a case which we observed (*Madame Boivin, quoted by Cassan*, p. 51); and may have constituted the double uterus containing a single ovum, or, lastly, such a case, followed by superfœtation (*Canestrini, Purcell, Dionis*).

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[1] *Recherches sur les cas d'utérus double et de superfétation*, Paris, 1826, 8vo.

[2] We subjoin one of the most decided cases that can be quoted: it was communicated to us by Madame Dejean, a pupil of the Maternité of Paris.

"A person was on the point of labour in the *fifth month* of her seventh pregnancy: a continual flow of blood, three weeks before, caused her to forbode miscarriage. The labour proceeded slowly, the head of the fœtus passed the os uteri, but could only be extracted by aid of the fingers, and the infant was born dead and livid. The umbilical cord was broken at the moment of delivery. Madame Dejean was waiting impatiently for the return of the pains and the expulsion of the placenta, when, all at once, a mass of blood, partly fluid and partly coagulated, issued forth, and brought with it an embryo, supposed to be in its *third month, manifesting signs of life* The former fœtus was eight inches and a half in length, the latter only three and a half; the superfœtation was evident. Madame Dejean ascertained, by examination, that the vagina and utero-vaginal orifice were single, as well as the cervix uteri, but that there existed two *cervico-uterine orifices*, each corresponding with a distinct uterus. These two orifices were perfectly distinct and open, one on the right, the other on the left side; they were of a different size. The birth of the second infant was almost immediately followed by the expulsion of the placenta belonging to the first; the other came away an hour afterwards: one was four inches in diameter, the other three; both were nearly circular, and the cord was attached to their centre. It is easy to suppose that a second impregnation may have taken place two months after the first, inasmuch as the body alone of the uterus is occupied in the first half of pregnancy; and it is quite evident that the miscarriage was occasioned by the considerable distension of the two uteri, of which one only had been distended in previous pregnancies."

In a case of double uterus, observed some years ago in Germany, by Dr. Geiss, there was double pregnancy, at the same period; both of the infants lived, and the mother has since been pregnant again, with only one child.—See *Journal hebdomadaire de Médecine*, 1829, t ii, p 310.

[3] Eisenmann, *Dis. cit.* note *n.* no. 9. *Ramsbotham, Midwif.* part. t, p. 407. Ollivier, *Acad. roy. de Méd.* Juin 1825.

Lastly, the uterus may be of too small a volume to be capable of discharging its proper functions* (*Morgagni, Frank*, &c.), or an imperforate os uteri may prevent their fulfilment; but these cases of absence, or retention, of the catamenia will engage us more fully hereafter. The uterus may be entirely wanting; we have quoted, above, the cases recorded by Engel, Stein, and M. Dupuytren, in which the ovaria existed with this deficiency. There were merely some misshapen traces of those organs, and the uterus was replaced by a body of the size of a pen, in a case examined by M. Renauldin (*Séances de l'Acad. roy. de méd.*, 28 *février*, 1826); the catamenia had never appeared, nor had the mammæ been at all developed. In a great many other instances, the absence of the uterus has been ascertained, both by examination during life and dissection after death[1]. We have ourselves been consulted in a similar case[2], and have seen another in one of the hospitals of the capi-

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* I have the uterus of a girl thirteen years of age, in whom the catamenia had never appeared: its cervix was of the natural size, but its body was very diminutive and distended with mucus, and its parietes so thin as to be almost transparent. Such cases are rare, but they are mentioned by Andral.—Tr.

[1] *Columbus, Fromond*, &c. *Ap. Morgagni; idem. Epist.* xlii, art. 11, 12, 13: *Baudelocque*, t. i, p. 183: Boyer, *Mal. Chir.* t. x, 423 et 424; *Caillot, dans la Phys. de Richerand.* t. ii, p. 364, &c.

[2] The patient, who was under the care of M. Lerminier, was examined by Madame Charrier; we subjoin the details, which were transmitted to us immediately afterwards.

The person in question was unmarried, forty years of age, tall, thin, and without development of the mammæ. The catamenia had never appeared, though expected in the nineteenth year; some drops of blood were the only symptom that occurred. At the age of thirty-five years, pains were felt in the loins, abdomen, the thighs, and the left side of the pudenda; a voluminous tumor was formed in that part, which opened after some time, and discharged some bloody pus. Three years afterwards, the same symptoms recurred, with a tumor in the perinæum, and a similar event. From that period, however, a swelling arose on the left side of the pudenda and vagina, which very recently (November 1821) became the seat of a third abscess. The pudenda were natural, excepting that the left nympha was of a dusky colour, elongated and rather prominent. The finger was introduced into the vagina with ease; but, at the depth of an inch and a half, it was checked by a soft cul-de-sac, which gave no impression of any solid or projecting body, of any fluctuation, or, in short, of any thing indicating the presence of a healthy or distended uterus, or of a collection of catamenial

tal. The vagina is sometimes entirely wanting, and there is a rudiment only of the pudenda; at other times the vagina is found, and the exterior organs of generation; but the finger can only discover a boundary, without orifice, at the extremity of the vagina; sometimes a small tubercle occupies the place of the os uteri. The finger, introduced far into the rectum, may distinctly feel the convexity of the catheter introduced into the bladder, and discovers that there is nothing between itself and the instrument, but thin and membranous parietes[1]. If the ovaria existed, the mammæ might be developed, and a slight febrile state induced every month; if the ovaria be wanting, as well as the uterus, there will be neither catamenia nor development of the mammæ.

If any deviations, &c. occur in the fœtus, they either do not appear till after birth, and will be treated of elsewhere; or, although congenital, they are difficult to recognise during life; or unimportant in themselves. Thus, M. Baudelocque has discovered a canal which proceeds from the right Fallopian tube, passes into the parietes of the uterus, and opens into the cavity of the cervix (*Acad. roy. de méd.*, 12 *février*, 1826).

VIII. OF THE FALLOPIAN TUBES AND OVARIA.

We treat of these two organs together, though they are perfectly distinct from each other. They are mutually related in the same way as a glandular organ and its excretory canal. We find both, in the adult, floating in the highest part

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fluid, &c. On the left, at the fundus of this cul-de-sac, a narrow crevice was felt, very painful to the touch, which was probably an issue for the pus. The hand, when applied to the hypogastrium, could not discover any solid body resembling the uterus, notwithstanding the thinness of the patient. Examination per rectum, and with the catheter, was omitted; but there was every proof of the non-existence of the uterus. The abscess may have been the result of other causes.

[1] Those cases should have been excepted, in which, as in that of Stein, the uterus was replaced by a fleshy body. Its form and consistence, ascertained by the rectum, might, in such a case, correct the erroneous diagnosis which would rest solely upon the presence of a thick body between the rectum and the bladder.

of the pelvis, and nearly at the same height, upon both sides of the uterus. A secondary fold of the broad ligament (ala) serves as a mesentery to each, and conveys to them the peritonæum, the vessels, and the nerves (*Atlas*, pl. I, fig. 1).

The ovarium is firm and elastic, whitish, a little wrinkled, convex upwards, and flattened downwards, where it presents a kind of pelvis, like that of the kidney, to receive these vessels and nerves; rather lengthened transversely, and narrowed towards the uterus, it gives origin to a cylindrical, whitish ligament, fixed towards the upper angle of the body of the uterus, and called the ovarian ligament; softer in the opposite direction, it is attached to the fimbriæ of the Fallopian tubes.

The case is not exactly the same in the adult state. The Fallopian tube forms at that period an almost independent and flexuous canal, very narrow towards its origin, at one of the upper angles of the uterus, into the cavity of which it opens; towards its middle it enlarges a little, and again swells out towards its outward extremity, which is called the pavilion; this, in its turn, is open in the abdomen, and its orifice, narrower than the cavity which it terminates, is surrounded by fimbriæ redder than the rest of the tube, which is nevertheless tolerably high-coloured in young subjects. One of these fimbriæ goes to the ovarium, and supports the pavilion at a little distance; hence, the Fallopian tube, being much longer (from four to five inches) than the ovarium with its ligament (two inches and a half at most), is necessarily recurved towards it.

The interior cavity of the Fallopian tube, which is frequently not half a line in diameter where it passes through the parietes of the uterus, is from three to four lines in its largest parts. It is lined with a mucous membrane, especially manifested by longitudinal folds, which render it susceptible of easy extension: it frequently contains an opaque, white, milk-like mucus, sometimes puriform, at other times transparent and in less quantity. This internal membrane is separated from the peritonæum by a muscular layer, often imperceptible, though in some cases visible, as Santorini, Meckel, &c. have already remarked, composed of longitudinal fibres

externally, and circular fibres internally. The longitudinal fibres are a continuation of the oblique fasciculi of the uterus; it is evident that the transverse fibres represent the continuation of the circular fasciculi, which surround each of the angles, at the fundus of the uterus, and their orifices, which merge into the Fallopian tubes (see pl. VII): here is the proof of the resemblance subsisting between the human uterus and that of other mammalia, in which the Fallopian tube differs not from the cornu uteri, of which it is the continuation, except by being very narrow.

The ovarium appears also to possess something of a muscular structure; at all events, we are certain that the uterine fibres unite, in part, to form the ligament which attaches it to the uterus, and that others traverse the peritonæal ala, in order to reach it (see pl. I, fig. 1). Under the peritonæum, which is very thin and adherent, smooth, and moist, there is a dense, thick, whitish layer,—an expansion of the above-mentioned ligament, and resembling the tissue of the uterus in its empty state. This layer covers a reddish, soft parenchyma, containing the vesicles of Degraaf. These vesicles, from eight to twenty in number, and varying in size from that of a grain of millet to that of a large pea, are filled with a limpid, albuminous fluid. According to Baër[1], those vesicles which border upon the exterior, and especially upon the side towards the pavilion of the Fallopian tube, contain a small floating germ, which had already been suspected by Malpighi, and which constitutes the real rudiment of the ovulum (plate XXXVII, fig. 1). The vessels and nerves of the Fallopian tubes and the ovaria come from the spermatic; the vessels anastomose frequently with those that supply the uterus, vagina, and pudenda—a fact not without its importance in practice[2]. The connections we have just established between the Fallopian tube and the ovarium are perhaps more intimate at an earlier age; some canals have been supposed to commu-

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[1] *De ovo mammalium et hominis generis,* Lipsiæ, 1828, 4to.

[2] The round ligament includes vessels of considerable size; the veins are often so developed and tortuous, that they form a true varicocele in the groin (see pl. XXXII, fig. 3).

nicate directly and visibly between them, but the cavity of these canals has not been ascertained. *(Rosen Muller.)* It appeared, on the contrary, that, in the case of the embryo, the Fallopian tube would be closed, and its orifice established at the fourth month; and the fimbriæ at a still later period. *(Meckel.)* From that time these organs grow by degrees, in the same manner as the uterus; and thus, in the case of the adult, the Fallopian tubes are, proportionably to this latter viscus, much smaller and less flexuous than in the fœtal state.

The ovarium undergoes still greater changes in different ages: in the embryo state, it is much elongated, of a prismatic form, soft and reddish, occupying the lowest part of the lumbar region; at the time of birth, it is still long, narrow, and homogeneous in its texture. The dense and thick covering, observable in the adult, does not appear until the approach of puberty. The vesicles have been observed as early as during the first year; at other times, not before the tenth. The ovarium, like the Fallopian tube, gradually increases to the period of puberty, when it is from eighteen to twenty lines in length; in the new-born infant there is half this length, but much less thickness; hence, the difference of their weight is from ten grains to a dram and a half, or nearly as one to a hundred *(Meckel)*.

At the period of puberty, considerable changes are induced in these organs, independently of the sanguineous congestion, spoken of above. At the periods of the catamenia, the Fallopian tube with its fimbriated extremities is raised, whilst the pavilion proceeds to encompass the ovarium, and spread itself over one part of its exterior surface. We have ascertained these changes by examination, and several persons have remarked the same in cases of hysterical, as well as of pregnant, women. The ovarium, thus circumstanced, has often presented, even in the unmarried state[1], those yellow bodies called *corpora lutea**,

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[1] This phenomenon has been seen once in a child of five years of age.—*Mackintosh, London Med. Rep.* July 1825.

* Sir Everard Home observes, "that the corpora lutea exist previous to and perfectly independent of sexual intercourse, and that when they have fulfilled

which have been ascribed to impregnation, and appear to arise from the bursting of the vesicles when the ovulum passes into the Fallopian tube. The burst vesicle soon cicatrises, and presents the appearance of a globular body, as large as the top of the finger, of a reddish-yellow colour, fleshy, thick, and containing a little fluid in its centre. The yellow body afterwards collapses and wrinkles, and may be traced in the ovarium a long time afterwards, as a little mass with a sinuous and festooned outline. On the exterior it remains as a cicatrix; and hence it is that the ovarium, in persons who have frequently borne children, presents numerous puckered spots; but it is not less wrinkled in married women who have not borne children. In every case it decreases in volume, and shrinks at the period of the cessation of the catamenia.

There are also certain anomalies in different persons, which induce changes in these organs. The absence of the ovaria, or their excessive minuteness, has been pointed out

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their office of forming ova, they are destroyed by absorption, whether the ova are impregnated or not. On examining the appearance of the corpora lutea before and after impregnation, it appears probable that impregnation is necessary for the expulsion of the ovum; but when impregnation does not take place, the ovum appears to remain in the corpus luteum."—*Phil. Trans.* 1819, p. 59.

Dr. Blundell says (*Med. Chir. Trans.* vol. x, p. 262), "I have now in my possession a preparation (for which I stand indebted to Dr. Cholmeley and Mr. Callaway) consisting of two ovaries of a young girl, who died of chorea, under seventeen years of age, with the hymen, which nearly closed the entrance of the vagina, unbroken. In these ovaries the corpora lutea are no fewer than four. Two of them, it must be acknowledged, are a little obscure, though an experienced eye, I conceive, would readily detect them; the remaining two are very distinct, and differ from the corpus luteum of genuine impregnation merely from their more diminutive size, and the less extensive vascularity of the contiguous parts of the ovary."

Dr. Blundell cut the vagina of rabbits (under their puberty) asunder, so as completely to interrupt its canal. Although the external genitals of these animals were turgid with blood and the sexual excitement of some was remarkably lively, although too, in some of them, intercourse was renewed at intervals of a week or fortnight, on the whole, as many as thirty times, not one became pregnant; the same general appearances were observed in all. The vagina, if the operation had been properly performed, was completely interrupted. In both ovaries there were corporea lutea. In some cases the wombs appeared to have undergone little change; in others they were enlarged and evolved as completely as in actual pregnancy; but in no one instance was there the appearance of a single ovum extra-uterine or in the womb.—*Med. Chir. Trans.* vol. x, p. 252.—Tr.

in the case of *Pears*[1]*: the uterus and Fallopian tubes existed, but were as little developed as before puberty. The ovarium is sometimes wanting only on one side (*Baillie*), and is without vesicles in barren women. Its structure appears also, in certain cases, so equivocal as to render the nature and sex questionable, especially when it has insinuated itself, like a testis, into a kind of scrotum, through the inguinal ring.

It sometimes happens, even at birth, that the Fallopian tube is obliterated at its pavilion, where it terminates in a cul-de-sac, without fimbriæ (*Baillie*), thereby causing barrenness. The instances of obliteration which we have seen, appeared to be of later origin, and were only complete on one side, unless extensive adhesions had joined them both to the uterus.

IX. OF THE VAGINA AND PUDENDA.

The vagina is cylindrical, though most generally flattened, and almost obliterated by the pressure of the rectum and the bladder, between which it is situated. Posteriorly, three-fourths of its inferior paries are joined to the rectum, constituting the recto-vaginal partition, which is considerably thick-

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[1] *Annales de Litt. Méd. étrangère*, t. i, p. 241.

* This case was originally published in the *Phil. Trans.* for 1805, p. 225. The subject of it was born in Radnorshire, in 1770. She was of a fair complexion, mild temper, and abstemious habits; she was apt to be constipated; she ceased to grow at ten years of age, and attained only the height of four feet six inches; the mammæ and nipples were like those of the male subject; she never menstruated, or shewed any signs of puberty, either mental or bodily; she died of a pectoral affection, at the age of twenty-nine.

On post-mortem examination, the uterus and os uteri preserved their infantine form and size; the cervix uteri and the Fallopian tubes were pervious; the ovaria were rudimentary and indistinct.

This case shews that the imperfect development of the ovaria entails that of the uterus itself, and of the whole form and character of the person.

In the case in which Pott removed the ovaria, in an operation for Hernia*, the catamenia became suppressed, and the mammæ disappeared.—Tr.

* Works, vol. iii, p. 329.

ened below, and forms the deep or elevated portion of the perinæum. The fourth or fifth upper part is separated from the rectum by a space, which is lined by the peritonæum; hence it follows that, here, a perforation of the vagina would communicate with the cavity of the abdomen, whilst, below, it would reach into the intestine. Anteriorly, a perforation high up would penetrate into the fundus of the bladder, and lower down, into the urethra, the anterior paries of the vagina being closely connected with both these organs.

The upper part of the vagina encloses the os uteri, and the groove which separates them, scarcely perceptible in front, is very deep behind. From this point the vagina, instead of following the direction of the axis of the uterus, descends forwards into that of the outlet, so that these two organs, taken together, represent a bent line, parallel to that which would be formed by the union of the axes of the brim of the pelvis and of the outlet.

The parietes of the vagina are composed of a mucous membrane, firm and rugous in the young,—soft, lax, and of a pale or slate-colour in the old,—and always moistened with a viscous fluid.

This membrane lies upon a thick coat, to which it closely adheres, and which partakes of its rugæ; it is yellowish, dense, and appears to be a continuation of the substance of the cervix uteri, and of the same nature (*Azzoguidi*, *Velpeau*, &c.); it seems to us to be also continuous with the fibrous or muscular capsule which enfolds this organ (sub-peritonæal coat). It is surrounded, and even penetrated, by a network of arteries and veins.

Immediately within the os externum is situated the *hymen*. This fold, broad behind, gradually disappears towards the fore-part, being usually crescentiform: in other cases, and generally in the adult state, according to Ruysch, it is circular.

Beneath the hymen, the os externum presents, behind, a small cavity called the *fossa navicularis*, constituting, together with the *fourchette*, a small transverse bridle, which terminates it beneath the anterior edge of the *perinæum*. In front of the vaginal orifice, at a short distance, is situated the *meatus urinarius*,—the inferior orifice of the urethra,—from three to

four lines in its apparent longitudinal diameter, and closed by two small lateral labia. To this succeeds a space of about an inch in length, called the *vestibule*, bounded on the side by a fold proceeding from the vagina, which appears to be raised by a portion of the constrictor muscle of the vagina, in the direction of the clitoris, and is analogous to the corpus cavernosum. (*Blandin, Anat. chir.* pl. XI. L' L'.) In front, the vestibule is bounded by the *clitoris*.

There are certain unnatural conditions of the os externum. We were once obliged, in the case of a child, to separate by the ligature a fleshy substance which projected from five to six lines beyond the os externum, towards the perinæum, and was produced by an elongation of the hymen.

A much more serious affection, illustrated by three known cases (*Boyer*), two of which are given in detail by *Barbaut* [1], is that of the termination of the vagina in the rectum. One of these cases is, doubtless, that mentioned by Louis. Sometimes the rectum terminates in the vagina, in which case the latter sometimes opens into the neck of the bladder or into the urethra (*Sue*). This latter communication may also occur without the former, as we have seen indicated in several cases of supposed hermaphrodites. On one occasion a deep incision was made in front of the coccyx, to restore the anus, of which there was before no trace, and thus to heal a recto-vaginal fistula[2]*. The other deformities, before alluded to, are incurable.

In a certain number of cases, the os externum, properly speaking, has no existence at all; or it is reduced,—as in complete obliteration of the vagina, or, as in the absence of the vagina and of the uterus,—to a funnel-shaped indentation between the labia pudendi, terminated by a meatus always unnaturally large, and without defined edges. On the other hand, the os externum may be considered as larger than

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[1] *Cours d' Acc.* p. 59.

[2] Dupuytren, art. *Anus anormal*, in the Dictionary of practical Medicine and Surgery, t. iii, p. 121.

* I understand that Mr. Copland has succeeded in curing a case of recto-vaginal opening, by freely dividing the sphincter ani, so as to leave a free exit for the fæces and keep the ulcerated edges of the opening in contact.—Tr.

usual, or it may be confounded with the anus in certain cases in which the rectum opens immediately beneath the orifice of the vagina; but, in that case, it is apparently the intestine carried along the perinæum, rather than the os externum extended at the expense of this space. We witnessed a case of this kind, at least, in a newly-born infant, and are satisfied that the communication took place only by a narrow canal, directed horizontally from before to behind. This canal might thus be easily laid open, and the anus restored to its natural place —an operation which has indeed been successfully performed, in Germany, by Dr. Dieffenbach.

The os externum may also be closed by the congenital adhesion of the labia; but this condition, and the different degrees of contraction, by which it is induced, are more generally the effect of accident or of a burn: sometimes it results from an operation customary among some nations. More than once it has been necessary to open or enlarge the orifice with the scalpel.

This partial closure has been sometimes accompanied with an excessive development of the clitoris, at the base of which an orifice served as a passage both for the urine and the catamenia; in which case it may have been difficult to distinguish the sex: and the error would be the more apt to occur, if the labia pudendi, almost entirely adherent, contained a portion of intestine, or of omentum herniated by the inguinal ring, and resembling a testicle[1]*.

The nymphæ, like the clitoris, small, very short, and scarcely perceptible, may acquire, in some instances, an unnatural size: they constitute, in some Hottentots and Boschismans (*Levaillant*), two oblong lobes. This elongation, less common in other Africans, is nevertheless sufficient to give rise to the particular business of nymphotomy.

Lastly, the adhesion of the nymphæ, which neccessarily accompanies that of the labia pudendi in supposed cases of hermaphrodites, may exist alone. In the case of a little girl,

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[1] See the Memoir quoted above, *Ephém. Méd de Montpellier*, t. v, pp. 24, 25.

* Dr. Merriman relates a case of an entire closure of the opening of the labia, so that the child had not passed urine for more than twenty hours.—Tr.

whom we examined, the urine escaped by a narrow orifice near the clitoris: the catheter could not be introduced by the orifice into the bladder; but, when directed horizontally from before backwards, it was carried into the vagina, close by the os externum; the nymphæ seemed to have no existence: we ascertained also that they were adherent and formed a narrow canal, situated at a right angle upon the orifice of the urethra, so as to receive the urine, check it in its expulsion, and afford it a passage, partly before and partly behind: it was only necessary to divide it.

An operation perfectly simple, a mere puncture, has been equally successful in cases in which the meatus urinarius was directly obstructed by a membrane.

X. OF THE MODES OF EXAMINATION PROPER TO DETERMINE THE DIAGNOSIS OF THE DISEASES OF THE UTERUS AND ITS APPENDAGES.

1. *Super-pubic Examination.* The patient being conveniently placed in the supine posture, the head and the shoulders a little raised, and the thighs semi-flexed upon the abdomen, the hypogastrium should be carefully pressed in every direction by the hand. If a hard body be felt, the fingers should be applied so as to ascertain, if possible, its volume, form, consistency, mobility, and connection with other organs. The iliac fossæ should be first examined, where the Fallopian tubes and ovaria are sometimes found, when diseased: afterwards, the hypogastrium, which frequently contains the fundus uteri. It will be necessary, in some cases, to press the abdominal parietes deeply into the pelvis with the bended fingers, while the palm of the hand is applied to the fore part of the pubes. The bladder and the large intestines should always be previously evacuated.

2. *Examination per Vaginam.* The erect posture is the most convenient for ascertaining the weight, elevation, and direction of the uterus: in other respects, the supine posture

is better, as in the former examination*. The forefinger is generally sufficient for this examination, whilst the middle finger, bent towards the palm of the hand, rests upon the perinæum and presses it upward. In some cases the whole hand must be introduced into the vagina. The finger is passed along the canal, under the cervix uteri and behind it, pressing the several parts, to ascertain their sensibility; it then raises the whole uterus, to form an estimate of its weight and mobility, and then ascertains its size, the other hand being pressed upon the hypogastrium. On withdrawing the finger, a white napkin is used, in order to ascertain the state of the discharges. The rectum should be previously evacuated; as it otherwise flattens the vagina, forces its posterior paries forward, and renders it difficult to reach the body of the uterus. This will be best done by an abundant enema of warm water.

3. *Examination per Rectum.* This mode of examination is adopted only when the preceding one furnishes an incomplete diagnosis. Cases will occur in which tumors, formed between the uterus and the intestine, or towards the lateral and posterior parietes of the pelvis,—congestions of the body of the uterus,—and particular displacements of this organ, cannot be sufficiently examined per vaginam. Cases also of imperforation, and excessive narrowness of the vaginal orifice, may require examination per rectum; and we have already shewn its usefulness in cases in which the uterus was entirely wanting.

The patient should be placed in the same position as in the preceding examination, with the pelvis raised. The forefinger should be introduced into the rectum.

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* It is usual to make the examination per vaginam, as in labour, the patient being on her left side. But I am persuaded that there are, in many cases, great advantages in the position upon the back, the head and shoulders being raised: 1, in this manner the uterus falls a little lower; 2, the sentient part of the finger receives the os uteri and especially its posterior border, and the anterior part of the vagina, whilst it is easily passed to each side; and 3, the hand is easily revolved so that the finger may touch the anterior part of the cervix and the posterior paries of the vagina. This is peremptory when we want to obtain repercussion and to examine prolapsus, in which the patient must also be raised almost into the erect position.—Tr.

In order to ascertain the colour, form, and volume of the cervix uteri still more accurately, as well as to introduce leeches, caustic, and narcotic applications, we use the *speculum*. One form of this instrument consists of two or three branches, forming together a narrow cone; these branches separate from each other by a simple piece of mechanism.

Madame Boivin constructed a speculum, consisting, at first, of two parts, which, when united, constitute a perfect cone; each of these is supported by a branch, provided with a ring, and these branches unite like the blades of the common forceps*.

The cervix uteri is sometimes so inclined backward that the speculum cannot shew it by any movement. In order to bring it forward, Madame Boivin conceived the idea of an instrument which will always succeed, except in cases of morbid adhesions: it consists of a curved metallic stem in the form of an *S*, furnished at each of its extremities with a ring to encircle the cervix uteri, and draw it forward†.

We will conclude with a few words upon the use of the stethoscope. M. de Kergaradec first observed the pulsations of the heart of the fœtus during pregnancy: this has for some time been a means of distinguishing true from false pregnancy: the same physician has ascertained, besides, another kind of pulsation, isochronous with the pulse of the mother, and attended with *souffle*, or rush; this he attributed to the placental circulation. Proceeding upon satisfactory reasoning, M. Paul Dubois has since thought that the souffle is independent of the placenta, and caused by the circulation of the blood in the dilated uterine vessels. This phenomenon, perceived by the ear applied mediately or immediately to the abdomen, serves accordingly as a proof, not that the uterus

* In this place the authors give verbal descriptions of speculums invented by MM. Récamier, Dupuytren, Lisfranc, Guillon, Rique, Dubois, Lallemand, Deyber, Guibert, Columbat, and Ségalas, too tedious to read, and impossible to be understood without plates. I have therefore omitted them.—Tr.

† This object may generally be accomplished without an instrument, by means of the finger passed into the rectum, or even by a change of position.—Tr.

contains a living fœtus, but rather that it is in a state of distension and hypertrophy from some cause or other, as from a true, or false pregnancy*.

A stethoscope has also been imagined, which might be applied to the os uteri ; this is the metroscope of M. Nauche.

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* There is an excellent paper upon this subject in the *Dublin Hospital Reports*, vol. v, p. 231, by Dr. Evory Kenedy.

Dr. Kenedy states that the *souffle* discovered by M. Kergaradec is distinctly heard over the region of the uterus, to which the placenta is attached. It is, according to this writer, diagnostic of pregnancy, in some favourable instances, so early as the tenth, eleventh, and twelfth week.—Tr.

PART FIRST.

DISEASES OF THE UTERUS.

SECTION FIRST.

BREACHES OF CONTINUITY.

THIS section may be naturally divided into two chapters —the one containing ruptures, or breaches of continuity, from internal causes, such as violent and unnatural contraction of the uterus; the other, wounds, or breaches of continuity, from external violence. But, as ruptures never occur without previous distension of the uterus,—as during pregnancy, and in the act itself of parturition,—these accidents are commonly classed with those which belong to midwifery; and, in order to give a complete account of them, we should be obliged to copy, nearly word for word, the memoir which was composed by one of us, and which forms part of Madame La Chapelle's 'Pratique des Accouchements' (8e Mémoire, t. iii). We would rather refer our readers to that work for many opinions which would be out of place here; and to the thesis of M. Deneux[1], and the less recent dissertation of Crantz[2]. It remains for us to treat of injuries from external causes.

[1] *Essai sur la rupture de la matrice pendant la grossesse et l'accouchement*, an XII, *ou* 1804.

[2] *De rupto in partûs doloribus a fœtu utero*, 1716.

Some of these, such as forcible pressure or violent concussion, may cause rupture when the uterus is distended. In the generality of wounds of the body of the uterus, this organ was also in the distended state. Being moveable, in fact, and covered in the pelvis, it easily escapes external injuries, so long as it retains its ordinary volume; if, like the cervix, it be exposed to shocks, or even contusions, there are either no immediate results, or they belong entirely to the subject of metritis, menorrhagia, cancer, &c.

In treating of the mode of cure of diseases of the uterus, we shall have an opportunity of quoting the numerous cases, in which the scalpel has been applied to the cervix uteri, for the purpose of incision or removal, and those in which the practitioner has ventured to remove the entire uterus. We shall then see that the wounds of the cervix uteri are not very dangerous in themselves—a circumstance satisfactorily proved by the cases of laceration, occasioned by rashness, or indeed by the simple impulse of the head of the fœtus, as in the case recorded by Merriman, in which almost the entire cervix uteri was thus carried away[1].

We cannot speak so favourably respecting wounds of the body of this organ, as is proved by the frequent ill success of the cæsarian section. It is true that, in this case, the abdomen is laid open largely, and peritonitis is almost unavoidable: but the abdominal parietes remain entire in cases of uterine rupture, and yet scarcely any cures have followed these spontaneous injuries*. These cases, however, together with those in which abdominal hysterotomy has been practised with success, prove that the wounds of the uterus are far from being necessarily fatal†. Death has indeed some-

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[1] *On difficult parturition*, p. 271, and plate VI.

* In the *Transactions of a Society for the Improvement of Medical and Surgical Knowledge*, vol. iii, p. 290, Sir Charles Clarke gives an interesting case of death during labour, in which from forty to fifty transverse lacerations of the peritonæum were found at the posterior surface of the uterus, of very little depth, from which a little blood had exuded.—Tr.

† The cæsarian operation in this country has only once saved the life of the mother. Case by Mr. Barlow, *Med. Records and Researches*.

times been the immediate result of such wounds, and of hæmorrhagy arising from injury of some of the large vessels, which so abundantly supply the uterus during pregnancy.

A soldier's wife, in the eighth month of pregnancy, received a sabre-wound near the umbilicus, and died in a few moments; upon examination, a great effusion of blood was found in the abdomen and uterus; this latter organ was pierced near its fundus; the fœtus, also dead, was wounded in the thorax. *(Devaux*[1].*)* In a second case, a large nail pierced the abdominal parietes on the left side of the umbilicus, at the distance of three inches, during the seventh month of pregnancy: moderate pain was felt at first; water mixed with blood gushed from the wound; the abdomen collapsed, the skin wrinkled, and the uterus contracted; the next day there were convulsions, with hiccough and bilious vomitings: death ensued sixty hours after the accident. The puncture of the uterus was found to be very narrow, and situated two inches lower than that of the integuments; there was, notwithstanding, some water still remaining in that organ: the infant was slightly wounded at the lower part of the right shoulder. *(Planchon.)* In a third case, a girl, desiring to induce abortion, plunged a sharp instrument several times, per vaginam, through the parietes of the cervix uteri, so as to pierce the membranes and destroy the fœtus; copious hæmorrhagy followed, high fever, delirium, convulsions, and death[2]. These are examples of the importance of such wounds: there are others, however, which particularly show that so serious a prognostic is not universally applicable. Mr. Simmons witnessed the case of a woman, pregnant and dropsical, in which the uterus was wounded with a trochar; this was discovered by the flow of blood, and the pain attending the puncture: nevertheless, the pregnancy proceeded regularly to its full period[3]*. The trochar was even used success-

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[1] *Art. de faire les Rapports en Chirurgie*, p. 175.

[2] *Brendelius, Ephem. Nat. Cur. Centur.* 3 *et* 4, *obs.* 147.

[3] *Ann. lit. Méd. étrangère*, t. ii, p. 460.

* This case is inserted in the 8th vol. of the *Medical Facts and Observations*.—Tr.

fully to pierce the uterus, distended by dropsy, in the case of a woman, aged fifty-three years[1]: nor is this a solitary instance of the kind. Rousset relates a case in which a musket-ball passed through the uterus, and killed the infant; the mother survived and recovered. (*Partus cæsarius*, p. 114.) In another case, not very unlike that of Rousset, a woman, at the full period of pregnancy, was wounded by a shot from a gun, charged with balls and deer shot: besides several other wounds, she received one in the left side of the hypogastric region; loss of blood and fainting ensued; labour and spontaneous parturition presently followed; the infant had a wound on its right clavicle, containing a piece of the woman's clothes, and a shot of the size of a pea. Both of them recovered; but the mother's wound, remaining fistulous[2], had frequently afforded a passage to the catamenia, as well as to a daily supply of pus: it spontaneously cicatrised after three years, and would not have remained open so long, but for the tube which it was deemed necessary to preserve in it unintermittingly, and which was one day happily forgotten[3]. Several cases occur in the same work, followed by a speedier recovery: one, after a cut with a knife, which laid the head of the fœtus open (*Langius*); another, after a blow with a pointed stick, which wounded the infant in the thorax (*Hoffman*). A case is also given (inaccurately, as we consider), in which the abdomen had been laid open by a bull's horn, so that the fœtus fell upon the ground, enveloped in its membranes. The account says it was replaced, and the abdomen sown up; and, that the woman not only recovered, but gave birth, at the full period, to a living child. More reliance may be placed on other accounts, which have the following point in common with the above case—that the wounds of

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[1] *Ann. lit. Méd. étrangère*, t. ii, p. 290, *d'après Wirer*.

[2] This disposition of a breach of continuity to remain fistulous has been sometimes observed, though in very particular cases: we have witnessed, as a consequence of rupture of the cervix uteri, the formation of an utero-vesical fistula, and the establishment of a purulent communication with some sub-peritonæal abscesses. *Prat. des Accouchements de Mad. Lachapelle*, t. iii, p. 105, 176, and 177.

[3] Reichard, *Diss. exhib. uterum gravidè unâ cum fœtu vulneratum*, 1735. *Diss. chir. Hallerianæ*.

the abdomen and uterus, though severe and lacerated, have completely healed; but, that the infant was either immediately expelled, or extracted by the wound[1]. Smaller wounds have also healed after the removal of the remains of the fœtus, which had lodged exteriorly to the uterus. This was the case with a washer-woman, who was wounded by the point of a palisade, in the sixth month of pregnancy: blood and pus issued per vaginam; several abscesses formed, and at last a tumor, which, when opened, gave passage to the remains of the fœtus[2]. But, whilst we are showing that the prognosis of such an accident is not so serious as we might have expected, we ought to mention a circumstance which may appear a melancholy consequence of large wounds of the uterus, even after cicatrisation. In more cases than one, the patient, after the cæsarian section, has again become pregnant, and been delivered in the natural way; in other cases the cicatrix of the uterus and abdomen has burst, and the infant has come forth this way with a little assistance[3]. The patient, quoted by Schumucker, died at the full period of pregnancy: varicous vessels had burst about the cicatrix of the uterus, and an effusion of blood was found under the peritonæum, and also in its cavity.

The facts we have been relating present a brief outline of the diagnosis, prognosis, and therapeutics of these injuries much better than we could have done in a regular and systematic chapter; indeed, such cases are too rare and too varied to admit of such an arrangement. This is not the case, however, with the generality of the diseases contained in the several chapters of the following section.

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[1] Deneux, *loc. cit.* p. 34, 35, from Sue, Schumucker et Lair-Corini: see also Desault, *Journal de Chirurgie*, t. ii.

[2] *Hist. de l'Acad. des Sc.* 1709, p. 22.

[3] *Collin. Bull. Fac. méd. de Paris*, 1816, no. 3, p. 235.

SECTION SECOND.

CHANGES OF SITUATION.

CHAPTER I.

GENERAL REMARKS.

We have seen, in the introduction, that the uterus is endowed with a certain mobility, and, at the same time, with a position almost fixed—that is, variable within certain limits only. If the changes in the direction, the elevation, and the descent, be considerable, inconveniences ensue, which may be termed morbid. If, on the other hand, the uterus lose its mobility entirely, or nearly so, a source of uneasiness will arise in the neighbouring viscera, and it will cease itself duly to discharge its appointed functions—that of gestation, for instance, which requires considerable changes of situation in this organ.

The present section will therefore comprise the displacements, and the unnatural immobility of the uterus. The displacements are usually divided, first, into elevation, and prolapsus; secondly, into changes of direction: to these must be added changes in the lateral, or antero-posterior, situations, without change in the direction of the axis,—which we shall term *deviations*. These displacements, moreover, seldom occur singly—a change of direction, for instance, without a change of elevation, and vice-versâ; and this depends principally upon the fact, that the same causes produce both. For this reason, we have been induced to combine, in a single section, all those displacements which occur without *essential*

change in the structure of the uterus. Among their common causes, there are some so serious and important in themselves as to constitute the principal affection; so that the displacement of the uterus should be considered merely as an effect, or symptom: this applies more particularly to some of the above-mentioned derangements, respecting which we shall therefore be satisfied with making a few remarks, without entering into lengthened details.

Most of the lateral inclinations, and of the lateral or antero-posterior deviations of the uterus, unattended with elevation or prolapsus, depend upon the development of some tumor or abscess formed in the pelvis, whether the disease be seated in the ovaria, vagina, bladder, or rectum, or originate in the cellular tissue of the broad ligaments, &c. but sometimes it is merely a contraction,—generally of an inflammatory nature,—of one of the great peritonæal folds, and fleshy fasciculi which it involves (round ligament)[1].

The ascent of the uterus may be so considerable, that the os uteri is with difficulty felt on examination per vaginam; this examination will be almost impracticable, if the displacement be owing to a tumor, which, in raising the uterus, presents in itself a further obstacle. This ascent is generally attended by elongation of the cervix uteri: either the fundus itself of this organ enlarges so as to exceed the capacity of the pelvis, and is obliged to rise above the brim; or, one of its internal appendages, as the ovarium or the Fallopian tube, is largely developed or distended, and draws the uterus so as to attach it, and confound it with the parietes of the sac which they form (dropsies, extra-uterine pregnancies). There is, in that case, lateral inclination almost always at the same time with ascent. This inclination is much more considerable in cases in which the uterus has formed a *hernia*—a subject of sufficient importance to demand a separate chapter.

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[1] These lateral inclinations, which are always inconsiderable, are most common on the right side, like the lateral obliquity during pregnancy. In the *Obs. Anat. de Ruysch*, (p. 82 and plate), there is a case of this kind, produced by a third fleshy fasciculus, resembling the super-pubic ligament, but proceeding from the cervix uteri.

CHAPTER II.

OF PROLAPSUS UTERI.

Definition.—It would be scarcely believed, in the present day, that the possibility of this displacement of the uterus had been for a long time questioned, did we not know how few opportunities were afforded, for many ages, of verifying upon the dead subject the conditions assumed by the diagnosis during life.

Some authors confine prolapsus to the vagina. There is no doubt that this canal frequently becomes relaxed, and is carried down by the uterus in its prolapsus. Relaxation of the vagina and prolapsus of the uterus may, however, occur independently of each other.

There are three degrees of prolapsus uteri:

I. The *Incipient*, usually termed relaxation. In this, the uterus descends towards the lower part of the pelvis, shortening the vagina by filling the upper portion of it, by stretching it, or by carrying it down. In this case, the uterus preserves its usual direction, or nearly so.

II. *Semi-prolapsus.* (*Delapsus.* Kulm.) In this, the os uteri forces its way to the os externum (see pl. IX, fig. 1). The uterus, resting, as M. Gardien says, on the internal surface of the perinæum, fills the vagina, the upper half of which becomes folded within itself, like the finger of a glove with its top thrust inward*. The uterus, thus situated, assumes the direction of the axis of the outlet of the pelvis—that is, that of the vagina.

III. *Complete Prolapsus* (see pl. IX, fig. 2). In this, the uterus protrudes beyond the os externum: it hangs be-

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* "When the uterus has so far descended that it can rest on the perineum, it not unfrequently remains resting upon it as upon a shelf: the violence of the symptoms abating, the parts which suspend the uterus above, although much lengthened, being no longer put upon the stretch."—Observations on those Diseases of Females attended by Discharges; by Sir Charles M. Clarke. Second edition, p. 68, vol. i.—Tr.

tween the femora, covered by the vagina, which is turned wholly inside out, and which embraces not merely the uterus and its appendages, but also the bladder, part of the rectum, and some portion of intestine (see pl. IX). This has been completely demonstrated by Kerkring, Saviard[1], and others[2].

Causes.—The term 'relaxation,' generally used to denote incipient prolapsus, is sufficiently explanatory of the condition it represents: this condition is, undoubtedly, the result of considerable extension of the superior ligaments, and the vagina; but it is wrong to refer this effect exclusively to the latter organ. Those who have considered it merely as a weakness of the vagina, ought to have been undeceived by the numerous cases in which the lax and extensible condition of this canal does not lead to prolapsus; and by those in which the upper part of the vagina, without being dilated, is propelled through the lower*.

The broad ligaments, almost entirely membranous, are of little influence in supporting the uterus, as is proved by the facility with which they are extended during pregnancy. The round ligaments, on the contrary, clearly resist any considerable descent, and especially the inclination backward, inevitable in semi-prolapsus. These are necessarily lengthened by morbid relaxation, especially in complete prolapsus; but, in incipient prolapsus, they are not stretched further than their length and bend permit. The only plausible explanation, then, of incipient prolapsus, is, the relaxation of the utero-sacral ligaments, which is of course much greater still in the other two degrees, since the uterus moves forwards as well as downwards.

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[1] *Nouveau recueil d'observ. chirurgic.* pp. 54 et 65.

[2] *Boehmer, in Disput. chir. Haller,* t. iii, p. 557. *Kulm, ib.* p. 588, etc. *Ruysch Observ. anat.* vii *Jules Cloquet, Thèse de concours pour la chaire de pathog. chir.* pl. viii, fig. 1, 2, et 3. Paris, 1831, in 4to.

* "By experiments made on the dead subject, we find that more resistance is afforded to the protrusion by the connection of the uterus and vagina to the neighbouring parts, than by the agency of the ligaments; for, although the ligaments be cut, we cannot without much force make the uterus protrude. A debility or relaxation of the levator ani and perineal muscles, but particularly an extension and slackness of the pelvic facia and its connection with the uterus and vagina, are in a great measure essential to the production of prolapsus."—Principles of Midwifery, by John Burns, C. M. Sixth edition, p. 125.—Tr.

These ligaments then entirely disappear, their muscular fibres shrivel, and the peritonæal fold, which covers them, is unfolded, in order to stretch over the adjoining parts*.

The first cause of these derangements, then, will often be found in a natural weakness of these ligaments: also, in violent and repeated distension. The former applies solely to young persons; occasionally even, to the unmarried, of whom Degraaf mentions having cured four, by astringents or the pessary. Marguerite Malaure, who was cured of complete prolapsus by Saviard, "had never known herself otherwise." The same practitioner was often obliged to use the pessary in cases of nuns and others. Mauriceau has also frequently witnessed prolapsus uteri in cases of young persons, if not unmarried, at least without children†. But, where parturition has frequently occurred, when we consider the strain which the round ligaments undergo during the ascent of the uterus, and that of the utero-sacral during the second stage of labour, when the cervix uteri, greatly enlarged, is forced violently downwards and sometimes forwards by the head of the fœtus—when we consider, besides, the forcible distension of the vagina, and of the pelvic aponeurosis, on the one hand, and the increased weight, which the uterus retains after delivery, on the other—we have a complete list of the general causes of prolapsus. The same effect is also frequently occasioned by difficult labour, and too early exercise. The weight of the uterus, joined to the relaxation of the vagina, is sufficient to lead to the same consequences from any violence, in cases in which the uterus is diseased, or affected with chronic inflammation, leucorrhœa,

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* Among other causes of prolapsus, ascites may be enumerated. I have seen one case, in which the occurrence of the prolapsus might be traced most distinctly to this cause.—Tr.

† A case is related by Dr. Alexander Monro, in his Works, 1782, and in the Edinburgh Medical Essays, vol. iii, p. 282, of prolapsus uteri occurring in a child three years old: there was at the same time a discharge of blood from the vagina. The swelling could not be returned, and the child died after some time. The author closely describes the prolapsed parts as he found them on dissection, and they are also delineated by a copper-plate.—Richter's Biblioth. Chirurg. vol. vi. p. 664.—Tr.

scirrhus, polypus, &c. It was a cancerous fungus of the cervix uteri, in a case of prolapsus, which induced M. Récamier, for the first time, to remove the entire organ. In almost all cases of congestion of the uterus, and in the first months of gestation, there is a certain degree of prolapsus.

The slight resistance offered by these ligaments, in cases in which they were feeble, has sometimes been suddenly overcome: muscular exertion, violent pressure on the abdomen, the shock in jumping, or a fall upon the nates, &c. has caused complete prolapsus; sometimes instantaneously, at other times gradually. In these cases, violent distension, and perhaps partial rupture of the ligaments, is commonly marked by acute pain in the abdomen, in the region of the sacrum, the loins, and the groins.

Sometimes the resistance is overcome slowly, and by repeated efforts, in cases of habitual constipation: an instance of this kind is now before us (D). Lastly, it has yielded, either to the impulse of a tumor downwards, sufficiently large to weigh upon the uterus, though small enough to sink with it into the pelvis; or, to the dragging of all the soft parts of the pudenda and adjacent region by a large tumor formed under the skin. We shall give, hereafter, an example of the first case, and we could add a second, of semi-prolapsus, occasioned by a tumor in the ovarium, at the age of forty. Dr. Wagner has given an instance of the second (*Bibliot. méd.* t. 13. p. 114). We, in fact, at one time considered a congenital shortness of the vagina as the only real cause of semi-prolapsus.

Symptoms.—In incipient prolapsus, the patient complains of slight dragging in the loins and weight upon the anus, increased by efforts made while standing or walking. The anterior paries of the cervix uteri may be easily reached by the finger, at no great depth, and the os uteri is felt to be supported against the posterior paries of the vagina: this must be raised, in order to find the orifice and to pass behind it; and then a space, larger than natural, is discovered to have been produced behind the os uteri.

In semi-prolapsus, to the dragging and pains of the lumbar and sacral regions, others of the inguinal also are added, and

even of the umbilical. These symptoms are owing to dragging of the bladder and uracus. The weight upon the anus is always felt on rising up and walking; the urine sometimes passes with difficulty*, and more frequently than usual; but, above all, there is a distinct perception of a large body, which seems likely to fall through the os externum upon the slightest exertion. The os externum may, indeed, sometimes disclose the os uteri, filling the inferior orifice of the vagina, or surrounded by a hood†, formed by the parietes of this canal. Its round structure, transverse cleft, and the deep cul-de-sac enclosing it all around, characterize it equally to the eye and finger. The somewhat empty space left in the pelvis by the prolapsus uteri may, at the same time, be detected by the application of the hand to the hypogastrium; and this will be the best means of distinguishing prolapsus from elongation of the cervix‡.

Complete prolapsus is attended with more serious results and more painful dragging; the bladder is, in that case, turned backwards and withdrawn from the pressure of the abdominal muscles, and discharges itself with difficulty and incompletely: the tumor increases whenever the bladder fills, and the catheter is introduced with difficulty: this instrument must be turned backward; and sometimes calculi are formed. The rectum is also obstructed in its functions. But the principal uneasiness arises from the tumor, which increases from six to ten inches, and hangs between the femora (*Hoin*, *Saviard*). This tumor is sometimes globular, oval[1], and strangulated at its origin; but most frequently conical, large at the base, and

* Sir Charles Clarke observes that strangury arising from prolapsus uteri, may be distinguished from that which arises from other causes, by its going off when the patient lies down.—Tr.

† See the wood-cut, at p. 54.

‡ Elongation of the cervix uteri is best ascertained by tracing it with the finger, introduced first in vaginam and then into the rectum; or, if pregnancy does not exist, by passing a probe into the os uteri.—Tr

[1] See Ruysch *Observ. anat. chir.* fig. 8, 11, and *Thesaur. octav.* tab. ii, fig. 3. This tumor, which hangs sometimes lower than the middle of the femora (*Mauriceau, obs.* 96), allows us to ascertain, in certain cases, that the uterus has not exceeded its natural volume. It forms merely the summit, i. e. the lowest part of the protuberance, the rest of which encloses some intestines. See also Hoin, quoted by Sabatier. (*Ac. chir.* t. iii, p. 366.)

filling the os externum, the labia of which extend along its sides: at the bottom there is an orifice which is perceived to be the os uteri, although it is sometimes narrowed[1], rounded, or semi-lunar, &c. From this orifice there is a continual discharge of mucus,—and, at the due periods, of the catamenia: there is also a flow of mucus, sometimes puriform, from the whole surface of the tumor*, which is generally inflamed, ulcerated, and even encrusted. It is only in cases where the prolapsus is nearly congenital, that the mucous membrane of the vagina, when reflected, can endure the contact of the external air, of the femora, and of the clothes, or dry up and assume the appearance of skin: we have a case of this kind before us at the present time (April 1832): the same observation has been made by Saviard and Lafaye. It is well known that such cases as these, as well as the rudest resemblances, have caused ignorant and credulous persons to believe in the existence of hermaphrodism in cases in which there was no mal-formation to warrant such an error: this was the case with Marguerite Malaure, and Marie Lemarcis, who was merely afflicted with prolapsus: in the latter instance, Dr. Duval was grossly deceived by a resemblance between the cervix uteri and the male glans, which had been pointed out a long time before.

Prognosis.—Besides the above-mentioned symptoms, impregnation may also be checked, the os uteri being closed by its contact with the vaginal parietes[2]. Where impregnation has taken place, as occurred in a case of complete prolapsus[3], inconveniences ensue, which will be spoken of

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[1] *Orificium uteri ita angustum, ut vix, ac ne vix quidem, acu in cavitatem uteri penetrare potuerimus.* (Boehmer Disput. chir. Haller, t. iii, p. 558.)

* In some cases, especially when there are slight excoriations about the cervix, the discharge is in such abundance that I have seen more than four drachms collected in four hours. This fluid I sent to Dr. Prout, who was kind enough to examine it: it consisted of serum with flakes of lymph.—Tr.

[2] Madame Boivin witnessed a case of prolapsus which was complete during the day, but reducible at night, and in which the patient became pregnant twice. It made its appearance after a difficult labour, during which the perinæum had been much lacerated. The woman was contented with a suspensory bandage, the pessary being troublesome.

[3] Chopart, *Mal. des voies urinaires.* 2e édit. t. i, p. 389, d'après Marrigues.

hereafter: but, independent of pregnancy, the uterus becomes swelled and elongated almost to twice its natural size; its cervix becomes lengthened, and it is then liable to violent inflammation, to various diseases, and even to gangrene. Dr. Elmer saw a case, in which a small portion of the uterus, having escaped by the os externum, became affected by gangrene; after two years, the prolapsus became complete from travelling in a cart: the uterus swelled and became sphacelated altogether; it separated after some days, and the patient speedily recovered[1]. Rousset records three similar cases: in one of them the uterus, which had long been gangrenous, was found, on dissection, entirely wanting[2].

Complications.—The prognosis of the disease, however serious, is aggravated by any of those complications, which may be viewed sometimes as the effects, and sometimes as the causes, of the principal affection:—as, prolapsus vaginæ, leucorrhœa, dropsy, scirrhus, enlargement of the ovarium, chronic congestion, cancer of the uterus, polypus, &c. These may indeed alter the symptoms throughout; may render the reduction of the prolapsus impossible*, unwarrantable, or temporary, and call for particular operations and remedies: the same may be said of calculus[3], or pregnancy.

In some cases, pregnancy exists previously to prolapsus. In one instance, in which the prolapsus was little more than incipient, the result was fatal: this would perhaps never have occurred, if the bladder had not been allowed to become excessively distended. In this case, the urethra was closed by the descent of the uterus into the pelvis at the fourth month

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[1] *Ann. lit. méd. étr.* t. vi, p. 676. Rousset, *partus cæsareus*, p. 337, 353, et 354.

[2] See also *Zuinger*, *Act. nat. cur.* t. i, *obs.* 36.

* "In inversion of the vagina and prolapsus of the uterus, if, after death, the cavity of the pelvis be examined, the fundus only of the uterus can be seen, with its appendages, very imperfectly, or the whole of the uterus is hid entirely: the bladder then appears to be in contact with the rectum. In this state of the uterus and its appendages, I have known adhesions formed between them and the neighbouring parts. These must have rendered the reduction of the uterus and the vagina to their natural situation very difficult, and perhaps, till the adhesions were a good deal elongated, impossible."—Dr. Baillie's Morbid Anatomy. Fourth ed. p. 419.—Tr.

[3] Saviard, p. 93. Ruysch, *Thes.* viii, p. 27.

of pregnancy[1]. It has often happened that incipient prolapsus, having disappeared during the first months of pregnancy, has returned at a later period, and even during labour[2]. In the case of Ducreux, quoted by Sabatier[3], it would seem as though complete prolapsus first took place at the time of labour. In other cases, the uterus remains partly in the pelvis, partly without, up to the full period of pregnancy: such are—1, that of Wagner, in which, as we have said, the uterus was dragged down by a large tumor of the mons veneris; and, 2, that of Chopart, mentioned above. The inconvenience in those cases must have been considerable; yet the labour terminated favorably in both instances, without reduction of the prolapsus, which was impossible. Reinick mentions a case, published by Kulm[4], in which the reduction might perhaps have been effected This was performed by Mauriceau at the fourth or fifth month[5], and by Giroud only six days before labour. On the other hand, M. Capuron had one case which proves that prolapsus may cease to be reducible after the first month of pregnancy[6]; and another, which shews that the inconvenience attendant upon this state may lead to abortion*.

Palliative Treatment.—Incipient prolapsus may be left without treatment for a long time, without much inconvenience, by merely avoiding all aggravating circumstances. It has often remained during life, without occasioning serious uneasiness; but, in most cases, it goes on increasing, and imperceptibly becomes complete; it then renders the patient liable to much suffering, though some persons have survived many years. This neglect may preclude all possibility of reduction, at an advanced period, and oblige the practitioner to content himself with a bandage, to protect the parts from

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[1] Kulm, *Disput. chir.* Haller, t. iii, p. 587, etc.

[2] Mauriceau, *Obs.* vi. Paul Portal, *Obs.* x. Brodmann, *Ephem. decur.* ii. an. 3, p. 375.

[3] *Ac. de chir.* t. iii, p. 368.

[4] *Disput.* Haller. t. iii, 4, *L. C.* [5] *Obs.* 67 and 95. [6] *Mal. des femmes*, p. 301.

* Irreduced prolapsus generally leads to abortion. I have seen several cases of this kind. In a case, in which the uterus was reduced and supported by a globular pessary, the ovum was expelled without the pessary being displaced.—Tr.

shocks and friction. Nevertheless, we must not despair of reducing the worst cases. Saviard succeeded in the case of Marguerite Malaure, though her disease had continued so long; Mauriceau, and others, as Hoin and Leblanc, quoted by Sabatier, aimed at diminishing the volume of the tumor, in the first instance, by rest, bleeding, emollients, baths, diet, &c. and, afterwards, they succeeded in reducing the most frightful cases. Dr. Bobe-Moreau thought the pressure produced by a bandage the only means of reducing cases of long standing; and this mode, already proposed by Léveillé, has been successful[1]. In these difficult cases, the bladder should first be evacuated by the catheter, and the rectum by a clyster.

It would, however, be rash to make these attempts where many obstacles are presented: the consequences have been metritis, peritonitis, and death[2*].

But even when reduction is effected, all is not accomplished—the uterus must be supported. This is effected by *palliative* and *curative* treatment; the former embraces mechanical contrivances for sustaining the uterus when replaced; these consist of plugs of different kinds, and of *pessaries* varied in form and material.

The uterus, in incipient prolapsus, may be supported by a fine sponge, of a cylindrical or oval form, a little larger than the natural dimensions of the vagina: it is introduced just under the os uteri, after being thoroughly oiled and squeezed between a pair of forceps; a thread passed through it serves to withdraw it; it may be maintained in its place by a bandage.

This would be insufficient in complete prolapsus, especially if reducible; patients have therefore made for themselves pessaries or plugs of wood, cork, wax, metal, &c.

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[1] *Bull. fac. méd.* 1815, no. 4.

* Care should be taken to ascertain if inflammation has ever attacked the internal parts of the tumor. If the effort to return it is attended with great pain, the attempt should be abandoned. Bands of organized lymph may compress some parts of the intestinal canal when the tumor has been reduced, and the patient may be exposed to all the hazard of strangulated hernia.—Sir Charles Clarke, vol. i, p. 124.—Tr.

[2] *Nouvelle Bibl. méd.* 2e année, t. iv. p. 215.

according to their fancy, of various forms, and sometimes of surprising dimensions. From the use of these, excoriations, ulcers, and even fistulæ, have ensued ; and painful operations have been necessary in order to extract them. A portion of the uterus has been even known to pass into a hole in a pessary which was badly made, to become strangulated, and to form a large tumor, which was only released by the division of the pessary[1]. In England, they retain the use of the wooden pessary, of a round or oval form, and drilled with holes ; in France, cork, formerly used, has given way to caoutchouc and wool ; the form is the same ; it is only in particular cases (vaginal hernia) that the *bung-shaped* pessary is preferred to that of the conical form. This latter is a hollow, truncated cone, the base of which receives the os uteri, whilst the summit is sustained by bands fastened to a girth. M. J. Cloquet has improved its shape by making it flat and curved from before to behind, and calls it by the name of *élytroïdes*. The *ring pessary* is necessarily large, in order that it may retain its situation high in the vagina, and it creates much uneasiness by its pressure upon the bladder and rectum ; it is therefore contra-indicated in cases of inflammation, or undue sensibility of the uterus. It is rendered less inconvenient by being made oval and placed transversely. Bruninghausen allows three inches in breadth, in order that it may rest upon the ischio-pubic parts of the pelvis, if the vagina be very relaxed ; he has also hollowed it out, before and behind, to prevent pressure upon the bladder and rectum. It seems to us, however, unlikely to maintain its place steadily : it were better that the vagina were uniformly expanded, affording, as it were, a nest to the instrument, to secure it in its place ; the slight uneasiness, felt at first, becomes still less, and the only inconvenience is an increase of the mucous secretion of the vagina. For this purpose, the pessary should rather exceed the dimensions of this canal[2] ; its edge should be carried at once as far up as possible ; it should then be turned, so that its circumference may

[1] *Bibl. méd.* t. xvii, p. 259.

[2] They are made from three inches to an inch and a half in diameter.

be every where in contact with the vagina. In order to accomplish this last movement, the finger may be pressed upon the lower rim of the pessary, whilst by a little cord, attached to the upper rim, it may be drawn downward: this cord is further useful for withdrawing the instrument.

It has been found that pessaries of elastic gum give much pain, in consequence of the size required; and, in cases of complete prolapsus, they are insufficient; the *cup-and-ball* pessary ought then to be employed. Bauhin formed pessaries consisting of a silver ring attached to a stem of three branches; ivory or box is preferable for this purpose: this ring, which is the essential part, is rather small, presents a thick rounded surface, with its central orifice rather larger than that of the *ring* pessary; it is continuous with a little cup with three holes, supported by a stem, generally straight; this stem, however, would answer the purpose better if it were bent, so as to be adapted to the direction of the uterus and vagina, respectively; it is attached to cords, which are themselves attached to bandages passing round the thighs, and, in their turn, secured to another passing round the body. The weight of the uterus cannot displace this instrument; and as to the inconvenience of sitting, and the dread of shocks communicated from the exterior part of the instrument to the uterus, they may be avoided by using a spiral spring for the stem, as suggested by M. Récamier: the insertion and removal of this instrument are very easy.

Curative Treatment.—Rest and the recumbent position, the pelvis being raised upon a support, together with the continued use of pessaries, gradually diminished in size, have sometimes restored the ligaments to their natural tone. The same thing has been effected by the occurrence of pregnancy, either temporarily *(Saviard*, p. 55), or permanently *(Pechlin, quoted by Boehmer)*. In cases of simple prolapsus, resulting rather from relaxation of the vagina than of the ligaments, it has been found useful to employ astringent injections, and fomentations made of the decoction of plants containing tannin (*bistorte*, Provence roses, catechu, kina, &c.) or saline solutions (acetate of lead, sulphate of zinc, alum, sul-

phate of iron, tartrate of potassa and of iron), cold baths, and cold applications to the vagina. These remedies should be used somewhat cautiously, as inflammation has sometimes followed; it will be proper to add enemata of the same kind, and tonic frictions about the groins. Osiander's bag, made of tan, and saturated with strong wine, has only the advantage of acting without intermission; its operation is restricted to the vagina: it acts also, however, as a pessary.

A much more decided mode of cure has been proposed:—viz. to close the vagina by the adhesion of its parietes. The success of this attempt is doubtful; for the mucous membranes do not adhere readily by simple inflammation, as is seen in the attempts to cure urinary fistula; and even this inflammation itself may not be without danger.

Dr. Marshall Hall* has lately cured a case of complete prolapsus, by artificial contraction of the vagina: a strip of

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* We think the case, to which the authors refer, so important, that we shall insert it here:

"The patient was a poor woman, whose bread depended upon the labour of her hands. Her sufferings, from the prolapsed state of the uterus, were often extreme, and she was frequently disabled from engaging in her various occupations.

"For several years there had been complete prolapsus of the uterus; to this were also conjoined a partial descent of the bladder at the anterior, and of the rectum, formed into a pouch, at the posterior part of this prolapsus. The os uteri protruded at least two inches beyond the os externum.

"It occurred to me that, if the canal of the vagina could be considerably, permanently, and firmly reduced in its diameter, the uterus would be supported in its place, and prevented from resuming its prolapsed situation; and that this might be done by removing a portion of its mucous membrane along the anterior part, and by bringing and returning the denuded surfaces in contact by successive deep sutures, until they should unite by cicatrix.

"This operation was performed by Mr. Heming, of Kentish Town. The uterus being protruded as much as possible, by the efforts of the patient, two parallel incisions were made through the mucous membrane, from the sides of the os uteri, along the course of the protruded vagina, to the os externum; the portion of this membrane situated between these incisions was then removed, leaving a space of an inch and a half in breadth, and of the entire length of the vagina, completely denuded. A suture was then inserted near the os uteri. This suture being tightened, the os uteri was obviously pushed upwards. A second, a third, and other ligatures, were then inserted, in the same manner, at short intervals, to the os externum; each ligature, on being tightened, moving and supporting the os uteri upwards.

"This operation was attended with little pain; the only sensitive parts of the membrane being those near the os uteri and os externum.

the mucous membrane, an inch and a half wide, was removed along the whole of the canal, and the wound was sown up.

" The patient was directed to keep quiet in bed. The bowels had been opened. An opiate was given. No pain or fever followed. In four or five weeks the denuded parts had firmly united, and shortly afterwards the ligatures were come away.

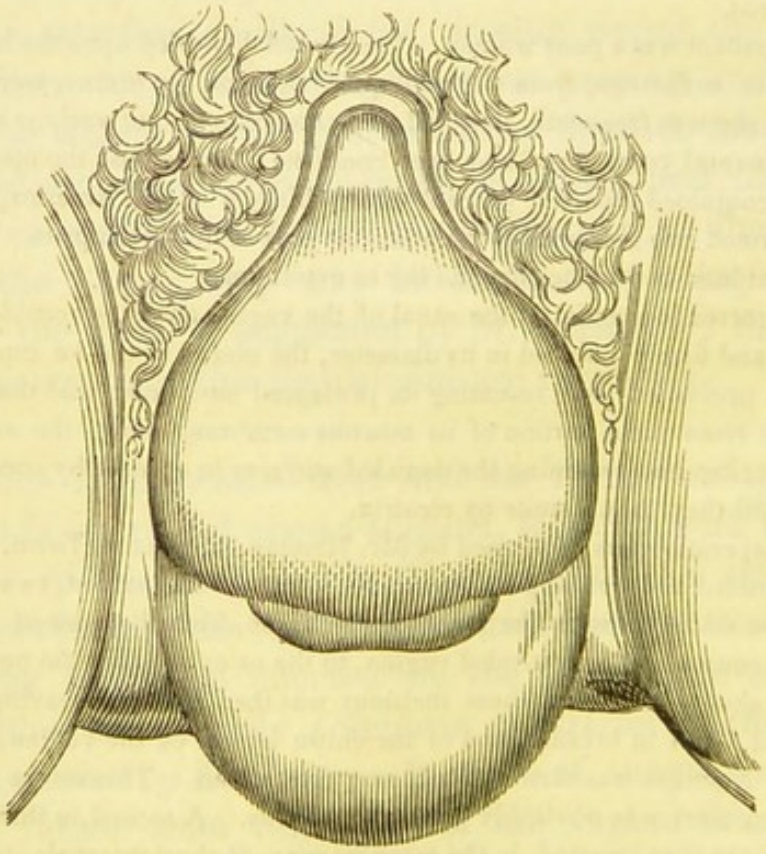
" On examination, six, eight, and ten weeks after the operation, the os uteri could be just felt *in situ*, by the finger passed through the vagina: the vagina was firmly contracted along its whole course.

" The prolapsus of the uterus was thus completely remedied. The descent of the pouch of the rectum was lessened.

" 14, Manchester-square, Nov. 1831."

P.S. The principle upon which this case was treated, is illustrated by a fact, detailed to me by Dr. Holland, of Queen-street, May Fair. A pessary introduced in a young person to support the uterus, subject to be completely prolapsed, induced great inflammation. This was followed by such firm contraction of the vagina, that the uterus ever afterwards remained in its proper situation.

The subjoined cut represents the anterior and posterior pouches formed by the descent of the bladder and a portion of the rectum, and the intervening tip of the cervix uteri.



We have only to add, that the patient was examined by Mr. Vincent, surgeon to Bartholomew's Hospital, at the beginning of the present month (November 1833), two years after the operation, and the uterus and bladder were found perfectly supported in their proper situation.—Tr.

We hear nothing of hæmorrhagy*, and are assured that the patient suffered neither pain nor fever after the operation. Time will shew whether the cure will be permanent†, and whether the vagina will not be pushed back or dilated again by the weight of the uterus: the operation had been performed only ten weeks when the case was published.

Treatment of Complications.—Prolapsus Vaginæ, which frequently accompanies that of the uterus, requires no separate attention; leucorrhœa, which is a cause, or an effect, will either disappear after reduction, or yield to the remedies applicable to both diseases, or to those which are adapted peculiarly to itself.

Inflammatory swelling, accompanied with remarkable sensibility of the uterus, during the first or second stage of prolapsus, is a complication of a more serious nature. The use of astringents and the pessary would be manifestly improper in this case; and Madame Lachapelle recommends that they be laid aside, even in cases in which the prolapsus would otherwise demand them. The hip bath, emollients, leeches, &c. will perhaps gradually remove the sensibility and swelling; and then the uterus, being less weighty, may be supported by a small piece of sponge, or even require no mechanical aid at all. Rest and the recumbent posture may lead to the desired result, though it may be the work of many tedious months.

This swelling and pain, with the ulcerations upon the surface of the inverted vagina, are complications which seem to some practitioners—to Ruysch especially—to contra-indicate reduction; others, considering these injuries as effects only of prolapsus, and having no such alarm, prepare the patient, by local applications and rest in bed, for the operation; they afterwards use emollient injections and solutions, acetate of lead, &c. before the pessary is applied. Such is the mode of treatment adopted by the practitioners already quoted; and their hopes have been realized.

Scirrhus, if inconsiderable, would not be a sufficient objection to reduction of the uterus, and to the application of pes-

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* There was scarcely any.—Tr. † See the preceding page.—Tr.

saries, suited to the altered form of the organ. If, however, there be cancer of the whole uterus, or if the cervix be alone, yet severely, affected, or if there be the complication with polypus, reduction of the uterus would afford but slight relief, and deprive us of the advantages which the state of prolapsus presents in favour of the application of the ligature, or of incision. The polypus, for instance, could be more easily tied before reduction, and the reduction would be easier when the excrescence had been removed; and as to cancer, we shall see, in the progress of this work, that a part of the cervix uteri, thus diseased, has often been successfully removed; and this operation would be much easier during prolapsus,—which is, indeed, the very thing desired,—and attained only by considerable violence and incompletely in other cases. We shall see that, in extensive disease, the whole organ has been removed; but this operation and its consequences are so formidable, that it will probably be eventually interdicted when the uterus is in its place; but, in prolapsus, the use of the scalpel or ligature is much easier, and the chances of success greater: this is seen in the case of Rousset, in which the ligature, applied to the uterus in complete prolapsus[1], cured the patient[2]. More recently, MM. Récamier and Marjolin[3] have successfully removed, with the double ligature, the entire uterus much prolapsed and easily drawn outwards, in a case in which it was extensively affected with cancerous fungus. Ruysch *(obs.* VII), however, relates a case in which the ligature caused death, by closing the urethra and inducing fatal retention of urine*. The interesting case, lately published by professor Delpech, proves that, in complete prolapsus, injury of the bladder would be hazarded by

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[1] No doubt the ligature was applied below the part of the tumor containing the bladder, which, in such cases, always descends less than the uterus: perhaps the bladder was also but little out of its place. It appears that its natural attachments to the cervix uteri lengthen greatly, when the progress of the malady is slow; and that the uterus, and even the vagina, slip beneath the bladder before they drag it out of its place.

[2] *Part. cæs.* p. 334. [3] *Revue méd.* 1825, t. iv, p. 393.

* A sound ought surely to be introduced, in order to ascertain whether the bladder be contained in the inverted vagina.—Tr.

a ligature applied, or by the bistoury used, unskilfully. In this case, the patient being sixty-six years of age, a large tumor was formed outside the os externum, near the uterus: the whole cervix, as well as the parietes of the vagina, was inverted, and covered with hard, ulcerated, cauliflower growths: repeated hæmorrhagy induced her to submit to an operation. The bladder had been drawn down by the uterus; it was necessary to separate from it the anterior paries of the vagina, and a part of the rectum, both of which were involved in the disease: many arteries were tied, and the space left in the remaining portion of the vagina was filled with sponge, to keep the parts in their place. The consequences were not very serious; the cure was complete. The omentum, by adhering to the wound of the vagina, facilitated its closure.[1]

The presence of calculi in the bladder makes it difficult, sometimes, to reduce the uterus *(Saviard)*; but experience has proved that they may be safely removed by direct incision[2]. This, then, is a complication to be first removed. Another complication, which suggests some practical consideration, is pregnancy.

Common sense suggests the propriety of returning the uterus, and retaining it in its place by the pessary,—or by absolute rest, if the pessary cannot be borne,—during the first months of pregnancy, in cases of complete prolapsus. In semi-prolapsus, the uterus generally rises spontaneously in the fourth month; nevertheless, the case should be watched, and any inconvenience, from retention of urine or otherwise, must be obviated. At the time of labour, the efforts of the patient should be judiciously directed; she should lie on the back, the pelvis raised; and the edges of the os uteri should be supported during each pain by the fingers introduced in vaginam. If the prolapsus recur, or continue during gestation, and seem for the moment irremediable, the delivery should not be entrusted to nature alone. As soon as the cervix is effaced, and the os uteri becomes thin at its borders, and begins to open, it would be right to follow the example of Mauriceau,

[1] *Memorial des hôpitaux du Midi*, t. ii, p. 612. [2] *Ruysch*, thes. viii.

Portal, Ducreux, and Wagner, who, after gently dilating the orifice with the fingers, carry the hand into the uterus, and extract the fœtus, and then the placenta; afterwards, as soon as the organ has contracted, attempts should be made to effect its reduction. It is only in some rare cases of induration, or disease of the os uteri, that it is necessary to enlarge this orifice by incision. *(See the cases of Chopart, Capuron, and Brodmann).* If the head of the fœtus present, with a discharge of the liquor amnii, the forceps may be used with propriety.

CASES.

1. *Prolapsus in consequence of Congenital Shortness of the Vagina.*

Madame la Comtesse de B——, twenty-five years of age, of sanguine temperament, had been regular from her fifteenth year. Since her marriage, which was five years ago, the catamenia had greatly increased, assuming, at times, the character of menorrhagia, with repeated uterine inflammation. I was consulted, September 1829. The period of the catamenia was at hand; the right labium pudendi was swollen and painful. This tumor formed regularly as the catamenia came on, and disappeared when they were passed. The vagina was but an inch in length, or rather was formed, as it appeared, by teguments of the os externum, the os uteri being close upon this orifice, and protruding upon the slightest exertion. Suitable means having been adopted, the catamenia ceased in the month of June, 1830; a little blood was taken from the arm at the period of their usual return, and total rest on the sofa prescribed till the 6th of September. The general health and appetite were good, and the sleep regular: the circumstance of pregnancy I could not ascertain, as I saw the patient no more.

2. *Prolapsus, attended with Pain, cured by Emollients.*

Madame la Princesse de C——, twenty-two years of age, fair and of lymphatic temperament, had three children at the full term, in thirty-two months: in the last pregnancy she could neither stand nor walk without pain; the labour proceeded slowly, the patient lying on her side. After delivery, there was a sense of pain in the lower part of the abdomen, and the lochia continued to flow nearly six weeks. The patient did not nurse her child. I found the uterus greatly enlarged, about six inches in length; the cervix swollen and painful, and resting on the perinæum: there was also leucorrhœa. Various injections had been already used; I prescribed entire rest, and forbad all injections for some days. As soon as the patient was restored by rest, the physician returned to the use of injections, composed of the decoction of Provence roses and ratanhia, which stopped the leucorrhœa and reproduced the pains. Being consulted some weeks later, I found the patient in good general health, but uneasy about the pain. The uterus was reduced to its natural volume, but was still low down, and the anterior part of the os uteri was extremely sensible. The astringents were laid aside, and narcotics, emollients, injections, and the hip-bath were adopted, with local application of leeches. The patient improved.

It was evident, in this case, that astringents and mechanical applications were improper; the uterus was obviously congested, and its weight overcame the resistance of the ligaments.

We proceed to add a case, extracted from the papers of Madame Lachapelle, in further proof of the caution required in the use of means which tend to renew painful irritation:

"I prescribed, several times, the use of the pessary for Madame B——; to which she objected. After a closer examination, I became of her opinion. In point of fact, although the uterus is situated very low down, and carried forward, so that the finger comes in contact with the os uteri

at the very entrance of the vagina—a condition which calls for the use of the instrument—there is a contra-indication, a remarkable hardness, and a sensibility so acute that the uterus cannot be moved without pain; besides a sensible state of the mucous membrane of the vagina. It was better, therefore, for the patient to use emollients, and bear patiently *the sense of weight of which she complained.*"

3. *Semi-prolapsus after Delivery.*

A young woman, eighteen years of age, had been safely delivered of her first child: she nursed, and returned to her avocations on the twelfth day after her confinement. From that time she felt a weight, a sense of bearing down; afterwards, the uterus almost protruded from the os externum; especially during the efforts at defæcation, the patient being habitually constipated. During the day the part was supported by a common bandage; by night it returned. I found the uterus almost projecting through the os externum: the cervix, fourteen or fifteen lines in diameter, was of a deep red colour; the os uteri was widely open, and a puriform, whitish fluid issued from it in great quantity. (See pl. IX, fig. 1.) I easily replaced the organ, and supported it with a ring pessary of elastic gum, *twenty-four lines in diameter;* which I so placed, that, in the erect position, the cervix uteri rested over the hole of the instrument. I then recommended injections per vaginam; at first, emollient; then consisting of a slight decoction of tea; and, lastly, of Provence roses, with half a dram of alum to the pint. In six months the pessary gave pain; the vagina was more firm and contracted. The instrument, which was, even with difficulty, withdrawn, was replaced by the cup-and-ball pessary, made of ivory, and of a smaller size, which gave no inconvenience. The contraction and augmented firmness of the organs promised a complete cure. It appears that this patient became pregnant some time afterwards.

4. *Complete Prolapsus, reduced, and supported by the Pessary.*

1. A chamber-maid, twenty-four years of age, who had given birth to a child the preceding year, without suffering any subsequent indisposition, felt something, all at once, give way in the abdomen, while jumping down four stairs at once; a projection from the os externum was felt, and miscarriage was apprehended. The uterus was entirely projecting, and of its usual volume: the patient complained of slight dragging in the groins, and in the iliac and sacral regions. I replaced the organ, secured it with the round pessary, and prescribed tonic injections (pl. IX, fig. 2).

2 and 3*.

5. *Dropsy of the Ovaria, followed by Rupture, and accompanied with complete Prolapsus of the Uterus, of the Vagina, and of the Bladder. Post-mortem Examination.*

A woman, fifty years of age, a dealer in vegetables, had been subject for a year to prolapsus uteri, for which she had been advised to use the pessary. In fifteen days the pains in the neighbouring parts became insupportable. This prolapsus had been preceded by pains in the iliac regions, and progressive enlargement in the abdomen. The tumor, of an oval shape, and of the size of the fœtal head, presented, on its exterior surface, the mucous membrane of the vagina. It was reddish, and in many places much ulcerated towards the base. Towards the summit were some circular folds; and near the pubes was seen the meatus, through which the urine passed when the tumor was pressed. It was evident that the prolapsus was owing, in a great measure, to an unnatural enlargement in the abdomen. The uterus had been, to the

* The original work contains two other cases; but, as they really present no additional fact, I have thought it right to omit them. The latter of them is illustrated by plate X, in the atlas.—Tr.

last moment, supported by a suspensory bandage. The overflow of urine was not the only cause of the ulcerations near the orifice of the cervix uteri; for the patient had, also, involuntary alvine evacuations. On pressing the tumor, I evacuated the bladder, and easily replaced the whole within the pelvis. I endeavoured to support the organs with a lint plug covered with wax; but they again protruded in two hours. They were then merely confined in a waxed cloth, to secure them from external injury. After some time, the patient complained of violent pains in the left side, which increased so much that she died, uttering piercing cries.

Post-mortem Examination.—A copious effusion of sanguineous fluid was found in the peritonæum. A voluminous reddish-brown cyst presented traces of a recent rupture, which explained the agony felt at the last moments: it was formed by the left ovarium; the right ovarium, as large as the fœtal head, contained a blackish, tenacious fluid. The tissue of the cysts was of unequal thickness and consistency. The thickest parts were soft, and friable under the finger; the thinnest, two or three lines in thickness, were fibrous and solid.

The posterior surface of the bladder adhered entirely to the anterior paries of the vagina, and consequently descended in the prolapsus. A little gravel was mixed with the urine. The uterus, otherwise healthy, was placed horizontally beneath the bladder; its fundus behind, and its cervix before, adhered to this organ; the edges of the os uteri were effaced, and surrounded with ulcers.

CHAPTER III.

OF ANTEVERSION.

This displacement, one of the most common to which the uterus is subject, is frequently overlooked, both by writers and practitioners, even since the observations of Levret[1], Desgranges, and others[2],—doubtless, because it is most frequently complicated with some other affection of this organ, which exclusively occupies the attention[3].

The natural inclination of the uterus forward must be obviously increased when the bladder is empty; but this slight deviation is neither inconvenient nor morbid, and is soon rectified by a change of posture or repletion of the bladder. The case is altered, however, when the weight of the uterus, increased at its fundus and anterior part by congestion, permanently extends the utero-iliac folds of the peritonæum; these gradually yield, and in the erect position, the fundus of the uterus descends forward, presses on the bladder, into which it sometimes sinks, while the os uteri is carried backward, and is at sometimes even raised, pressing, in both cases, upon the rectum.

Increased weight is, then, the ordinary cause of this deviation in the direction of the uterus; and it would be more frequently induced by pregnancy, were it not that the volume of the organ increases proportionably at that period, and that the broad ligaments, put on the stretch and shortened, carry the body of the uterus above the pelvis. If it incline more forward at that period, which is generally the case, it is not anteversion, but *obliquity*—a deviation wholly obstetric, although anteversion may, in reality, have existed at the beginning. There is only one well-corroborated case of

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[1] *Ancien Journal de Médecine*, t. xl, p. 175, &c.

[2] *Ancien Journal de Médecine*, t. lix, p. 35. See also the article '*Utérus*,' by Désormeaux, in the 'Dictionnaire de Médecine,' and the '*Thèse*' of M. Ameline on Anteversion. Paris 1827, no. 55. Several observations, belonging to Madame Boivin, have been published in that dissertation.

[3] Morgagni, *Epist.* xlvi, art. 16.

anteversion, in the second month of pregnancy; we allude to that communicated by Chopart to Baudelocque. We have seen a case, in which the fundus of the uterus inclined forward, lower down than the cervix, and reduction seemed impracticable; yet this was accomplished by nature alone, during the progress of gestation (B).

We have had frequent occasions of observing, after parturition, a decided inclination of the fundus uteri forward: this condition is intermediate between *obliquity* and anteversion, and, perhaps, more frequently than is supposed, renders delivery difficult and assistance necessary, especially if the placenta be situated forward: but this does not belong to our present purpose, which is to treat of the uterus in its unimpregnated state. The uterus, in this case, retains an increased weight, which, joined to the relaxation of all its attachments, especially of the vagina, would certainly induce a great liability to anteversion, in case of violent efforts, or premature exercise on foot, an event which has actually been known to take place. A similar effect has been produced by a fall, under the same circumstances[1].

It appears that the uterus may, at times, incline forward without any congestion[2], in consequence of repeated effort, as in a laborious business (*Desgranges*), or vomiting, as in the case of anteversion, with incipient pregnancy, given by Chopart; or difficult defæcation, as we shall hereafter show: indeed, any physical effort may induce this result. Lastly, it is certain, that morbid attachments, resulting from inflammation of the uterus and peritonæum, may lead to this inclination, and that, permanently*. In a case, communicated by Madame Legrand to M. Ameline, adhesions of the os uteri to the posterior paries of the vagina were the supposed causes of incurable anteversion, and were followed by atrophy of the

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[1] Madame Legrand, quoted in the Thèsis of M. Ameline, p. 45.

[2] Out of twelve cases, M. Ameline counted nine which followed after congestion, and three without it (*Thèse citée*). This proportion can hardly form a rule; the difference is really greater.

* Among other causes of anteversion, may be enumerated an accumulation of fæces in the sigmoïd flexure of the colon. See *Lehrbuch der Gynäkologie*, by Carl Gustav. Carus, vol. i, p. 377.—Tr.

viscus; but such adhesions are not always attended with anteversion. Is not this rather owing to the contraction of the utero-sacral, coinciding perhaps with that of the super-pubic, ligaments, which have been found shortened in several cases, either simply, or with inflammatory congestion? In the first case, this shortening is owing to the long continuation of the displacement, which it renders, in its turn, almost incurable (*Levret. Morgagni. Stoll. Saxtorph*). But, even supposing the contraction of the super-pubic ligaments could induce a certain degree of deviation, it would absolutely prevent that degree mentioned by Desgranges, for the fundus, being then lower down than the cervix, would extend the fleshy fasciculi violently, and cause acute pain in the inguinal regions.

This pain is not commonly a symptom of anteversion; for it is more generally felt in the lumbar and epigastric regions, owing to the dragging of the ovarian plexuses, which proceed from the great sympathetic. The paient is conscious of a weight, when walking or sitting, about the rectum and bladder: the os uteri presses on the intestine, the fundus rests upon the bladder, and forces it to evacuate itself more frequently than usual; sometimes it even falls lower, and presses upon the neck of the bladder, inducing retention of urine (*Desgranges*); while the os uteri, forced backward, sometimes arrests the passage of the fæces along the rectum. These inconveniences, which cease, for the most part, when the patient lies upon the back, unless there be adhesions of the uterus, have often masked the nature of the disease. Stone in the bladder has been suspected; and it was not until Levret had performed an unsuccessful operation of lithotomy, that he verified, for the first time, the existence of anteversion: the tumor, formed in the bladder by the fundus uteri, is not, however, so hard as a stone, nor does it give the sensation of a calculus, on passing the sound; and, on examination per vaginam, the finger feels the anterior surface of the uterus, when the patient stands up or sits on the edge of a chair: sometimes the vagina is partly obstructed by the fundus uteri inclining forward, either directly, or a little more on one side than the other, so as to constitute a sort of *latero-version*—the only one of that kind, perhaps, which can exist. The os uteri is always very backward,

and must be sought in the concavity of the sacrum: though generally fallen with the rest of the uterus, it is sometimes raised so high as to be hardly reached by the finger. If the os uteri be brought forward by the top of the bended fore-finger, and the fundus pushed back by it, it is easy to restore the organ to its natural direction, though it immediately falls back into its unnatural position. In one case only,—that of adhesions caused by inflammation,—this replacement cannot be so quickly effected; but, independently of this, the pelvis presents no obstacle to reduction: the pubes, inclining forward and downward, allow the fundus uteri, even when swollen, to pass easily—an advantage not so favourably afforded by the sacrum in cases of retroversion. In these circumstances, we may generally ascertain that the uterus has more weight, volume, and sensibility than usual. This state of congestion or of chronic inflammation, which we consider, with Levret, a frequent cause of anteversion, may, sometimes, be the actual effect; and this has appeared the more common event to several practitioners, and, among them, to Désormeaux, according to whom chronic metritis frequently appears only when the disease has been of rather long continuance: it is equally certain that acute metritis, after labour or a fall, may pass into a chronic state and produce anteversion, which will only yield with the original disease.

These considerations are very valuable in practice: for, if chronic metritis be almost invariably a cause of anteversion, mechanical means and pessaries should be cautiously employed, for fear of irritation. Madame Lachapelle seldom had recourse to the pessary in cases of anteversion; and we ourselves have often succeeded by the use of antiphlogistics (leeches to the groins and pudenda), emollients (baths, lavements, fomentations, cataplasms, seldom injections), narcotics, and rest upon the back, raising the pelvis a little upon a pillow. This treatment has been required for several weeks, and even months. Nevertheless, we would recommend mechanical means in cases where the uterus is little sensible and slightly congested: and, if we are less disposed than Désormeaux to believe that chronic metritis will subside in this way, because the effect is destroyed by removing the

cause,—we still think that this metritis may disappear under the influence even of a mechanical irritation.

The use of the pessary, as a means of cure, is easily explained. Levret thinks it should be applied, for this purpose, for about a year or fifteen months; at which period the leucorrhœa, caused by it at first, ceases, and constitutes, according to him, an indication of recovery. Désormeaux, agreeing with him on this point, would discontinue the use of the pessary much sooner. Before it produces a perfect cure, the pessary diminishes the patient's uneasiness; it also raises and supports the uterus, whilst it renders the orifice accessible, so that conception may take place; and pregnancy may sometimes, though it does not always, prove a cure[1].

The pessary generally used, in cases of anteversion, is the cup-and-ball, having a deep cavity to receive the cervix uteri. The proper position of the uterus will be restored by pushing up the fundus and drawing down the cervix, either with the finger or with the *cuiller fenêtrée* (windowed spoon); it is preserved, by keeping the patient on her back, and by pressing with one hand upon the hypogastric region, as deeply as possible, whilst the pessary is introduced with the other; the cervix is made to enter into the cup, by repeated movements from before to behind, while the finger ascertains its position; being finally adjusted, the instrument is still further introduced, and placed in the axis of the vagina. The *bung-shaped* pessary, especially the *élytroïdes* of M. J. Cloquet, may suffice for the treatment of less important cases: in others, more rare, a small sponge passed into the vagina, behind the os uteri, when very prominent, has served to support the uterus when slightly displaced.

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[1] Instance of relapse after labour, *Ameline*, p. 45, according to Madame Legrand.

CASES.

1. *Simple Anteversion.*

1. Madame D——, although she had been married several years, had never become pregnant: there were anteversion and obstinate constipation; this latter condition might be the cause or the effect of the displacement of the uterus. It was, however, most natural to attribute the latter to her daily exertion in cleaning the floor of her apartment. I found it so easy to reduce the uterus, and the vagina was so lax, that, by pushing a sponge as high as possible between the uterus and the bladder, I succeeded in supporting the former. The sponge was withdrawn at night, and replaced in the morning by the patient. After some weeks she became pregnant, was safely delivered, and the anteversion was completely cured.

2. A second case is that of Madame R——, the mother of several children. Abundant leucorrhœa, and excessive laxity of the vagina, seem to have been the causes of anteversion: constipation being in this case, as in the preceding, rather an effect than a cause. I was obliged to support the uterus with the bung-shaped pessary; I was careful that this should be nicely adjusted to the cervix uteri. A short time afterwards the catamenia ceased, pregnancy ensued, and the anteversion was cured. The patient has since had two children.

3. The following case is from Madame Lachapelle:— Madame D——, forty-one years of age, had been regular from the period of her last labour, nine years before; the catamenia, though returning at the due period, were diminished in quantity; after violent exertion, the patient complained of a sense of weight towards the sacrum. The uterus was found, on examination, very low, and close to the os externum; the fundus was inclined so forward, that the os uteri was almost on the same level with it. There was no pain or undue sensibility; perhaps a little enlargement.

2. *Anteversion, with Congestion of the anterior Paries of the Uterus.*

Madame Dej— (December 7, 1830), fifty years of age, and the mother of several married children, complained for several years of weight and dragging in the groins, the sacral region, and the left iliac fossa. We found the uterus anteverted; the os uteri, carried backward, was a little swollen, but otherwise healthy. Upon drawing back the finger, behind the pubes, and in front of the anterior paries of the uterus, I discovered a tumor, as large as an egg: the cause of the displacement of the uterus was evident.

3. *Anteversion, with Congestion of the whole Uterus.*

1. A young woman had, after her first confinement, metritis of short continuance; after the disappearance of which, there were a sense of weight and pain low in the abdomen. The pain being slowly relieved, she undertook a journey, and became worse: the pains were not violent, but there was much dragging in the loins and sacrum, with increased sense of weight in the rectum, and still more in the bladder, when the patient stood upright. She was also obliged to pass the urine frequently, and in small quantities. These symptoms abated when she lay down; but the shoulders and head were always raised. Now, I satisfied myself, that, by raising the pelvis and lowering the head, all sense of weight and dragging ceased, leaving no other uneasiness than a dull pain. This was owing to chronic inflammation of the uterus, which we found swollen, hard, and sensitive on pressure, and lower down than usual, especially when the patient was in the erect position: but there was no difficulty in restoring it to its proper situation in the recumbent posture. This was adopted for nearly six weeks: leeches were aplied to the groins, and baths, emollients, fomentations, &c. were pre-

scribed. The patient was completely cured, and no mechanical means were required for the support of the organ.

2. In this case the anteversion was so decided, that the os uteri could not be felt with the finger: it was necessary, therefore, to draw it back to the centre of the vagina with the *levier fenêtré* (windowed lever).

3 and 4*.

4. *Anteversion, in consequence of inflammatory Congestion of the super-pubic Ligaments.*

Madame De —— had slight metritis at her last confinement, and pain continued to be felt in the groins, particularly in the left: the left labium pudendi was also swelled, and it is remarkable that, at each return of the catamenia, both the pain and swelling entirely subsided. Such was the state of things for several years; but the swelling increased, and the pain became more acute; shooting pains were felt in the vagina, and the catamenia were preceded and followed by the discharge of a fluid, resembling bloody pus. Being consulted, I found the patient on the eve of the catamenia; the left labium had become, at its lower part, as large as an egg: I followed, with the finger, the direction of the tumor, as far as the inguinal ring, which was the most painful spot. From the periodical disappearance of the tumor, I presumed that the catamenia suddenly caused an inflammatory action, generally dull and chronic, in the round ligament as well as in the uterus, and thus produced a new abscess or purulent exudation; which, though originating in the inguinal region, descended, by infiltration, as far as the labium pudendi, enlarged its lax cellular tissue, and then escaped, by a small fistulous orifice, which presently closed up.

The os uteri presented its natural volume, but was carried very far backward, while the fundus, inclining forward, was firmly resting upon the anterior surface of the pubes. Hav-

* Two cases follow those which are already given, in which the anteversion had been preceded, and probably caused, by peritonitis, adhesions having been formed between the uterus and the surrounding parts.—Tr.

ing no doubt that the seat of the disease was in the round ligament, I ordered an extensive incision to be made in the labium, from which a large spoonful of reddish, thick matter issued. The consequence was, that, although the swelling returned at the next catamenial period, there was only a slight itching instead of the former pain. This occurred several years ago, and the patient has not suffered the slightest inconvenience since.

5. *Anteversion, in consequence of morbid Adhesions.*

Madame la Comtesse de Sh—— had already given birth to a child, after a very painful labour: difficulties had occurred in consequence of the attachment of a portion of the placenta, unavoidably left in the uterus. Afterwards symptoms of acute metritis appeared, followed by a long convalescence. Fifteen months after this confinement, the patient again became pregnant, suffered much pain in the loins, until the end of the third month, when she miscarried. Much weakness followed the loss of blood on this occasion. The catamenia became irregular, and, during two years and a half, there was no pregnancy: painful dragging was felt in the groins, and a sense of weight in the anus; violent efforts were also induced by constipation. Being consulted in the month of April, 1830, I found the fundus of the uterus low, the vagina and the os uteri carried very high up behind, and a little to the left of the coccyx. This organ was exceedingly sensitive, as well as the entrance of the vagina, which was contracted, dry, and of a bright colour. This position of the uterus probably prevented conception. The patient was kept in absolute repose in the recumbent position for two months; she then became pregnant. In the second month pains were felt behind the pubes, attended with vomitings; the pulse was full, small, and frequent; she was bled, with marked relief. In the beginning of August these symptoms returned, in consequence of alarm: they were again subdued, and pregnancy and labour were then completed without further inconvenience.

(For Anteversion, see pl. XI, fig. 1.)

CHAPTER IV.

OF RETROVERSION.

ANTEVERSION is an increase of the natural inclination of the uterus forward. Retroversion, on the other hand, consists in a considerable deviation of the uterus backward, resulting from violence, and causing serious inconveniences by its continuance; it has, therefore, engrossed the attention of practitioners, almost exclusively.

The uterus, in retroversion, may be carried backwards in different degrees, though always sufficiently to have its fundus fixed under the sacro-vertebral angle, and retained in the cavity of the sacrum. It is then, sometimes, so inclined that its fundus is much lower than its cervix; sometimes these two parts are nearly on a level; at other times the cervix is even lower than the fundus, and, in that case, the whole uterus sinks lower down than in its natural state: hence, prolapsus of the uterus predisposes to retroversion, which is the less surprising, because in prolapsus the uterus is always inclined backward. Hence it is easily perceived how the efforts used in emptying the bladder,—by increasing the pressure upon the fundus uteri, whilst the prolapsed cervix is raised with the fingers,—may have occasioned a complete retroversion.

The uterus, being moveable, may frequently become nearly vertical, and be even carried further, obliquely, backward. But, on the one hand, the strength of the ligaments prevents a very decided inclination in this direction; which can only result from a movement of the uterus upon its centre, carrying the cervix forward and the fundus backward,—that is, by stretching these ligaments; on the other hand, the uterus, displaced for a moment, has not, in its natural and empty state, dimensions sufficiently large to be arrested by the parietes of the pelvis; there is nothing therefore to prevent its

return to its natural position. Hence the necessity of two predispositions,—or of one at least,—to induce retroversion:

I. The relaxation of the uterine ligaments, as in prolapsus; and,

II. Increased volume of the uterus.

With the former of these conditions, retroversion will be found sometimes, even in the empty state of the uterus. Professor Lallemand has published a very remarkable case, which had been for a long time misunderstood. But, in general, there has been, even in this case, an increase of volume and weight: and it is for this reason that it is found to follow after labour[1].

In a case given by M. Comte, the patient died of peritonitis, and the fundus of the uterus was found to have been detained in the cavity of the sacrum by a fæcal mass in the rectum; the os uteri was situated above the pubes. Desault observes that the same result might ensue from the presence of polypus in the uterus. This increase of volume is, however, more generally the consequence of pregnancy. From the third to the fourth month, the uterus becomes sufficiently large to fill the pelvis by its great diameter, and yet is not too voluminous to be prevented from entering into the pelvis horizontally. At a later period, the occurrence of real retroversion is no longer possible. It was, nevertheless, in the fifth month, that the case occurred of which Smellie[2] speaks, and that which Hunter has related and figured[3].

A case is recorded of retroversion even in the seventh month[4]. The uterus, being soft, was, no doubt, misshapen and shortened, and, so, sank into the pelvis, and that without shock or violent effort; the reduction was as easily effected as the displacement, which occurred a second time, and was again easily and effectually cured by rest in bed. The patient was spontaneously delivered at the full period. It is evident that this case was hardly one of real retroversion, and

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[1] Callisen, *Chir. hod.* t. ii, p. 546 Comte, *Bibl. méd.* 1826, t. i, p. 394.

[2] *Traité des accouchements*, t. ii, p. 150.

[3] *Icones uteri hum. grav.* tab. xxvi.

[4] Bartlett, *Bibl. méd.* t. lxxvi, p. 123.

we ought, a fortiori, to refuse this title to the cases given by Merriman, as illustrative of this affection, even in the last period of pregnancy[1]. It is sufficient to read his general remarks (p. 66), and the cases adduced by him, to be satisfied that this case was only one of obliquity of the uterus backward—one of those, in fact, which we have pointed out to the attention of accoucheurs, under the name of super-pubic positions, or posterior obliquities of the fœtus[2]. Some other facts, taken from different observers, and given by this writer as cases of retroversion in an advanced period of gestation, are plainly only extra-uterine pregnancies, since the fœtus could only be extracted by a rent, or ulceration of the sac containing it. The tumor, formed by this sac, forced the vagina forward, pushed the empty uterus upward, and rendered its orifice very difficult of access—a common event, in pregnancies of the Fallopian tubes, in which the ovum and its cyst have been precipitated into the pelvis, between the rectum and the uterus.

Since unnatural changes in dimension become predisposing causes of retroversion, we are disposed, with Callisen, to rank among inducing circumstances, a certain degree of narrowness of the pelvis, and, especially, a considerable curvature of the sacrum backward, and great prominence of the sacro-vertebral angle: the result of these will be, on the one hand, a difficult elevation of the uterus, when enlarged by impregnation, perhaps even a gradual inclination backward; and, on the other hand, an easy detention of this organ in the horizontal direction, when once retroverted: to this cause, and to this mechanism, were fairly attributed the displacements observed by Professor d'Outrepont, of Wurtzbourg, in a case in which pregnancy was the occasion, in three successive instances, of retroversion in the first month. The last instance was a false conception, and the malposition was discovered, in consequence, after the sixth week, on account of the rapid enlargement of the uterus[3].

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[1] *A synopsis of various kinds of difficult parturition*, p. 66 and 244. *Idem, a Diss. on the retroversion of the Womb.*

[2] *Prat. des Acc. de Madame Lachapelle*, t. iii, p. 295, &c.

[3] See the case of Dr. Parent of Beaune, in the subjoined note.

Retroversion has sometimes been observed, even without deformity of the pelvis, to form slowly (*Baudelocque*), and become, at last, complete, in the third month of pregnancy; but it is most generally of sudden occurrence: a violent shock, a muscular effort, or forcible pressure on the abdomen, have produced, or at least completed, this displacement in a moment. We have seen a case, in which a violent shock in the loins caused at once a fall upon the knees, and then of the body backward, and a concussion on the abdomen, by a weight which the person was carrying on her head: there were, therefore, shock, effort, and pressure (D).

Of all these causes, the most powerful, in the opinion of Denman, Merriman, Callisen, Boër[1], Sibergundi, and others, is the retention of urine; but it is very difficult, in this case, to distinguish between cause and effect; for, if the distension of the bladder can cause the uterus to turn upon its central point, by raising its cervix[2], this change of position, once

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[1] *Nat. méd. obst.* p. 586.

[2] We have twice seen the cervix uteri much raised after labour by the distended bladder. The fundus of the uterus was forced considerably backward, but there was also flexion of the body upon the cervix, constituting *retroflexion (B)*.

To this retention of urine Dr. Parent of Beaune attributes definitive retroversion. I use the word 'definitive,' because he thinks that there is, in the first instance, a simple descent of the uterus, which, by pressing upon the urethra, causes distension of the bladder, by which the uterus is forced backward and retroverted, if the sacro-vertebral angle is considerable and the cavity large. The case which suggested these ideas strongly resembles those in the text, and is too remarkable to be passed over. The retroversion occurred, for the first time, in a second pregnancy, in consequence of an effort, and in the third month. After various attempts at reduction, Dr. Parent found himself obliged to introduce his whole hand into the rectum; he was then able to raise the uterus, by causing its fundus to pass to the right of the sacro-vertebral angle, which projected considerably; and, observing that the uterus was very moveable, and its ligaments very lax, he pushed it forward, so as to turn it over the pubes: but, in this situation, the uterus still pressed upon the urethra, the bladder filled, and the retroversion recurred. The reduction was repeated in the same manner: the catheter was left in the bladder; repose was observed for several weeks; the uterus soon got beyond the brim, and there was no further danger. In a subsequent pregnancy, similar results, owing to a similar cause, ended in miscarriage: Dr. Parent was not consulted. In a fourth pregnancy, this patient suffered retroversion in the middle of the fourth month; it recurred three times, at intervals of a few days, in consequence of the catheter not being kept in the bladder: the reduction was effected each time as above, with the additional assistance of the fingers introduced into the vagina. Finally, in a fifth and last pregnancy, the descent of the uterus had already caused retention of urine,

effected, checks, in its turn, the passage of urine, and retains it in the bladder—forcibly lifted up above the pelvis,—its neck, as well as the urethra, being compressed.

Thus, complete or partial retention of urine is one of the first symptoms of retroversion,—at least, in distension of the uterus. An unusual movement in the abdomen, a flattening of the hypogastrium, previously prominent, a weight, a sudden pressure before and behind, sometimes involuntary efforts at expulsion, with tenesmus, draggings in the groins and loins, obstinate constipation, then great distension and pains throughout the abdomen, symptoms of peritonitis and metritis, vomitings, &c.—such are the symptoms which attend, primarily or secondarily, on retroversion. An examination will, however, be always necessary to complete the diagnosis. This will lead to the discovery of a rounded tumor, varying in consistence with the state of the uterus (pregnancy or congestion), but seeming to occupy the whole of the pelvis, pushing downward, at times, a portion of the vagina, which forms into rugæ, shortening this canal behind, while in front it extends upward, beyond the reach of the finger*. If, in short, examination be made behind the pubes, the os uteri will sometimes be slightly felt, though with difficulty; at other times it will not be felt at all—and this, in proportion to the degree of retroversion, which may be so great that the fundus is lower than the cervix, as we have already remarked. This occurred in the case given by Hunter, and is drawn in the second and third figures of his twenty-sixth plate, where it may be seen

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and retroversion was threatened, according to Dr. Parent, when he prevented it by the continuous use of the catheter. The remarkable point is, that the uterus, when empty, is not at all low down; hence, we think we may fairly conclude, that the prominence of the sacro-vertebral angle was, in this case, as in that of Professor d'Outrepont, the principal cause of the retroversion.

* Retroversion may be attended by such a complication as that described, p. 54, as accompanying prolapsus. The following extract is taken from a case described by Dr. J. Bell. "One part of the examination deserves notice: a large portion of the rectum was pushed into the vagina and protruded a considerable way beyond the external pudendum. The sphincter ani was perfectly contracted, and the protruded gut might aptly be compared to a hernia deprived of its coverings. It formed, in fact, a true elytrocele."—Med. Facts and Observations, vol. viii. —Tr.

how far the bladder and rectum are, in such cases, flattened and obstructed. We have attempted to give as exact a drawing of it as possible in our atlas (pl. XI, fig. 5).

The finger, introduced into the rectum, assists the diagnosis: a tumor is felt compressing the rectum and occupying the lowest part of the cavity of the sacrum.

It is right, however, in this place, to compare retroversion with several diseases, with which it is occasionally confounded:

1. Ascites distends the hypogastrium, and sometimes presses back the vagina, throwing it into folds: thus, cases of retroversion have been mistaken for dropsy of the peritonæum*[1]. The fluctuation felt, in that case, in the abdomen, was owing to a large quantity of urine retained in the bladder, which could only pass in small quantities, and by overflowing. This may be understood by referring to Hunter's first figure, in which the fundus of the bladder is raised as far as the epigastrium,—and to our own atlas, pl. XI. An examination has always determined, in such cases, the cause of the symptoms, and the catheter has immediately discovered the nature and the seat of the fluid indicated by the fluctuation.

2. A tumor, and especially a serous or hydatid cyst, developed between the vagina and the rectum, filling the pelvis and forcing the intestine backward, the vagina forward, the uterus and bladder upward, may resemble retroversion[2]. If this tumor coexist with advanced pregnancy[3], it is easy to feel in the abdomen, through its parietes, the body of the uterus containing the fœtus, and thus to detect the resemblance. The diagnosis would be more difficult, if the uterus were empty; but if the os uteri can be felt, it is possible to ascertain, by its direction and mobility, the mutual independence of the uterus and the tumor; the latter of which is, besides, not

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* In retroversion, the catheter is usually introduced with difficulty; in the case in question it would be introduced with perfect facility. The diagnosis may also be assisted by an attention to the history of the disease.—Tr.

[1] Bellanger, *Revue méd.* t. i, 1824, p. 229: Lallemand, *ibidem*, t. ii, 1824, p. 191.

[2] See Denman, *Introd. à la prat. des Accouch.* t. i, p. 149.

[3] See Madame Lachapelle, *Prat. des Acc.* t. iii, p. 389. Merriman *On diff. parturition*, p. 61 and plate 1.

always situated exactly upon the median line, but on one side; or it may present roughnesses and inequalities, which distinguish it from the retroverted uterus. A more perfect idea will be formed of this state by referring to the two cases recorded by Professor Cruveilhier[1], one of which is taken from Professor Roux. Both of these relate to cysts enclosing hydatids, and of which the ovarium seems to have been the seat.

We have seen a case in which, had the patient been younger, and the state of things more forward, there might have been reason for some such doubts as those we have exposed. On opening the body of a woman about sixty-five years of age, we found the pelvis occupied by the left ovarium, transformed into a cyst, which, having come down between the vagina and the rectum, had forced the uterus from its place into the hypogastrium, with the bladder flattened, elongated, and empty—a proof that the tumor, however voluminous, had not obstructed the flow of urine (D). This may, further, serve as a more distinct characteristic of retroversion; for, as Dr. Bellanger judiciously observes, it is not the pressure upon the urethra which induces retention of urine, for, then the tumor would be enormous; it is rather the projection of the cervix uteri into the bladder, pressing forward upon its lowest part, and, like a plug, obstructing the orifice of the cervix vesicæ.

If the possibility of this error has been suggested to one of us by the state of things above described, it has been demonstrated to the other by a fact, which we proceed to detail.

A girl, twenty-two years of age, was brought to the Maison de Santé; she had been affected, five days before, with obstinate constipation, and complete retention of urine; and, more recently, with repeated vomitings of greenish matter. The left iliac fossa was painful and swollen. Leeches were, at first, laid all over it, and then emollients, cataplasms, and the hip-bath were used: neither enemata nor the catheter could be passed. On examination, we were enabled to discover a

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[1] Art. *Acéphalocystes* in the 'Dictionnaire de Médecine et de Chirurgie pratiques.' Paris 1829, t. i, 8vo, p. 254, &c.

vast tumor, which filled the pelvis: the vagina was so forcibly pushed forward by it, from behind, that it was impossible to pass the finger behind the pubes. I considered it a case of retroversion, but failed in attempting the replacement. Some days after, my opinion being confirmed by Professors Dubois and Béclard, I repeated the attempt at reduction, after having prescribed a warm bath, and emptied the bladder. I even tried to turn the uterus on its central point*, by the help of a lever introduced into the vagina, beneath the pubes; the object of which was to bring down the cervix uteri, while the fundus was pushed upward by the fingers introduced into the rectum. The reduction was not accomplished; but the patient was so far relieved, that the urine was passed, and a copious evacuation of the intestines was procured by an injection. Both these evacuations have, since that time, been spontaneous; but the abdomen was distended and painful, especially towards the left iliac region: we then resorted to leeches and the hip-bath.

We repeated our examination and attempts at reduction, and, with Professor Dubois, had reason to doubt the correctness of our first decision. The tumor, though indolent and smooth, like the pregnant uterus, was hard, elastic, and without any fluctuation or repercussion, either through the vagina or the rectum. Was not this an enlarged ovarium fallen into the pelvis, or a state of tumefaction between the rectum and the vagina? Partly under this impression, we used the speculum, in order to expose the posterior paries of the vagina, and to apply twelve leeches. A considerable diminution in the volume of the tumor was the result: the uterus could redescend into the vagina and be felt, and its natural dimensions ascertained, although still pushed forward and upward. Thus was the error of the first dia-

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* "*Basculer.*" This word, for which we have no corresponding one in English, expresses the movement induced in the uterus, when, by pressing the *fundus* upwards and drawing the *cervix* downwards, it is made to turn on its most central point: it is one half of the *see-saw* motion. I shall hereafter use the terms *basculate* and *basculation*, in the sense of the author.—Tr.

gnosis completely demonstrated. Here our observations terminated, the patient having left the hospital.

We have sometimes been enabled to ascertain, by post-mortem examination, the effects of tumors formed between the rectum and the vagina: we have seen them, like the cyst already mentioned, push the uterus upward, induce atrophy of this organ, with its appendages, and ligaments, dragged and deprived of all fibrous appearance, entirely obliterated indeed by the stretching of the peritonæum.

It is not surprising, then, that such a tumor, containing water (and perhaps masses of tuberculous matter, as we observed in one of the pregnancies quoted above), though formed primarily between the rectum and vagina, has been mistaken for retroversion. We subjoin briefly the substance of a case inserted in the 'Bulletins de la faculté de médecine' by Dr. Jourel, in 1812. There were signs of presumed pregnancy six weeks before, violent and repeated shocks, followed by loss of blood, pain in the loins, a sense of weight in the perinæum, difficulty in walking and in the act of defæcation. The hæmorrhagy continued four months, the symptoms increased, and a tumor was found, upon examination, filling the pelvis and compressing the rectum and bladder. Attempts to reduce the uterus, supposed to be retroverted, were ineffectual; nor could the catheter be introduced into the os uteri to pierce the membranes: at last, a puncture was made through the posterior paries of the vagina, and a pint of bloody water flowed out; the tumor softened, and the state of things improved: the urine and fæces passed naturally; much serous discharge continued to flow from the vagina. Seventeen days after the puncture, the uterus was restored to its place; though always *curved*, it was ascertained to be of its natural volume: some pus occasionally issued by the rectum. Six weeks afterwards, the catamenia reappeared, and the patient recovered, without any appearance of fœtus or membranes. It is plain that there was neither pregnancy nor retroversion in the case, but, rather, an encysted tumor, pushing and *curving* the uterus,—emptied by the puncture,—and healed by the inflammation and suppuration of its parietes.

3. It is undoubtedly proved, by actual cases, that extra-uterine pregnancy may be confounded with retroversion. We quote one of these from Dr. Nauche[1], in which the mistake was discovered. A voluminous tumor, of an oval shape, and appearing to contain some foreign body, and some water, was felt in the vagina: the cervix uteri was carried forward above the pubes; it might be felt with the fore finger, and brought back towards the middle of the vagina, and the finger introduced into its orifice, which was soft and a little open. This circumstance ought to have removed the suspicion of retroversion; it was a proper case for the introduction, as White advises, of a sound into the uterus, for the purpose of ascertaining its emptiness—a mode of proceeding generally impracticable in retroversion, not so much in consequence of the fulness of the viscus, as the position it assumes. Nevertheless, some distinguished persons (Dubois, Dupuytren, Capuron, Lisfranc, Maygrier, Londe,) thought it was retroversion. Attempts at reduction failed, the symptoms increased, and it was determined to puncture the tumor; about three ounces of reddish fluid escaped, pains and faintings ensued, and reduction was as impossible as ever. The fluid continued to flow, the tumor somewhat diminished, the uterus collapsed, and its cervix came nearer the pubes: some blood issued by the rectum, and afterwards a fetid discharge. At the distance of two inches above the anus, an orifice was felt, communicating between the rectum and a cyst, from which were discharged, by this way, a putrefied fœtus, piece-meal, and, soon afterwards, portions of the membranes. The woman died shortly afterwards; the uterus was found to be empty, merely adhering to the cyst, which had contained the fœtus.

To adduce, in this place, all the cases quoted by Merriman, would be almost to repeat the preceding details, the only difference being, that some cures, after the expulsion of the fœtus by the rectum, have precluded the possibility of ascertaining extra-uterine pregnancy; thus, the same authors, from whom Merriman takes his cases, have differed from *him*, and

[1] *Maladies des Femmes*, 1re partie, p. 108.

agreed with *us*. In one of these cases, the cyst became ulcerated, opened, and discharged the fœtus by the vagina, although there had been also an evident communication with the rectum.

The prognosis in retroversion is often rather serious, especially if it has been long misunderstood; for reduction then becomes very difficult, and even impossible, in consequence of the inflammatory swelling of the displaced and compressed organs, and the accumulation of fæces and urine above the uterus. If this displacement be the consequence merely of relaxation of the ligaments, and the uterus have preserved its usual volume, there must be old adhesions to render reduction impossible; this reduction is easy in every other case, but it is little permanent. This case of retroversion, happily, can occasion little inconvenience. The same observation cannot be made in the case of pregnancy, especially towards the fifth month: miscarriage is not avoided even by reduction, and may occur after the replacement of the uterus (*Sibergundi*). Several of the means, of which we shall treat hereafter, inevitably occasion miscarriage: it is well, indeed, if this can be accomplished; the risk of fatal peritonitis, as in the cases observed by Hunter and ourselves, being averted. Even when miscarriage has taken place, the danger is not always over, as was exemplified in a case recorded by Smellie.

We need not be surprised, then, at the violent measures, and even experiments, which have been adopted in such cases. These we shall pass under review, beginning with the mildest.

The first, and only true indication, is to replace the uterus. Baudelocque succeeded immediately in his first case of retroversion. Nature, alone, will at times effect a cure, as soon as some of the obstacles are diminished: the introduction of the catheter[1], or the evacuation of the bladder by Baudelocque's

[1] The dragging of the meatus urinarius upward and backward, and the flattening of the urethra, will always render the use of the catheter rather difficult: but the operation will be facilitated by advancing the concavity of the instrument backward, and making use of a flattened catheter, similar to those recommended in certain cases of midwifery, in which the head of the fœtus presses upon the urethra in the same manner.

contrivance of raising the cervix uteri with the finger, has been sufficient, either alone (three times, *Boër*— once, *d'Outrepont*), or aided by the evacuation of the rectum (*Sibergundi*). Bleeding at the arm, and the bath, have greatly contributed to a cure, and are not to be neglected even when mechanical means are employed. Dewees had the greatest confidence in bleeding, which he continued even to syncope, at the moment of attempting the reduction ; others consider it only as a slow antecedent means. It was not till after waiting ten days, and employing these subordinate means, that Baudelocque succeeded in another case. It is not always necessary for the patient to be placed upon the knees and elbows ; the supine posture has sometimes succeeded better ; the prone position, however, is more convenient for the replacement of the fundus uteri forward, under the influence of its own weight, whilst it, at the same time, disengages it from the cavity of the sacrum[1]. In this attitude, the operator can easily introduce his fingers, and even his whole hand, into the rectum, to push back the fundus uteri. Baudelocque, Dewees, and Nægelé are of opinion, that, in most cases, it may be enough to introduce them into the vagina ; and this method has often succeeded : but much inconvenience would arise, in this case, to the operator, if desirous of bringing down the cervix uteri, and drawing it towards him, with the other hand. For this purpose, two fingers may be introduced into the vagina, behind the pubes, or a strong sound conveyed into the urethra, and even into the bladder (*Bellanger*, *Lallemand*), to act as a lever upon the os uteri, which is pressed down whilst the fundus is being raised. This twofold movement upon the centre, — this *basculation*, — has succeeded in cases where the elevation, singly, has been unsuccessful.

After reduction, if the uterus is empty, a pessary, introduced and supported as in cases of anteversion, will prevent its return. In case of pregnancy, complete rest, and the

[1] In order to release the uterus still better, M. Capuron recommends that it should be semi-rotated, by pushing its fundus towards the right side, to make it pass by the sacro-iliac symphysis.

supine position, will be proper for several weeks; the bowels should be kept open, and we must watch over the state of the bladder, in which it may be even necessary to keep the catheter for several days, according to the advice of Dr. Parent. After the fifth month there is scarcely any fear; all fatigue, however, and shocks, should be carefully avoided.

We have observed that, sometimes, reduction cannot be accomplished by the ordinary means; in such cases there is always danger. Shall we then proceed to puncture the bladder, as Sabatier recommends? This would be attributing too much, perhaps, to the circumstance of retention; and it seldom happens that the catheter cannot be passsed into the urethra[1]*. Must then the uterus be pierced with the trochar, as Hunter advises? We have already stated that such an operation has been safely performed. Dr. Jourel thought he had performed this operation; but Baynham appears to have really done it,—and that from the rectum,—in a case in which the whole hand had been in vain introduced into the anus[2], in order to push back the fundus uteri: the retroversion seemed to be of six weeks' duration, and pregnancy was advanced to the sixth month. This puncture diminished the volume of the uterus, and it was then replaced without much difficulty. Labour came on a little afterwards, and the delivery was terminated twenty-five hours after the operation. The fœtus was of the usual dimensions at the sixth

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[1] An instance, however, is recorded of fatal rupture of the bladder in consequence of retroversion: the patient would not submit to the puncture, and the catheter could not be used. (Lynn, quoted by Sam. Cooper, *Diction. de Chirur.* art. *Utérus.*)

* Dr. J. Clarke observes,—"I think I may venture to hazard an opinion, that, either with a small or flexible catheter, the urine may be drawn off, in all cases, by a person accustomed to the use of the instrument, and who is perfectly acquainted with the disease."—*Essays*, p. 6. Burns also observes—"I cannot conceive any case where a gum catheter could not be introduced; I certainly, as yet, have never met, under any circumstances, with such difficulty." p 252.—Tr.

[2] This, he said, was not very difficult. Might not this operation be facilitated by dividing the sphincter ani, or attempting to dilate it by the extract of belladonna? Dr. Parent says that he was enabled, without causing any considerable pain, to introduce the whole hand into the rectum; and this is just what Dusaussois had done before.

month ; it had been wounded by the trochar in the abdomen. Some pus followed, mingled with flakes, both by the vagina and the rectum,—probably in consequence of an abscess formed between the rectum and the vagina ; the patient recovered six months after the labour. Professor Boyer quotes another successful case, recorded in the *Recueil des Thèses de la Faculté de Paris*[1]. Before he proceeded to this operation, we think he ought at least to have attempted to pierce the membranes of the ovum, as White, Hamilton, Dewees, Jourel, &c. had already proposed and attempted, though without success*: a male catheter should be employed for this purpose, of conical form, much curved,—adapted, in a word, for reaching and penetrating the os uteri, in its unnatural position behind the pubes.

As for the section of the symphysis pubis, recommended by Purcell and Gardien,—independently of the inevitable danger attending it, it may be asked whether the proposed benefits would be obtained ? The principal obstacles to reduction being the concavity of the sacrum and the sacro-vertebral projection, symphysiotomy would be of no advantage : the pubic bones must be separated very far indeed, if space must be given to the uterus forward, which is wanting behind, for its replacement.

Might not the abdomen be opened, in desperate cases, by an incision in the hypogastrium, and the hand be introduced into the pelvis, in order to raise the uterus ? This would be less serious than the cæsarian section ; but it is doubtful whether it would always succeed, since, in the case examined after death, by Hunter, the uterus could not be disengaged until the bones of the pelvis had been largely separated.

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[1] *Mal. Chir.* t. x, p. 531.

* If the patient should still be uneasy when the bladder has been emptied, gentle methods may be tried, of which the best is, to let the patient kneel on a bed, and rest with her elbows on the floor. By this means all pressure is removed from the fundus of the uterus, and then it may sometimes be placed in its natural situation by a very gentle pressure made upon it with two fingers in the vagina. If this should fail of success, I would strongly recommend that additional force should not be employed."—*Clarke's Essays*, p. 9.

CASES.

1. *Retroversion of the unimpregnated uterus from accumulation of fæces in the rectum.**

2. *Incomplete Retroversion in the unimpregnated state of the uterus, occasioned by malformation of the vagina*†.

In the case of Madame M——, the vagina formed a large empty cul-de-sac. The os uteri could not be felt. It might have been supposed, as she had never borne children, that there was a total want of the uterus, had not the catamenia, though flowing in small quantities, proved its existence. In carrying the finger vertically behind the pubes, I there discovered the os uteri; it was situated behind the urethra so firmly that every attempt to bring it down was useless. The os uteri being thus fixed forward, the uterus had, of necessity, changed its direction: its fundus being at the same time turned backward, but remaining tolerably high up in the pelvis. There can be no doubt that a shortening, or imperfect development of the anterior paries of the vagina had brought on this displacement, this paries being only from eight to ten lines in height, and the cul-de-sac being formed entirely of the posterior paries.

3. *Retroversion in the unimpregnated condition of the uterus, carried to a great degree, in consequence of excessive relaxation of its ligaments.*

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* I have not thought it necessary to give the details of this case. There was a large accumulation of fæces in the rectum, the probable cause of retroversion; this was removed by means of a stimulating enema, and the uterus returned to its situation.—Tr.

† This case I have greatly abridged.—Tr.

‡ This case seems to have been the result of a fall: there is really no proof of special relaxation of the ligaments. In the treatment, Madame Boivin thought of

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4. *Retroversion in consequence of relaxation of the suspensory ligaments.*

Madame B—— had been affected with prolapsus many years; the cervix uteri was found in the erect position, one inch from the os externum, slightly enlarged; a little behind the os uteri there was a small body, of the size of an egg, the seat of acute pain. I thought this might be the uterus itself; Madame B—— being placed on a sofa, I pressed upon the abdomen, but its fundus could not be felt; I now passed my finger into the rectum, and my thumb into the vagina, and could then enclose the uterus between the thumb and finger, in its retroverted position†.

Reflections.—If, in the two preceding cases, the clear proofs of the relaxation of the ligaments of the uterus, *previous* to the displacement, have not been recognised, this previous condition cannot be a matter of doubt in this,— at least in regard to the utero-sacral ligaments,—since, before the retroversion, there was prolapsus. In prolapsus of the second or third degree, there is always an inclination of the fundus uteri backward; but this inclination was much more considerable in the present case than it is in uncomplicated prolapsus; doubtless, because, in cases of simple prolapsus, the relaxation of the super-pubic ligaments is, in general, proportionably less than it was in this instance.

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employing a sheep's bladder, attached to a box provided with a valve, so as to retain the air injected into it, after being introduced into the rectum, in imitation of the air pessary of Aitken, and which he recommends in cases of prolapsus uteri[1].—Tr.

* I have thought it right to omit this case altogether, as it contains no important fact.—Tr.

† Enemata were used and the patient recovered: the case appears to me similar to that first noticed (p. 86).—Tr.

[1] *System of obstetrical tables*, plate M.

5. *Retroversion, owing to the enlargement of the uterus in its unimpregnated state.*

1 and 2*.

6. *Retroversion during pregnancy*†.

CHAPTER V.

OF HERNIA OF THE UTERUS.

When the anatomical position of the uterus, both as regards itself and its connections, is understood, it is difficult to imagine how it can be raised sufficiently to press against the abdominal parietes, and pass through their narrow openings at the lower part of the abdomen: this will, however, be better understood from the following considerations: 1. it is generally in the early period of pregnancy that hernia is produced; at that period the uterus is doubtless increased in volume, but it is also increased in height and in weight; 2. it frequently escapes, not by a natural opening enlarged, but by a separation of the parietes of the lower part of the abdomen, by a re-opened cicatrix, &c.; 3. in some cases it passes through a natural opening, such as the crural or inguinal ring, which are weakened in their circumference by repeated efforts, and continued pressure, begun at first by one of the ovaria, or by some tumor of the omentum, which drags down the uterus by adhesion; 4. some of these displacements occur in the embryo, when the fundus of the uterus has little volume, is situated immediately above the pelvis, and would easily follow one of its super-pubic liga-

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* Omitted.—Tr.

† In this case there was retroversion; the attempt at reduction evacuated the liquor amnii; the patient died of peritonitis. The case affords no new fact, and is therefore omitted.—Tr.

ments, when shortened, through the inguinal canal, which is sufficiently open at this period, and even provided with a peritonæal sheath (canal of Nuck); the same shortening may, by degrees, produce similar effects in the case of adults. Hernia of the uterus is, however, very rare, and our task will be reduced to a brief statement of the principal known facts, as sufficient to guide the practitioner in similar circumstances.

A. *Ventral Hernia.*—This is a protrusion through an accidental separation of the aponeuroses, and of the muscles of the abdomen: no authentic cases of it are known, except those combined with pregnancy; and it appears that hernia has frequently been confounded with extreme anterior, or latero-anterior, obliquity, carried to such an extent as to propel the fundus uteri upon the fore part of the femora, in consequence of the excessive laxity of the abdominal parietes. The following cases are better ascertained:

1. A woman, who had been in labour three days, experienced, on a sudden, violent pain, with a sense of laceration in the abdomen, followed by extreme weakness. J. L. Petit found, upon examination, "a ventral hernia extending from the umbilicus as far as the os pubis, and another from the umbilicus as far as the ensiform cartilage. The former, that is, the lower one, was so considerable, that the recti muscles were separated from each other by a distance of nine or ten inches. It was stated that this tumor had been of long duration, and had increased at each pregnancy, and at each labour,—that six months previously it had increased more rapidly, but had reached the enormous size which I had witnessed only three days before." This increase seemed clearly attributable to a sudden yielding of the linea alba, which had been effected with much pain, and even a noise. The infant was hydrocephalous. Petit pierced the skull with a bistoury, and, at the same time, took care to compress and support the abdomen by means of a bandage and small pillow. The extraction of the fœtus was not difficult, and the woman soon recovered[1].

[1] *Œuvres posthumes*, t. iii, p. 264.

2. A woman, who had been the subject of a large abscess, followed by cicatrices just above the pubes, having become pregnant, observed the original cicatrix to become swelled and distended, and the uterus to fall more and more forward; at last, even to the knees; at the period of labour, spontaneous delivery was accomplished by merely raising the tumor[1]. The same circumstance has sometimes occurred after a first cæsarian section[2]

3. The case of Ruysch, given above, has often been recorded as inguinal hernia, in consequence of expressions which have been adopted to shew that the tumor entirely occupied the lower portion of the anterior abdominal region. The following is a case in which ventral hernia might have been easily confounded with crural, had not a careful examination led to the distinction. A woman, forty-nine years of age, in the fifth month of pregnancy, observed a tumor, which she had had some years before, near the inguinal region, gradually to increase; it was soon evident that the uterus, containing a living fœtus, formed part of the tumor. Professor Saxtorph, being satisfied of the combination of uterine pregnancy and hernia, and of the regular progress of labour, as well by the flow of water from the vagina, the pains and induration of the tumor, as by the presentation of the head and umbilical cord in the vagina, left the delivery to nature, purposing only to extract the placenta. In this latter operation, he ascertained anew the unnatural situation of the uterus. The patient recovered; but the uterus, though much reduced in volume, continued to project outside the abdomen, and it could be ascertained that it passed through the abdominal parietes, and not by a natural opening (*Bibl. méd.* tome 67, p. 59).

B. *Crural Hernia.*—The same doubts occur in reading the cases recorded by Sennert[3] and Doringius; in both of which, the tumor, formed bythe pregnant uterus, was situated

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[1] Ruysch, *advers. dec.* II, p. 23 [2] Rousset, *Hysterotomotokia*, p. 56.
[3] Sennert, t. iii, p. 654, *et apud Fabr. Hild.* fol. p. 93.

towards the groin; it was undecided whether the hernia proceeded by the inguinal or crural ring, or through a separation of the fibres. In the former of the two cases, a blow had caused the displacement; in the latter, the tumor had gradually increased since the first labour, which had been difficult: in both, the uterus, being irreducible, was opened as in the cæsarian section; both the women died, though the infants survived; in the case given by Saxtorph, the child was born dead.

Anatomical research proved the existence of crural hernia in the following case, in which the uterus was unimpregnated. M. Lallemand has described it in the 'Bulletins de la Faculté de Médecine' (1816, *tome* i, *p.* 1), and we have seen the anatomical preparation. The woman was eighty-two years of age, and had had the tumor forty years; it occupied the bend of the right groin, and was pyramidal in form; its length was five inches, and its breadth four. The uterus was behind Poupart's ligament, together with the ovaria, the Fallopian tubes, and even part of the vagina; they were all, doubtless, drawn along by hernia of the omentum, which was brought on, a few days after natural labour, from bodily exertion. We are of opinion that the uterus did not protrude from the abdomen for a long time after the inguinal tumor had appeared, and only eight years before death. This event was marked, in our view of it, by the increase of the tumor and some symptoms of strangulation[1].

C. *Inguinal Hernia.*—It has been remarked above, that the cases given by Sennert and Doringius might perhaps be classed under this head, as appropriately as under either of the others. That such an equivocal hernia might exist during pregnancy, is, at all events, proved by authentic cases, in which the uterus was empty. Lallemand has also seen the uterus, in the case of a person seventy-one years of age, entirely enclosed, together with the right ovarium and a portion

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[1] J. Cloquet, *Pathologie chirurgicale*; plan et méthode qu'il convient de suivre dans l'enseignement de cette science. Paris, 1831, 4to, avec 12 planches, pl. IV, fig. 5.

of the vagina, in a thick hernial sac, which had penetrated the inguinal ring on the right side. Laborious exertion had occasioned and increased the tumor, which, though very sensitive at first, became afterwards indolent. Its form was that of a pear, and it was only two or three inches in length. (*Mém. Soc. Méd. d'Emulation*, troisième année, p. 323.) There is another case published by Chopart, and condensed in the following manner by Professor Boyer[1]. The subject of it was fifty years of age; the uterus almost entirely protruded, together with the Fallopian tube and the left ovarium, by the inguinal ring on the same side, and was enclosed, without any adhesion, in a very large hernial sac; it was smaller than usual, rounded and lengthened in form, contracted within the ring, pale and flabby; there were also membranous shreds at its fundus, which seemed to result from a previous adhesion of the omentum.

This hernia may be congenital, and we have already mentioned such a case in the Introduction, quoted from Maret de Dijon. It was on the right side. It has been observed, indeed, that hernia generally takes place on this side; and it is also remarkable that the uterus inclines rather to the right, and that the right super-pubic ligament is shorter and thicker than the other.

We will not dwell long upon the common characteristics of these kinds of hernia, or the mode of treating them; we just remark that the volume of the tumor, its gradual increase, its dull fluctuation, the movements of the fœtus, the pulsations of its heart, observed by the stethoscope, &c. will contribute to the diagnosis of hernia of the pregnant uterus: and that the hardness of this tumor, its rounded form, the thickness of its neck, on the one hand, and the tension and obliquity of the vagina, the elevation and disappearance of the os uteri, on the other, will serve to characterise hernia of the empty uterus.

The tumor should be reduced, if possible, and supported,

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[1] *Mal. chirurgic.* t. viii, p. 381.

in either case, by every proper means; but the reduction will be especially indicated in the early period of pregnancy. In cases in which this is impracticable, and in which the time of child-bearing is past, we may satisfy ourselves with the application of a suspensory bandage; at a less advanced age, gradual and continued compression may be tried, according to the method of J. L. Petit for intestinal hernia with adhesion. In cases of pregnancy, if the patient be sufficiently strong, as in the case of Saxtorph, it will be enough to raise the fundus, in order to restore it, as much as possible, to its natural position; but if otherwise, the cæsarian section ought to be performed. This succeeded, as Rousset testifies, in a case in which labour afterwards took place spontaneously, notwithstanding the considerable increase of hernia, which protruded but little at first. In the case of strangulation, it would be right to remove the stricture, as in every other case of abdominal hernia.

CHAPTER VI.

OF UNNATURAL IMMOBILITY OF THE UTERUS.

In the preceding chapters we have treated of the inconveniences resulting from unnatural mobility of the uterus. Had it, however, been unnaturally immoveable, the expansion of the bladder and rectum would have been impeded, and other serious results have ensued.

A. If metritis seldom occur in early life, peritonitis is still less frequent; these, and chronic peritonitis of the pelvis, in the case of children, resulting from any particular cause, — as constipation, accidental or voluntary retention of urine,—may bring on very dense and close adhesions between the surface of the uterus and the neighbouring parts; the appendages will adhere both to the uterus and to the

parietes of the pelvis, and form unnatural adhesions, which may remain undiscovered for a long time.

In the adult state, metritis and metro-peritonitis[1] are much more common, either at the period of difficult catamenia, or after a painful labour. This is a fertile source of morbid adhesions.

These adhesions, hitherto not sufficiently noticed, have been duly considered in another work[2], of which we will only give the substance, together with a few cases. If sterility be a sad consequence of this state, conception is still more so[3]; for pregnancy may be followed by renewed inflammation, occasioned by the straining of these adhesions of the uterus in its ascent. Pains and draggings are then felt in the pelvis, lassitude in the lower limbs, abscesses are formed in the neighbourhood of the vagina or rectum, and sometimes death is inevitable. These symptoms are generally preceded by miscarriage in the third or fourth month, which is, again, preceded and followed by hæmorrhagy, and all the signs of metritis.

These physical obstacles to change of situation in the uterus may be foreseen by examination per vaginam, or by the symptoms:

1. The finger, introduced into the vagina, usually feels the uterus to be fallen or inclined, having firmly assumed some irregular position. Sometimes we perceive that it is bound down by its whole circumference; at other times, only by one side: one of the super-pubic ligaments may, by being shortened and inflamed, fix the uterus, which is then raised higher up than in the other case; but, if it be inclined, it is uneasy and brings on premature labour, perhaps at the seventh month.

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[1] Weidmann (*Memoria casus rari*, etc. Mons, 1818) has given the description and drawing of a case of adhesion of the omentum to the anterior surface of the uterus, brought on most probably during metro-peritonitis, which followed after a difficult labour. The patient died in a subsequent pregnancy, at the mid-period, with symptoms of internal strangulation, vomitings, &c.

[2] *Recherches sur une des causes les plus fréquentes de l'avortement*, par Madame Boivin, 8vo. Paris, 1828.

[3] To this may be added, that the Fallopian tube and ovaria, adhering to the exterior of the uterus during pregnancy, prevent its due extension.

2. The symptoms are such as are induced by antecedent metritis, peritonitis, dysmenorrhœa, miscarriage, difficult labour, wounds, and abscesses in the pelvis. We have observed that unnatural immobility of the uterus is more common in the cases of phlegmatic, scrophulous, and constipated persons.

Though it may not be possible to remove these adhesions, they may perhaps be prevented by antiphlogistic treatment, and we have evidence that the use of mercury may resolve those which are not yet confirmed, or under the influence of chronic inflammation.

B. These adhesions take place, not only when the uterus is reduced to its ordinary dimensions, but also when it is distended and raised by a voluminous ovum; in which case it remains in the upper regions of the abdomen several months. The omentum, frequently thrust back and adherent towards the epigastrium, may, in consequence of inflammation, adhere to the fundus of the uterus. This attachment will not be indicated by any symptom during the continuance of pregnancy; but, after labour, when the uterus should contract and redescend from the epigastrium to behind the pubes, the omentum, having become too short, owing to its previous agglutination, will be forcibly put upon the stretch. The consequences of this stretching will be, on the one hand, the dragging of the stomach and colon, partial lacerations or irritation inducing peritonitis[1], and, on the other, a serious obstacle presented to the restoration of the uterus to its right position in the hypogastrium. Now, since this contraction is indispensable to the obliteration of the orifices of the uterine sinuses, these orifices, remaining open, may occasion an alarming and even fatal hæmorrhagy[2]. Baudelocque has seen a case in which, before delivery, and even in the first period of labour, the woman died; the omentum, rolled up like a cord, adhered to the right anterior and lateral part of the uterus, so that the stomach and the arc of the colon were

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[1] We have at least observed this state of things two or three times, in cases of women who died of puerperal peritouitis (D). See also the examinations quoted above in reference to one of the most common causes of miscarriage. *Obs.* 4.

[2] Madame Lachapelle. *Prat. des Acc.* t. ii, p. 376.

remarkably dragged. Vomitings, diarrhœa, and syncope had preceded the fatal result. In less serious cases, as in those described and depicted by Ruysch[1], or those alluded to by Morgagni[2], the results were only painful draggings, and derangement of the health, long-continued.

CASES.

1. *Abortion at the fifth month; death; examination.*

Madame Kall——, twenty-seven years of age, of a phlegmatic, nervous temperament, was attacked with pleuritic catarrh about the middle of February, 1826. Twenty leeches were applied. This was succeeded by abortion, and death.

Examination.—There were old adhesions of the pleuræ; a cavity in the right lung, and suppurating tubercles in the left; the stomach and intestines were inflamed; the peritonæum redder and thicker than natural, containing a little yellowish serum; the broad ligaments, the Fallopian tubes, and the ovaria were firmly adherent to the posterior surface of the uterus, the adhesions containing miliary tubercles. (Plate XIII.)

If this state of things was not the cause of abortion, it doubtless would have been, at a later period, as in the following case.

2. *Abortion at the third month; death; examination.*

Madame Delam——, thirty-two years of age, of exceedingly phlegmatic temperament, was reduced to extreme weakness by uterine hæmorrhagy. We found the os uteri very large, and more firm than in the natural state, even in cases of miscarriage at the same period. The uterus was

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[1] *Obs anat.* p 59 and 78.

[2] *Epist.* 48, art. 46.

wholly immoveable; the abdomen was slightly tympanitic, although without tenderness; some fluid was felt on percussion, and the left lower extremity was anasarcous throughout; acute pain was felt in this limb, rising upward to the left side of the pelvis. Forty leeches were applied, without relief; baths, laxative and mild drinks, emollient enemata, and opiate liniments, were equally unsuccessful; the weakness was accompanied by irregular fever, and continual agitation, until dissolution, which happened twenty days after the miscarriage.

Dissection.—On opening the abdomen, a large quantity of serous, yellowish fluid was found. The liver was pale and voluminous, greasing the scalpel. Tuberculous granulations were found in the sub-peritonæal tissue of the colon and the rectum; the former of which adhered to the uterus, and the latter to the sacrum. A large abscess was situated in the recto-vaginal fold of the peritonæum. The Fallopian tubes and ovaria presented, at the surface of the uterus, and beneath the adhesions above-mentioned, an inextricable mass, charged with pus; several of these parts appeared to be changed into encephalosis. The paries of the rectum, which was adjacent to the principal abscess, was much thinned, and would probably have become perforated, an event which would, perhaps, have occasioned a considerable improvement in the health of the patient, as is proved by several other circumstances.

3. *Abortion at the third month; death; examination*.*

4. *Abortion at the fourth month; abscess formed in the rectum; cure; immobility of the uterus, turned upon its axis**.*

5. *Adherences of the appendages of the uterus; symptoms of chronic inflammation cured by mercurial treatment***.*

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* ** *** Omitted.—Tr.

SECTION THIRD.

DEVIATIONS IN FORM AND VOLUME.

CHAPTER I.

DEVIATIONS IN FORM.

In treating of deviations in the form and volume of the uterus, we shall confine ourselves to its flexions, inversion, and distension, after having first given a brief account of the subject.

A. Several of these affections may have been confounded, to a certain degree, with those of which we shall treat separately, hereafter. Certain foldings of the uterus, for instance, seem to be merely imperfect flexions, and inversion of the cervix and os uteri may resemble incomplete inversion of the uterus itself.

It is well known that the os uteri, at the beginning of labour, little or not at all dilated, is directed towards the sacrum, and is sometimes difficult to reach with the finger; consequently, the anterior paries of the cervix answers to the area of the vagina; it is upon this part that the weight of the fœtus and the contraction of the uterus act; it therefore expands the most, and becomes the thinnest, and will be, occasionally, more relaxed, and less contracted, than the opposite part. Perhaps it then resists the weight of the body of the uterus, still containing the placenta, less than the posterior

part of the cervix, and, yielding, gives origin to those anteversions of short duration, of which we have spoken in the preceding section. We proceed to give a remarkable case, which deserves to be well understood.

A pupil had just delivered a person who had been afflicted, during pregnancy, with anasarca, and other complaints. Upon examination, a large tumor, unsuspected before labour, was found in front of the cervix uteri. I considered it as a case of anteversion, until I discovered, on the one hand, that the fundus uteri was in the hypogastrium; and, on the other, that the bladder was empty, and the tumor without fluctuation. The patient died of anasarca in a few days. Upon opening the body, we searched in vain for the tumor; the uterus was healthy, though flabby, and the anterior paries, near the cervix uteri, was strongly inclined to bend forward and downward; there is no doubt that we were deceived by *this large rounded fold* in form of a pouch. (D)

B. It sometimes happens that cancer of the uterus begins with ulcerations and growths on the interior of its cervix, the internal surface of which then becomes congested, swollen, and more and more extended, forcing the os uteri open, pushing back its labia, until it inverts the surfaces which were previously turned toward the axis of the uterus. This effect, evident at the first, is often concealed by the increase of growths. We have very lately traced the progress of this affection (D), and we have now before us a description of an ulcerated cancer, presenting the principal characteristics which have been related. The cervix was turned towards the lateral and anterior borders of the uterus. But this is merely symptomatic; we have seen a case far less common (B); it was a similar inversion of the cervix uteri, which seemed to be congenital.

On the 8th of November, 1822, a young woman, of strong constitution, was brought, in a dying state, to the Maison de Santé. She had been treated with powerful antiphlogistics for fever, said to be inflammatory; she died on the following day. Upon examination, we discovered only a general con-

gestion of the sanguineous system. The catamenia had just occurred: we, accordingly, found the uterus congested, and of a deep violet colour; the ovarian vessels, especially the veins, were much dilated. The uterus, interiorly, was of a bright red colour, and presented a layer of colourless mucus; when dipped in warm water, and pressed between the fingers, blood oozed from it; the tissue was soft, both in the cervix and the body of the uterus; the latter contained some *œufs de Naboth*, as large as a grain of millet. The os uteri was inverted, so as to present a kind of broad flattened ring, covered with the rugæ usually concealed within the cervix uteri. In short, the inferior portion of the cervix was extroverted. There was no other morbid appearance. The ovaria were covered with little scars: that on the right side presented an erosion of three or four lines in extent. This state of things might easily have been mistaken for cancer; there were, however, no pains, suppuration, or other discharge. (Pl. IX, fig. 6 and 7.)

C. *Adhesions and obliterations of the os uteri.*

Changes in form, adhesions, and obliterations of the os uteri, are occasioned by the violence sustained, during labour, by the cervix uteri and the upper part of the vagina,—amounting often to laceration,—by irritation of the os uteri, and by ulcerations formed upon it by syphilitic and other discharges. Happily, these adhesions are more rare than the causes we have enumerated; and there can be no doubt, that the quantity and density of the mucus secreted by the cervix uteri, prevent, in a great measure, this serious consequence. Sterility is induced by the closure of the os uteri; or by its forcible contact with the posterior paries of the vagina. We have found the os uteri, in unmarried persons, obliterated, shrivelled, and destroyed, sometimes leaving in its place a few bands, and a funnel-shaped orifice; sometimes scarcely allowing room for a thread to pass, being actually all but closed, as is frequently the case with the cervico-uterine orifice in advanced age. From this closure, dropsy of the uterus may ensue, when this organ, or the Fallopian tubes,

secrete more fluid than can be absorbed*. At the period of puberty, retention of the catamenia may lead to serious consequences, as we shall hereafter shew: an instance of this kind is given in the 'Thèse' of M. Ameline, taken from Dr. Gauthier[1]. In the same dissertation, we find similar adhesions of the os uteri to the vagina, which may have been considered as causes of anteversion. These closures may, at times, also have impeded labour†, without having prevented conception, either from being incomplete, or occurring subsequently. Instances of this kind may be found in Madame Lachapelle's midwifery, and in the works of Amand, Simsom, Latour, Gauthier, Morlan, Martin, Flamand, and of Cathral[2] and Solera[3]. Some of these facts are, however, unsatisfactory: in some of them the closure appeared to be complete; in others it was probably only a mechanical agglutination of the edges of the os uteri. On the subject of these deviations, during the empty state of the organ, we refer our readers to Ruysch (*Thès.* vi, no. 1 and 85), and Morgagni (*Epistola* 46, no. 17; *Ep.* 47, no. 14, 28; *Ep.* 56, no. 10, 17; *Ep.* 57,no. 2; *Ep.* 66, no. 17; *Ep.* 67, no. 9, 11).

D. The cervix uteri is sometimes considerably elongated. (Pl. XI, fig. 1 and 2.) In some cases of prolapsus, we have seen the whole organ drawn out, as it were, into a cord; but we ought not to consider every case of elongation of the cervix uteri, as prolapsus. Sometimes it is the whole cervix that is thus lengthened, and, in that case, the cul-de-sac of the vagina rises up very high above its loose extremity,—as in prolapsus; but the vagina is not shortened, and the fundus uteri may be felt at the hypogastrium, when the patient is thin; sometimes, only one of the labia is lengthened, even so as to project beyond the os externum. Professor

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* A very interesting case of pus, found distending the uterus, is published by the late Dr. J. Clarke, in the Transactions of the Society for the Improvement of Medical and Surgical Knowledge; vol. iii, p. 560.—Tr.

[1] *Nouv. Journ. de Méd.* t. vii, p. 30.

† See the *Anatomy of the gravid uterus*, J. Burns, 1799, p. 36.—Tr.

[2] *Ann. lit. méd. étr.*, t. ii. [3] *Ann. univ. di Milano, Agosto* 1827.

Lallemand has seen examples of this kind in advanced age; and, before him, Leroux of Dijon[1] seems to have observed something similar, though only during pregnancy: his own words are as follow:—"In some cases it is only the anterior labium of the *os tincæ* that is elongated; in others, it is the entire cervix. I have found it projecting from the os externum, like the neck of a bottle with its rim. I introduced my finger into the opening, as far as the internal orifice, which was closed by the membranes of the ovum. As soon as the pains of labour came on, the cervix became shorter, and was gradually obliterated, in proportion as the interior orifice expanded."

In a case of elongation, analogous to that of Leroux,—though in the empty state of the uterus,—the surgeon, mistaking it for polypus, notwithstanding the presence of the os uteri at the extremity, applied the ligature, and the patient died of peritonitis; upon examination, the diagnosis of Dr. Segard, who opposed the operation, was confirmed[2].

A similar error in the diagnosis, recorded by Buisson[3], was attended with results of a less serious nature: prolapsus uteri being suspected, the pessary was applied. Bichat observed this elongation in two or three subjects*.

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[1] *Obs. sur les pertes de sang*, p. 14.

[2] *Diss. sur les polypes utérins.* Paris, ann. xii (1804), p. 16.

[3] *Anat. descript. de Bichat.* t. v. p. 282.

* There is no disease of the uterus so likely to be mistaken for prolapsus as elongation of the cervix uteri. I described such a case in the Medical and Physical Journal, vol. 68, for August 1832. In this case there was hernia of the posterior part of the vagina: the descent of the intestine in the utero-rectal fold of the peritonæum had carried down the os uteri, the uterus itself not being displaced, and its cervix, consequently, becoming elongated mechanically; and this, I think, the usual cause of this form of uterine disease.

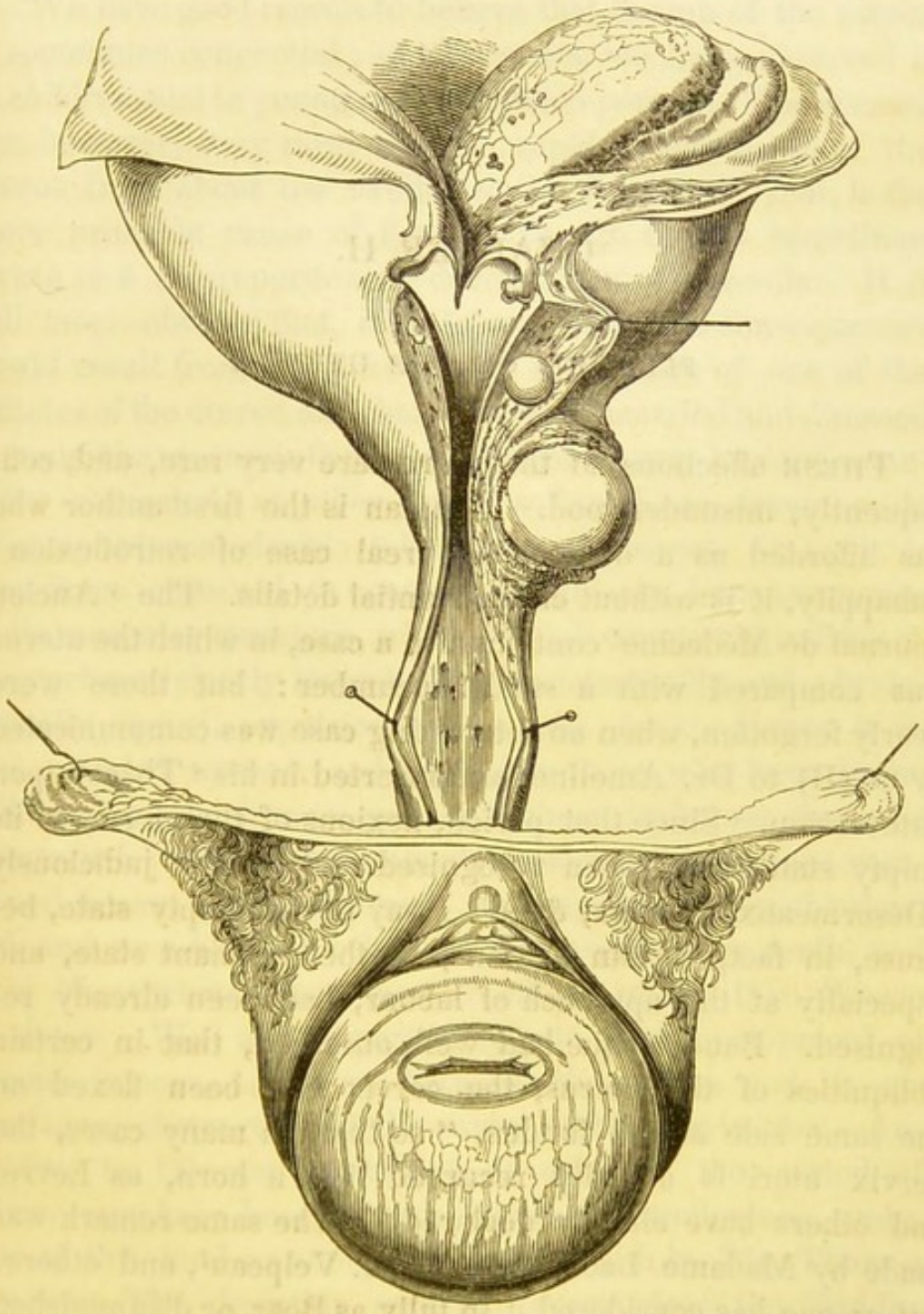
The diagnosis is not difficult: the cord-like cervix is readily traced by the finger, introduced into the rectum or vagina; a catheter, introduced into the urethra, passes in the usual direction, and not downwards, as in some cases of prolapsus; if pregnancy do not exist, a probe may be introduced along the elongated cervix into the uterus.

The distinction between this disease and prolapsus is highly important, especially if Dr. Marshall Hall's operation for the radical cure of prolapsus be contemplated, as it is probable that it would not succeed in the case of elongation of the cervix uteri.

E. Lastly, we might treat in this place of cases of *atrophy* and hypertrophy of the whole uterus; the former appears to us of great importance, but we shall enter upon it in treating

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In the case given by M. Cloquet (*Path. chirurg.*, pl. VIII, fig. 3), and in that from which M. Cruvielhier's drawing, which is copied in the annexed wood-cut, was taken, there was organic disease; but there was no such disease in the case published by myself, or in several others which I have had occasion to examine.



The first of my patients died of peritonitis: I was enabled to preserve the parts, which are now deposited in the museum of Guy's Hospital, under the scientific eye of Dr. Hodgkin.—Tr.

of *amenorrhœa*, which, with sterility, is its most remarkable result. And, for the latter, if we except all that relates to differences in volume in different persons, we may be satisfied that all other enlargements belong to disease or chronic inflammation.

CHAPTER II.

FLEXIONS OF THE UTERUS.

THESE affections of the uterus are very rare, and, consequently, misunderstood. Denman is the first author who has afforded us a distinct and real case of retroflexion; unhappily, it is without circumstantial details. The 'Ancien Journal de Médecine' contains also a case, in which the uterus was compared with a small cucumber: but these were nearly forgotten, when an interesting case was communicated by us (B) to Dr. Ameline, and inserted in his 'Thèse' upon anteversion. Since that period, flexions of the uterus, in its empty state, have been recognised and treated judiciously (Désormeaux, Deneux, &c.). I say in the empty state, because, in fact, certain flexions, in the pregnant state, and especially at the approach of labour, had been already recognised. Baudelocque had well observed, that in certain obliquities of the uterus, the cervix had been flexed on the same side as the fundus, "so that, in many cases, the cervix uteri is actually recurved like a horn, as Levret and others have already declared." The same remark was made by Madame Lachapelle, by M. Velpeau[1], and others: but no one has considered it so fully as Boër, or distinguished

[1] *Traité élémentaire de l'art des accouchements*, p. 662 and 664.

so accurately between cases of *obliquity* and those of flexion,—whether the body of the uterus maintain its position, the cervix only being flexed; or, whether both of them be curved towards the same side: he has ascertained this difference, by examinations, both during life and post mortem, and maintains that, five times out of twelve, the cervix uteri, during pregnancy, bends to the same side as the fundus.

We have good reason to believe that flexion of the uterus is sometimes congenital; at all events, we have observed it in children, and in young and unmarried persons. These cases are, however, very rare, and the rapid enlargement of the uterus from about the twelfth to the fourteenth year, is the more probable cause of flexion; though this is sometimes owing to a disproportionate development of one side. It is still more obvious that, after labour, the same consequences would result from the more speedy contraction of one of the parietes of the uterus, and that, in cases of married and diseased persons, the uterus, inflamed and irritated, may become sometimes elongated, at other times, softened, or drawn aside by some internal cicatrix (absorption of abscess, &c.); it is sometimes observed to contract irregularly, in consequence of its muscular structure, which, though commonly indistinct, is sometimes clearly indicated both anatomically and physiologically (pains, expulsion of coagula, &c.). Hence it is, that married women, and especially those who have borne children, are much more subject to these deviations than the unmarried. Chronic inflammation may frequently have occasioned flexion of the uterus, if we may judge from the deep red, and even blackish colour of that organ after death, and from the various other morbid effects which this disease produces. We allude particularly to the development of fibrous tumors, adhesions between the uterus and its appendages, obstruction of the cavity of the cervix, &c. According to Denman, retention of urine at the period of labour may have been the real cause of retroflexion; and a case of this kind was communicated to him by Mr. Thomas Cooper. The deviation recurred every time the bladder filled, and was easily rectified by pushing the fundus uteri

above the sacro-vertebral angle, after using the catheter. We have twice observed a similar cause produce the same result; but we are of opinion that there must be some other concurrent cause, or the affection of which we are speaking would not be so rare. Besides, this state of the bladder cannot occasion anteflexion, for it can only act by raising the cervix uteri, and pushing its fundus backward.

Flexion takes place, more particularly, near the place where the cervix is fixed upon the body of the uterus, and the angle of curvature varies, being more or less obtuse; sometimes the uterus is folded completely double. There is, commonly, a rigidity in this curvature, and very rarely any mobility of the body of the uterus upon its cervix, unless it be just after labour: it seems, however, to have been otherwise in the case of retroflexion related by Denman, who, besides, merely said that the symptoms were very much like those of retroversion. The distinction between these two affections seems to us to be important, and not very difficult. It would, no doubt, be less easy to distinguish between anteflexion and anteversion, in consequence of the presence of the bladder.

The bladder and the rectum having been previously evacuated, and the patient being placed, first in the erect, and then in the recumbent position, the finger is introduced into the vagina; it is aided by the other hand placed upon the hypogastrium, either to discover whether the fundus uteri be in its place, while the cervix is displaced, and *vice versâ;* or to press upon the whole organ, and render both its cervix and its body easier of access to the finger.

It sometimes occurs that the cervix is forcibly directed backward in retroflexion: in that case the fundus does not project in front of the vagina, as would be the case in anteversion; the fundus, as well as the cervix, may, on the contrary, be carried a little backward: there is an angular or rounded space between the two parts of the uterus, posteriorly; and, anteriorly, an angle or soft prominence may be felt, like a sort of elbow. More frequently, the os uteri is in the centre, and the fundus alone inclined. The uterus may be fixed by pres-

sing with the hand upon the hypogastrium, while the forefinger examines the sides of the unnatural curvature of the organ: this can be effected more easily on the left side, by using the finger of the right hand.

The same observations, in a contrary sense, apply to anteflexion, excepting that, in this affection only, the os uteri is more frequently found in the centre of the pelvis. To complete the diagnosis, the uterus should be moved in different directions, in order to ascertain how far it is free from adhesions. Examination per rectum will be proper in obscure cases; whilst, in this manner, the forefinger is in contact with the angle formed by the uterus or its fundus, we have sometimes been able to introduce the thumb of the same hand into the vagina, and lay hold of the viscus; this is not very difficult to accomplish in thin persons who have borne children, or in cases of the youthful and phlegmatic, in which the vagina is relaxed by habitual leucorrhœa.

Leucorrhœa, in fact, frequently accompanies flexion of the uterus; amenorrhœa, or, at least, irregularity of the catamenia, still more frequently. These complications or effects may, accordingly, constitute part of the characteristics of these affections. We must also add hysteria, pains and draggings in the pelvis, groin, and loins; painful compression of the bladder and rectum, frequent discharge of urine, &c. as other symptoms of this affection.

It is only by reference to these effects, or to the other consequences of the cause of the flexions of the uterus, that the prognosis may be determined. Sterility may be a result of this disease, though not necessarily, for we have known three instances in which this was not the case. Pregnancy may, in its first period, dispose to anteflexion; in its later periods, it may, by the changes induced in the state and size of the uterus, lead to a cure; labour will be apt to be followed by relapse, which must be prevented by frictions on the hypogastrium, and a strict attention to the condition of the bladder and rectum.

Flexion of the uterus is certainly most easily rectified

immediately after parturition: the hand may be introduced into the fundus uteri so as to raise it above the sacro-vertebral angle, where it must be supported until its contraction is complete. Attitude is the principal security against relapse—the supine position for anteflexion; the lateral position, inclined forward as much as possible, for retroflexion; and in every case, the pelvis should be raised higher than the shoulders. How far would a wooden spatula, covered with lint and wax, be dangerous, if introduced into the uterus, for a short period, until its firmness were established?

This means could not be proposed in flexion of long continuance, and during the empty state of the uterus; we should then prefer antiphlogistic treatment (bleeding and baths), if there were symptoms of congestion, inflammation, or plethora. The uterus should be restored, in the first place, by the fingers; its cervix supported and the uterus kept separate from it, either by a sponge introduced between them, in which M. Deneux succeeded, or by a pessary of ivory or elastic gum, passed vertically behind or before the os uteri, as Désormeaux recommended. The *bung* pessary might also be prepared, having a cup with one of its edges more raised than the other, in order to push back the flexed part (Nauche); the same advantages may be obtained by the *cup-and-ball*, made in a similar way.

It is, however, very questionable whether the upper part of the vagina will admit of the application of these means; and, if not, the flexion will be often incurable. We should, however, recommend, in some cases, stimulants and tonics to be applied near the origin of the ligaments of the uterus,—of the super-pubic in retroflexion, and of the utero-sacral, in anteflexion; douches upon the groins, in the vagina or rectum, and stimulating frictions, and even issues near the pubes.

CASES.

1. *Anteflexion supposed to be congenital.*

1. Marie-Antoinette B ——, eighteen years of age, and of small stature, died after repeated attacks of epilepsy. *Examination.* — Slight inflammation of the intestines. The uterus was so bent towards its middle, that the posterior surface of its body appeared in front, resting upon the neck of the bladder, and the fundus uteri was turned towards the anterior paries of the vagina, although the os uteri had retained its natural situation and form. If brought into its natural position, it immediately returned to the former one. Its tissue, laid bare by a vertical incision, was blackish and very dense. Its cervix was of a livid grey colour; its interior cavity of a dusky black, covered with whitish, transparent mucus. The vagina was of a red-brown colour. The length of the uterus, by its convex surface, was two inches and a half; that of its anterior surface being only fourteen lines. (Pl. IX, fig. 5 and 6.)

2, 3*.

2. *Anteflexion after labour.*

1. Françoise M ——, a cook, twenty-four years of age, had been regular from her fifteenth year; she became pregnant the year after she was married. After unusually difficult labours, pains were felt in the loins, followed, during the night, by excessive hæmorrhagy. The patient was then in the sixth month of pregnancy, was delivered of the ovum, and syncope ensued, with loss of blood, extreme weakness, and obstinate constipation. This was followed by suppressed catamenia, and a flow of milk from the mammæ. No tumor could be discovered, or any body resembling pregnancy, for ten months, and the patient had during that time been

* Omitted.—Tr.

separated from her husband. With the extremity of the fingers of the left hand applied to the hypogastrium, and with the forefinger of the right hand introduced into the vagina, I was enabled to feel the uterus and ascertain its volume and length; the vagina yielded so that I was enabled to trace one of the sides and the anterior paries of the uterus with the finger. The body of the uterus was very small in volume, and recurved in front; its fundus was in contact with the inferior border of the symphysis pubis, and the os uteri rested nearly at the centre of the vagina. Leeches were applied to the os externum, hip baths were prescribed, and we expected that pregnancy would restore the uterus.

3. *Anteflexion at the beginning of pregnancy* [1].

A young woman, twenty-four years of age, rather phlegmatic, had been twice pregnant, though in one case only did gestation go on to its full term: it was four years after her last delivery, that she supposed herself again in the second or third month of pregnancy. In a few weeks the os uteri descended lower than usual, without any inconvenience resulting from pressure upon the rectum or bladder. The catamenia were suppressed: there was leucorrhœa. I found the cervix uteri lying upon the internal surface of the coccyx, with the os uteri directed forward. This circumstance, connected with the descent, suggested to me incipient prolapsus; but I was undeceived by the discovery of a rounded tumor, somewhat more voluminous than the natural size of the fundus uteri, painful when pressed, and situated between the anterior paries of the vagina and the bladder. I soon ascertained that it was the body of the uterus directed horizontally forward, and recurved at a right angle upon the cervix; a deep sinus, into which the top of the finger was easily inserted, answered anteriorly to the point of the flexion. This was owing to a firm contraction of the tissues; for, upon pushing the body of the uterus, the cervix was raised with it. The cervix was not at

[1] Case recorded by M. Dugès.

all congested, but was longer than usual; its labia were prominent, especially the anterior, and its orifice open.

Pregnancy was no longer doubtful a few weeks afterwards. In a subsequent examination, I found the cervix higher up the vagina, and less oblique forwards; the body of the uterus was still inclined upon the cervix, and the intervening fold was much diminished. It was impossible to touch the uterus, notwithstanding its volume, by advancing the finger behind the os uteri. The anteflexion was therefore much diminished, and would doubtless cease altogether, as the cervix, in expanding, became shortened.

4. *Retroflexion in a young person.*

A person died in the eight-and-twentieth year of her age, of hypertrophy of the heart. There were, besides, numerous tubercles in the lungs, and a tumor as large as a nut upon the fundus uteri; the cervix was recurved upon its posterior surface: the tissue of its body was red and soft round the tumor; the cavity of the cervix was obstructed by chalky matter,—the principal cause, undoubtedly, of amenorrhœa.

In another case of death from hypertrophy of the heart, recorded by M. Dance, the patient had been affected with amenorrhœa and leucorrhœa: there were redness, thickness, and a mammelated appearance of the mucous membrane of the vagina; the uterus was bent backward at the point of union of the body and cervix, so that both of these projected in the same direction, and the os uteri was turned backward and upward: the parietes of the uterus were thin; its cavity enlarged and flattened; its cervix entirely of a deep red colour, soft, and covered with a thick and glairy mucus; the pavilion of both the Fallopian tubes closely adhered to the ovaria, the tubes themselves were swollen by calcareous deposits.

5. *Retroflexion after labour at the full period.*

1. In a case of fatal hæmorrhagy after delivery, which we examined, the bladder was found to be sufficiently enlarged

to fill the pelvis and part of the abdomen. The uterus had its fundus turned backward, and on the side of its cervix,—sustained by the bladder. The former viscus was as large as immediately after labour.

2. In another case, in which labour had been retarded by excessive distension of the bladder, which was not yet emptied, the fundus uteri, turned backward, filled the pelvis; the os uteri was situated so high above the pubes, that I could not discover it without the guidance of the umbilical cord. The bladder was so enlarged as to excite suspicion of a second fœtus. I drew from it more than two pints of urine, with the catheter. The cervix of the uterus then descended into the pelvis in front of its body, and I discovered a complete retroflexion. To effect delivery, I was obliged to introduce the hand into the uterus, which was done with difficulty; but, once introduced, I found it very easy to raise the fundus and place it upon the sacro-vertebral angle: a strong contraction was then sufficient to occasion the expulsion of the hand and placenta at the same time, and to preserve the uterus in its right position.

3 and 4*.

6. *Retroflexion after miscarriage.*

1†.

2. I was consulted in a case in which the patient informed me that she had been affected with hæmorrhagy of long continuance, after a miscarriage at the sixth month, about ten years before. The catamenia hardly appeared from this period: leucorrhœa, with pain and violent dragging in the groins, succeeded; and, afterwards, cough and other pulmonary affections. I found the patient suffering from nausea, vomitings of glairy fluid, and pains in the region of the stomach, all of which were considered sympathetic of the presumed affection of the uterus. The os uteri, rather swollen, was situated in the centre of the vagina. Though the patient was very thin, I could not feel the fundus of the uterus

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* Omitted.—Tr. † Omitted.—Tr.

on pressing upon the hypogastrium; it was on examination per rectum that I found it fallen upon the posterior paries of its cervix. I was enabled to feel the uterus, thus flexed, between the thumb introduced into the vagina, and the fore-finger, which was in the rectum, resting upon the curvature. I had no doubt whatever of the retroflexion, and I referred it to the miscarriage[1] which took place ten years before.

CHAPTER III.

INVERSION OF THE UTERUS.

(See Plate XII, figure 1 and 2.—Pl. XXXV, fig. 2 and 3.)

Definition.—This affection, which has been frequently confounded with prolapsus, and with excrescences, constitutes that state of the uterus in which it is turned wholly or partially inside outward,—its fundus, in the former case, from being its highest part, having become the lowest, and the os uteri communicating with the abdomen instead of with the vagina.

Leroux admitted of three degrees of inversion, and this division was generally recognized, although Dailliez[2] only employed the terms complete and incomplete. We prefer, after the examples of Sauvages, Professor Delpech[3], and Dr. Perraud[4], a fourfold division, offering distinct characteristics for the diagnosis, prognosis, and treatment. These degrees may

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[1] We met with two cases, in July, of flexion of the uterus,—one of anteversion, the other of retroversion: the persons had been delivered once, at the full period; in the former case seven years, and in the latter eighteen months, before. (B)

[2] *Précis des leçons de Baudelocque sur le renversement de la matrice.* Paris, 8vo. 1803.

[3] *Précis des Mal. réputées chir.* t. 3, p. 576.

[4] *Du renversement de la matrice*, thése de Paris, 1828, no. 250.

succeed to each other, either gradually or rapidly; each may also be permanent.

The first degree consists in a simple depression of the fundus uteri, presenting a concave instead of a convex surface, which either assumes an hemispherical form, and a direction perpendicular to the axis of the uterus, or, an elliptical form and an oblique direction; or, lastly, a conical form, with its base downward. This last condition approaches to *the second degree*, in which the body of the uterus, being inverted, falls into the cavity of the cervix, and projects through the os uteri. In *the third degree*, the cervix is also inverted, the os uteri alone remaining uninverted. The uterus is situated in the vagina in the form of a contracted tumor, strangulated in its upper part by the os uteri, which surrounds it like a ring. But Dailliez is mistaken in saying that the os uteri is not liable to inversion; for, in *the fourth degree*, the vagina itself is partly inverted, as in prolapsus, and the uterus is seen to hang down between the femora*.

In the fourth degree, which is the most rare, the volume of the tumor is commonly larger than that which the uterus ought to present, even immediately after delivery; it is then, in fact, distended by portions of intestines, together with the Fallopian tubes and ovaria. Several real cases of this kind are upon record, the earliest of which is that of Stalpart Van der Wiel, in which the intestines were laid bare, after death, by an incision of the tumor, still in its situation between the femora. Baudelocque has given a case somewhat similar; and Ruysch has drawn a tumor, the volume of which is six inches in diameter in all directions. We learn from Levret that the sac formed by the inverted uterus and vagina, in the case of a person seventy years of age, was filled with a portion of

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* "If the woman should continue to menstruate, the fluid of menstruation may be observed coming from the whole surface of the lower part of the tumor,—of the lower part, because in the greater number of instances the uterus will drag down the vagina with it: in which case the external tumor will consist of two parts; one above, which is the inverted vagina, another below, which is the inverted uterus. Where the vagina terminates, and the uterus begins, there will be found a contracted part, which is the os uteri."—Sir Charles Clarke, *Diseases of Females*, vol. i, p. 154.—Tr.

the rectum, of the bladder*, and of the small intestines, and with the Fallopian tubes and ovaria[1]. But in the other degrees, even in the third, the uterus does not contain, as is said, the Fallopian tubes and ovaria,—at least, not entirely; these organs are, for the most part, loose in the pelvis above the funnel-shaped cavity into which their attachments are sunk. A correct notion of this state may be formed by examining the figures annexed to the Thèse of Dr. Ségard[2], one of which is taken from Denman; the other is original, and communicated by Professor Chaussier. These figures represent an inversion of long continuance. (See the Atlas.)

Causes.—Among the predisposing causes of inversion, may be considered its occurrence in a preceding labour, though the organ were immediately replaced, as we learn from several cases of Amand, Hoin[3], Baudelocque, and Ané. This or any other predisposition becomes effective, however, when the uterus is softened, and distended by a fresh pregnancy, or some other cause: for whatever laxity is attributed to the fibre of fat persons, who are supposed to be more liable than others to this affection; however forcible the compression, caused by the weight of the viscera in such cases, the uterus will never become inverted, unless it has been previously softened, thinned, and distended. Hence we find that most of these cases occur after labour or abortion. Authors have quoted, however, some apparent exceptions to this rule; but in these cases, had not the patients an object in concealing the cause of their disease,—a clandestine pregnancy, or unassisted labour?

There can be no mistake in the two cases of Leblanc, recorded by Sabatier; for hæmorrhagy had preceded the inversion, and, in one of the cases, suppression of the catamenia had preceded this hæmorrhagy. No doubt, there had been effusion of blood in the uterus, distension, expulsion,

* It is most important to determine this fact, in reference to an operation. If the bladder were contained in the tumor, it might be ascertained by the catheter; if the rectum, by the finger.—Tr.

[1] *Observations sur les polypes de la matrice*, p. 140.

[2] *Sur les polypes utérins*, Paris, 1804, n. 246.

[3] *Mémoires de l'Acad. de Chir.* t. iii, p. 376.

softening, &c. In the second case, it was ten days after delivery that inversion took place: Ané and Baudelocque have observed its appearance on the thirteenth day; but, even supposing that the inversion had not commenced on the first days of labour, as these writers think, is not the uterus confessedly liable to be the source of hæmorrhagy, to be softened and distended on the eighth or fifteenth day, if there be a clot of blood, or any membrane remaining in it[1]? We have ourselves observed, in cases of death from repeated hæmorrhagy, that the uterus was soft, enlarged, and easily inverted, although there had only been some small polypi within it. (B) Yet, M. Boyer has described a case, in which he is of opinion that the existence of distension, previous to inversion, cannot be imagined. The patient had not been confined for five years before, and the uterus contained no foreign body: she had always been regular, and was in her forty-fifth year, when she discovered a tumor protruding from the os externum, about eight or ten lines in length. Inversion of the third degree was ascertained: is it certain that this displacement, so gradually completed, did not originate in the labour? The fact of no remarkable change in the health having occurred in consequence of this incomplete inversion, during so many years, affords no contradiction to this idea; for other persons have laboured under more advanced stages of inversion, without danger; such a case has been observed by Delamotte (*obs.* 412), in which the inversion was complete about thirty years before; and another by Levret, of which we have already spoken (*Definition, fourth degree*). Lastly, Baudelocque says he has seen inversion in the case of a person fifteen years of age, with the hymen perfect (*Dailliez*, p. 38). The fact seemed so remarkable to him that he could only explain it as being congenital; perhaps, as M. Dubois also thought, he was deceived by a polypus descending into the vagina. There is no doubt that similar errors have been frequently committed.

Previous distension of the uterus ought not to be considered as a real predisposition to inversion, except inasmuch

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[1] Madame Lachapelle, *Prat. des Accouchements*, t. ii, p. 378.

as the uterus, entirely or nearly empty, retains a certain degree of softness, flaccidity, and inactivity, such as sometimes obtains after labour, and is denominated *inertia*. It is under such circumstances as these that efforts on the part of the patient, as for the expulsion of the placenta, may, by the pressure of the intestines upon the fundus uteri, lead to depression in the first instance[1], and, afterwards, to inversion. M. Dailliez has adduced many examples in proof of this fact. Inversion will easily ensue, if the umbilical cord be hastily drawn, before the placenta is detached; and violence has often completely inverted the flaccid uterus, which had previously presented no sign of depression.

The same consequence may occur even under careful treatment. An irregular, partial contraction,—that, for instance, which occasions the *encystment* of the placenta*,—may circumscribe a flaccid portion, and force it inward, instead of strangulating it outwards. Astruc announced this in theory, and it has been borne out by experience. We have seen a case in which the fundus uteri, during hæmorrhagy occasioned by inertia of the organ after labour, sank into its cavity in the form of a cap; when the inertia ceased, the depression spontaneously disappeared; but the fundus was again found depressed, post mortem, the patient having survived the weakness, occasioned by the hæmorrhagy, only one day. (D)

The dragging of the umbilical cord, attached to an adherent placenta, is not the only cause of inversio uteri. A voluminous polypus may begin by distending the uterus; and then, if it be attached to the fundus, it drags that part after it, as it descends. This result is sometimes sudden, and there have been cases in which inversion has been produced by the instruments employed for the removal of the excrescence; but it is more frequently slow, and one of Denman's plates, copied by Ségard (l. c.), describes such a

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[1] We have seen a case of depression occasioned by the sacro-vertebral angle of a deformed pelvis: this was discovered on post-mortem examination. (B).

* This cause of retention of the placenta is exceedingly rare; it is particularly mentioned, however, by Levret (*Suite des Observations*), who refers to some cases of the kind, published by Dr. Simson of Edinburgh.—Tr.

state of things; the uterus in the plate seems rather folded and crushed than inverted.

It seems that the uterus is never so liable to inversion from polypus as after labour, supposing this to have co-existed with the pregnancy; and yet no case of this complication, that we have heard of, has been followed by inversion,—at least, not immediately[1].

Symptoms. Diagnosis.—If the inversion be rapid, certain symptoms may be noted at the very moment of its occurrence, by which the diagnosis will be elucidated. The patient should consider whether she has experienced any sense of giving way or dragging near the lower part of the abdomen, attended with a sense of fulness about the vagina. The pain is sometimes very acute, rising up into the loins, the groins, &c.; and frequently one or more attacks of syncope succeed. The practitioner, on his part, in case of pulling of the umbilical cord[2], may have felt this cord to yield all of a sudden, yet without breaking, and a large tumor, more rounded, more consistent, and more voluminous than is usually the case with the placenta, partly or wholly, to pass through the os uteri, and sometimes even through the os externum. In this case the placenta will be distinctly seen, on inspection, to encircle the tumor, adhering to it all round, or at some points only: the umbilical cord, with its veins and arteries, its membranes and spongy tissue, cannot be mistaken[3]. If no attempt has been made to expedite the expulsion of the placenta, or if this has already taken place, the practitioner, informed of the efforts and sensations of the patient, will recognise the same fact;—with this difference, that the tumor would be less voluminous, much less soft, and

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[1] See particularly *Mém. de l'Acad. de Chirurgie*, t. iii, p. 480.

[2] We have seen one or two cases in which, upon pulling the umbilical cord, depression of the fundus uteri was evidently occasioned, which shewed the liability of this organ to become inverted.—Sufficient time was allowed for it to contract, for the placenta to be separated, and its expulsion effected. No accident occurred. (D)

[3] *See* Amand, *obs.* 62. Leroux, p 58. Dailliez, p. 47, 48, &c.

more smooth, to the sight or touch. The examination of the hypogastrium, through its parietes, if thin, will prevent mistakes which might arise from the repletion of the membranes of the ovum by clots of blood, detained by the presence of the placenta upon the os uteri, or from the complication of a polypus, or mole, with pregnancy just terminated; for the hypogastrium will be free from all tumor, whether hard or soft, voluminous or already reduced, constituted by the uterus, with or without the ovum; and, upon pressing deeply with the fingers near the centre of the pelvis, the uterus and its partial inversion may be felt.

In cases in which the progress is slow, it is easy to notice a simple hemispherical depression, gradually increasing, and presenting more and more prominent borders, either uniformly or on one side; afterwards, the outline of these borders will be observed to contract as the cavity becomes deeper, and the viscus more inverted. The same result sometimes follows more slowly,—in several days, for instance, or months, or years, as in the case of M. Boyer. In one of the cases given by Ané and Baudelocque, the first degree may be supposed to have taken place on the third day of labour, owing to the patient having imprudently risen from bed,—and the inversion to have been complete only on the thirteenth, in consequence of the efforts being repeated.

In every case, however, and we may add in every degree, of this affection, a symptom almost always attending it, though generally in proportion to the degree, is hæmorrhagy, similar to that brought on by inactivity of the uterus after parturition, and proceeding from the same source,—viz. the open orifices of the uterine sinuses. We have seen that inertia is indispensable to inversion, and, as Leroux says, though in the first instance, a cause of the disease, it is afterwards kept up by it, in consequence of the inability of the uterus to contract regularly and completely.

It is, in fact, only by length of time that the uterus contracts; it usually remains more voluminous, though sometimes smaller than in its natural state; but the same disposition to hæmorrhagy almost always continues. Occasionally the discharge is mucous or puriform. We will quote, on this

subject, a case of our own, to which may be added one of Boyer's, and those of Levret and Delamotte, already quoted, in one of which *(Delamotte)* the tumor was dry, and doubtless become cutaneous. If any intestine sink, either suddenly or gradually, into the inverted uterus[1], as in the cases just quoted; or if, without this complication, the uterus be sufficiently low down for the tumor to project from the os externum, the diagnosis in this fourth degree is evident, on a mere *inspection;* and the uneasiness occasioned by the presence of the uterus in the vagina, the sense of weight experienced by the patient upon the rectum and bladder, the draggings in the loins and groins, and, above all, the repeated hæmorrhagies, soon lead to the proper *examination*, of which we proceed to give the results.

1. Examination per vaginam. *In the fourth degree*, the tumor, which may be felt even outwardly, is commonly voluminous, soft, partly reducible, of a red-brown and blood-colour; moist, in the earlier periods, at least,—paler at times and dry after a long while,—increasing and diminishing at intervals, when it encloses portions of intestine; the finger, introduced between its surface and the parietes of the vagina, discovers a cul-de-sac at a height which varies, and always presents, previously, a circular band, projecting upon the base of the tumor to which it belongs. *In the third degree*, the tumor, less voluminous and concealed, may still be seen by means of the speculum; its surface is found to be smooth and moist, of a deep red colour, and sometimes covered with ecchymoses; when the displacement is recent, even the orifices of the uterine sinuses may be observed exuding blood; but we do not perceive the os uteri any more than in the former case—a circumstance which at once distinguishes inversion from prolapsus of the uterus. What distinguishes the case still more, is the height to which the finger may be carried between the tumor and the vagina; the finger thus

[1] Theories have been proposed about the strangulation of these intestines in the inverted and contracted uterus; the possibility of this, however, has not been established by any known case.

passes, when the hypogastrium is compressed with the other hand, to the os uteri, which forms a ring situated at the upper part of the vagina, and embracing the root of the tumor, *without adhering to it;* the finger may, in fact, be passed between the ring and the root of the tumor, but it is soon checked by a circular cul-de-sac. This last circumstance serves to distinguish inversion from polypus; for, if the latter spring from the fundus uteri, the finger or the sound may be advanced deeply, and on both sides, between it and the base of the tumor; if it spring from the parietes of the cervix uteri, it will be checked on one side by a cul-de-sac, though there will be no obstacle on the other. *The second degree* will be involved in greater uncertainty. The os uteri, in fact, a little open, will not allow the finger to come in contact with any thing but an equivocal convex surface, separated from the parietes of the cervix by a narrow, but deep space. *In the first degree*, still less can be discovered by this mode of examination, unless the whole hand can be introduced into the uterus very soon after parturition. If otherwise, examination of the hypogastrium will afford the only means of diagnosis.

2. In examination of the hypogastrium, after the bladder has been evacuated, and the abdominal muscles relaxed, the uterus will be found, in the fourth, and even the third degree, to have entirely left its natural situation; the fingers can no longer feel it, on pressing upon the abdomen; but in the second and first degrees, either the depression, the fundus and borders of the uterus, will be felt, or the borders alone, yet with all the contour of inversion; or, again, a part of this contour only can be felt in the form of an angular border, situated transversely behind the pubes (*Leroux*, p. 60). This mode of examination will also enable us to ascertain the progress of the affection, or its cure.

3. Examination per rectum will be useful in confirming the previous one per vaginam; it would, no doubt, have helped to explain the case of the young unmarried person, given by Baudelocque.

Prognosis. Inversio uteri is a serious and often a fatal affection. If foreseen and judiciously treated, immediately

after parturition, it may be rectified without much difficulty, though not without fear of relapse, either on the following days (*Leblanc*, on the tenth day), or upon some subsequent delivery (*Ané*, quoted by *Dailliez*). If misunderstood and neglected, it may prove fatal in a very few hours, in consequence of excessive hæmorrhagy, especially in the last degrees.* Inversion has been found, on post-mortem examination, to have been the cause of death, though overlooked during life. This hæmorrhagy may prove fatal even in the first degree, as in the 230th case by Mauriceau: death, following a very few days after the inversion, may have been occasioned by pains, convulsions, and syncope, caused even by the violence which the uterus has undergone, especially in the case of unskilful treatment, when it has been mistaken for a polypus or mole. In such cases, hæmorrhagy has sometimes been succeeded by inflammation, and this, again, by gangrene, induced by a kind of strangulation of the uterus in its cervix (*Millot*, according to *Levret*). This gangrene, however, has not always proved fatal; instances are quoted of recovery, after the spontaneous or artificial separation of the mortified viscus[1].

When the inversion is not carried, at first, to the extreme degree, and no attempt has been made at reduction, it generally happens that the hæmorrhagy decreases and is checked, only to reappear at different times; it is, indeed, not always very abundant; Dailliez says that none of the persons, whose cases were attested by Baudelocque, lost above two or three cupfuls of blood. In these circumstances, the inertia, without doubt, presently disappears, notwithstanding the unnatural situation of the uterus. This organ at first contracts, becomes atrophied, and the disease is permanent: or, if it

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* This observation of Madame Boivin is confirmed by M. Nauche. Des maladies propres aux Femmes, t. i, p. 129.

The following remark is made by Burns:—"It is worthy of notice, that, frequently, complete inversion is not accompanied with hæmorrhage, whilst a very partial inversion may be attended with fatal discharge." Principles of Midwifery, by J. Burns, 6th edit. p. 520.—Tr.

[1] Rousset, p. 354. Ruleau, *Opér. cés.* p. 238.

proceed, it does not much affect the health. We have quoted some cases already, in proof of this assertion. In one of these, the patient, according to Delamotte, complained merely of uneasiness, and a peculiar sensibility to cold. The cases, in which the inversion seems of little importance, are by no means the most common. Repeated, and almost unintermitting hæmorrhagy, during most of the time, exhausts the patients, who seldom survive labour, occasioning inversion, beyond two or three years ; and it would be difficult to quote cases like that of the twenty-sixth of Dailliez, in which, notwithstanding the hæmorrhagies, the patient survived eleven years of suffering. The reason of the prognosis being so serious in these circumstances, is, that reduction soon becomes impossible: we shall see, in the course of this work, that attempts would be fruitless after an interval of a few weeks, in consequence of the uterus having, at that period, acquired so much consistence, and being so much contracted and condensed in its new form ; its tissue would tear rather than yield. In a case which Madame Lachapelle frequently mentioned, whenever she attempted a reduction, which did not appear to her quite impracticable, the patient experienced such pains, and was threatened with such consequences, that it was necessary to desist. And yet, it is very remarkable that this cure is sometimes effected spontaneously, even after a long continuance of the disease: there are but few examples of this kind, but these are much to the point. A case of inversion, detected by Leroux of Dijon, was spontaneously reduced, if we may believe *Dailliez* (p. 35) ; twice was the reduction effected suddenly during the violence and muscular efforts of a fall.

Treatment. The reduction of the inverted uterus, both as respects the mode of the operation, and its degree of practicability, presents us, at once, with two points for consideration, essentially different, and involving important results: the placenta may remain attached to the uterus, or the delivery may be complete.

In the former case, hæmorrhagy is sometimes less to be feared than in the latter, the placenta closing the uterine

orifices. It is for this reason especially, that some practitioners[1] choose to replace the uterus before the placenta is detached; another advantage of this treatment is the preservation of the uterus from a forcible pressure acting upon its substance: the following objections may, however, be raised to this practice:—1. If the placenta adhere, its detachment will be more difficult after the replacement of the uterus; 2. This replacement is difficult enough in itself, without adding the bulk of the placenta to that of the uterus; 3. If we proceed with promptitude, we need not apprehend the consequences of hæmorrhagy*. If they were fatal in the case communicated to M. Ferrand by Professor Delmas, it was in consequence of the want of promptitude in the practitioner: persons of experience have replaced the uterus immediately, after having easily removed the placenta; such is,

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[1] *See* Ferrand, thèse citée, p. 39.

* In this opinion the authors are at variance with Denman, Burns, Sir Charles Clarke, M. Carus, Dr. Blundell, and Gooch. The first of these authors observes, "If the placenta be partly separated, it will be proper to finish the separation before we attempt to replace the uterus; but if the placenta should wholly adhere, it will be better to replace the uterus before we endeavour to separate the placenta."—Introduction to Midwifery, vol. ii, p. 354, second edit.

Burns observes—"If the placenta still adheres, we should not remove it till we have reduced the uterus."—Principles of Midwifery, p. 523.

Sir Charles Clarke.—"The uterus is first to be returned to its usual state and natural situation, and the case, then becoming simply one of a retained placenta, is to be treated as such; but, if, neglecting this order of proceeding, the placenta should be first removed, a number of bleeding vessels will be exposed before the uterus can contract, and the chance is, that the patient may die from hæmorrhagy." Obs. on those Diseases of females attended by discharges, vol. i, p. 152.

Carus.—"If the inversion is quite recent, and the placenta still adheres to the uterus, it is best to return the uterus before separating the former; but if it is in a great measure detached, which is by far the most frequent occurrence, it is advisable to separate it completely before returning the uterus."—Lehrbuch der Gynäkologie, vol. ii, p. 423.

Dr. Blundell.—"If the placenta be adherent to the uterus at nearly its whole extent, you must proceed with the reduction with the placenta attached; but if the attachment be only partial, as by one lobe or so, then detach it before you reduce the womb."—Lectures on Midwifery, p. 149.

Gooch.—"First make an attempt to replace the uterus without separating the placenta; but if the difficulty of reduction, while the placenta is attached, is insurmountable, you must then incur the risk of hæmorrhagy, by first separating it."—Lectures by G. Skinner, p. 304.—Tr.

among others, the case quoted by Leroux, from the vivâ voce lectures of Levret.

How long after delivery may the replacement be attempted with the hope of success? Certainly, the sooner it is done the better; but the opportunity is not always in our power: sometimes the operation must be postponed; when, for instance, the uterus is inflamed, and covered with gangrenous spots, either in consequence of its contact with the air, of its strangulation by its cervix, or of external violence. Lauverjat and Hoin began, in such circumstances, with the use of antiphlogistics, baths, &c.; afterwards, they succeeded at reduction, one of them on the tenth or twelfth day after delivery, the other on the thirteenth. Chopart also reduced the uterus in a case in which it had been inverted for eight days, offering marks of gangrene, and appearing, as it is said, sphacelated. The recovery in these three cases was rapid*.

At a more remote period, other means may perhaps be employed with the same results. Millot, considering that reduction was prevented by the stricture of the os uteri, proposed to relieve it by incision; and M. Nauche would have adopted this measure in a case which he has recorded, if he could have reached the part. In a hopeless case, in which the pliability of the uterus would seem to forbode an easy reduction, this incision would be proper; but, before we adopt such a measure, it will be right to try others less severe. The notions of Chaussier respecting the application of belladonna to the uterus, and especially to the os uteri, have been

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* Sir C. M. Clarke states that he has been called by other practitioners to cases of inverted uterus, where the patient has expired, in consequence of hæmorrhagy, before the nature of the accident has been ascertained.

In such cases he has found very little difficulty in replacing the uterus, all resistance being removed by the weakened state of the patient previous to death. Sir Charles Clarke on those Diseases of females which are attended by discharges, vol. i, p. 152.

This latter fact seems to suggest the propriety of bleeding to actual syncope, as Dewees has done, in cases of inversion of the uterus unattended by great hæmorrhagy, and of attempting reduction under the influence of that state of the system.—Tr.

borne out by experience. An ointment prepared from the extract of this plant greatly facilitates the enlargement of this orifice, in cases of rigidity during labour. Would not this be a proper occasion for applying this remedy both to the tumor and to the ring which strangulates its root?

If the inverted uterus contain portions of intestine, they must be forced back by pressure upward. If the uterus be congested without being much inflamed, attempts should be made to diminish its volume by continued compression, especially at its lower portion, as Desault has already advised (*Désormeaux, Dict. de Méd.*). A bandage might be applied in inversion of the fourth degree; in the third, the uterus may be compressed by forceps, guarded with soft linen. Might not pressure from below upwards be also made available, for the reduction of the inverted uterus? A pessary, like that of the cup-and-ball, might, for this purpose, be introduced into the vagina. The super-pubic ligaments might, at the same time, be stimulated by means stated in the preceding chapters, or by galvanism.

In circumstances favorable to reduction, the hand or fingers will be sufficient, without mechanical aid. Levret used the fist; Baudelocque only the fingers. With the application of ointment over its surface, pressure upon the lower end of the tumor will probably succeed, if the parts about its root are soft and expansible; otherwise, the fundus would be flattened, the cervix remaining undilated. It will be better, in such cases, to take the nearest portion of the root between the fingers and push it back, and then to continue returning the whole tumor, as in cases of strangulated hernia (*Deleurye* quoted by *Baysselance; Delmas*, quoted by *Ferrand*, p. 42, &c.)[1]. By these means, less force will probably have to be exerted than appeared necessary to an English

[1] We witnessed an operation of reduction performed by Professor Baudelocque, in which he adopted the two-fold process of reducing by pressure the portions of the tumor nearest to its root, successively, and of pushing back the entire fundus, afterwards, with his fingers. The uterus was very soft, and allowed itself to be softened still more. The reduction therefore required no great effort.

surgeon, who, in order to accomplish this object, placed his foot against the wall[1].

During these operations per vaginam, the other hand should be applied to the hypogastrium, to mould the uterus to its form. Even when the body of the uterus has been entirely returned through the cervix, the reduction may not be complete, but only to the second or first degree. The hand, or some of the fingers, should then be introduced through the cervix, in cases of recent labour, and remain in the uterus until expelled by its contraction, which at the same time restores its form and tone.

This contraction alone may, in effect, maintain the uterus when reduced, and even rectify it, unassisted, in the first degree. We have been witnesses of this circumstance, and it is the object always proposed, in such cases, by friction upon the hypogastrium, by stimulating the os uteri with the finger, and applying cold and wet cloths upon the hypogastrium and femora, and, lastly, by injections of cool liquids, if hæmorrhagy and the inactivity be obstinate.

In every case, perfect rest and the supine position will be advisable for several weeks; any muscular effort may prove the cause of a relapse. During the operation, the patient should lie on the back, with the pelvis raised higher than the shoulders, &c.

If reduction seem impracticable, little can be done; yet care must be taken to palliate the evil. The most powerful astringents, and cold applications, have been employed, to no purpose, to consolidate the uterus and stop the hæmorrhagy: the constant plugging of the vagina would be insupportable; but continued pressure upon the uterus, although it might not succeed in immediately reducing its size, might at least induce atrophy. The pessary or sponge will be the only means of supporting the uterus, and checking the progress of the disease.

It is from apprehension of the danger attending irreducible inversion, that practitioners have proceeded to remove the uterus by excision or ligature. Two persons, of unquestioned

[1] *Bibl. médic.* t. xlvii, p. 271.

veracity and knowledge, have published, each of them, a case of inversion, in which the uterus was removed by ignorant persons. The preparations were carefully examined; and one of the patients, who completely recovered, was generally submitted to the inspection of the pupils of Osiander; while the other, equally cured, became the subject of a dissertation by Wrisberg[1]. Before this, Carpi had recorded a similar case. The ligature has been frequently employed, in such circumstances, by surgeons: Rousset relates two successfnl operations, performed in cases of long standing; and others may be found in the Medical Journals—those, for instance, of Faivre[2], Newnham[3], Granville, Gooch, Dr. C. Johnson*, &c.[4] In the two first, however, of these cases, the nature of the tumor seems not to have been sufficiently ascertained; and in the third, the cure could not have been certain, when the case was published. That of Mr. Chevallier, communicated by Merriman, is far more satisfactory; the only thing wanting is the post-mortem examination, the patient having died several years after the operation, and, as is fairly supposed, from some other cause.

These happy results are, however, far from common: unskilful lacerations have frequently caused death, and even a careful excision of the uterus proved fatal after a few days, although the operator was Deleurye (*Dailliez*, p. 104). The ligature applied to the root of the uterus inverted by polypus,

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[1] *De uteri resectione, etc.* Gott. 1787.

[2] *Journ. de méd.* Août. 1786.

[3] *Journ. univers. Sc. méd.* Septembre 1818.

* Dr. C. Johnson has related two cases of partial inversion of the uterus successfully treated by ligature. In the first case, the lady had the catamenia afterwards, which were checked for a few months; and it might be doubted whether it were really the inverted uterus which was tied, but for the following passage:—"In threeweeks the tumor came away, which proved to be the fundus uteri inverted, with the Fallopian tubes." Dr. Clark, of Dublin, saw this case. The portion of the uterus removed is now in the Museum of the College of Surgeons of that city. There was a larger portion of the uterus removed in the second case; but its results on its functions were not known, as the patient removed into the country.—Dublin Hospital Reports and Communications in Med. and Surg. vol. iii. p. 479.

[4] *The London Med. and Surg. Journal*, 1828.

proved fatal in seventeen days, and the diagnosis of Goulard was confirmed on examination. A similar result followed an operation of the same kind by Baudelocque and Desault. Lastly, the ligature, applied in a case in which the uterus was inverted and mistaken for polypus, proved fatal in two instances within our own knowledge: in one at Lyon, under the care of Dr. Key, and witnessed by Marc. Ant. Petit; in another, at Paris. In the former of these cases, the ligature had been applied only a few seconds, and occasioned so much pain that it was removed. In the second, in which the operation was performed by a young practitioner, the consequences were slower: gangrene and separation of the uterus ensued, and death followed in a very few days (*Boyer*, t. x, p. 510). In one case, in which the hæmorrhagy was alarming, Professor Dubois applied the ligature; the hæmorrhagy was indeed checked, but the ligature had soon to be removed, in consequence of the appearance of serious symptoms. Perhaps, as it has been suggested, the ligature might be employed at intervals, and thus the uterus be gradually atrophied*.

It is doubtful whether the case published by Baxter was really one of inversio uteri[1]. The uterus, it is said, had been dragged beyond the os externum by violent delivery, and there remained; but it was not till five weeks had elapsed that the tumor, inflamed and ulcerated in consequence of the separations of some gangrenous eschars, was seen by this surgeon, who, believing it to be a case of inversion, and fearing the patient might die of marasmus, if the tumor were not removed, traversed its root with a needle, applied two ligatures, and removed the tumor below them. Neither cavity, nor any resemblance of the Fallopian tubes or ovaria, were found in this tumor; it appeared a *solid scirrhous mass.*

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* Dr. Marshall Hall suggests that a needle may be repeatedly passed through the upper part of the neck of the tumor, so as to induce adhesion, and thus cut off the communication with the peritonæal cavity; and then that it may be removed by several ligatures, each of which should include small portions only. This suggestion might, it is obvious, have various other applications in surgery, and especially in the surgery of the uterine organs.—Tr.

[1] *Ann. de litt. méd. étr.* t. xv, p. 578.

The patient recovered, and the *catamenia had occurred twice*, imperfectly, when this account was written. This case may be classed among those of pregnancy, complicated by scirrhus of the cervix uteri: perhaps it was only a polypus springing from the cervix or the os uteri. It is, indeed, to such excrescences that the doubts and mistakes of distinguished persons are to be traced. We have seen a case, in which a mistake was more likely, from the circumstance of a part of the placenta being grafted upon a large portion of an enormous polypus (B). The third volume of the 'Mémoires de l'Académie de Chirurgie' contains the cases which Levret has compiled from different operators, and in which it has been ascertained that it was not the uterus that was removed, but a polypus; such especially is the case of Hoin. The polypus was hollow, and the father of this practitioner had mistaken it, even after its excision, for the uterus; but the catamenia returned, and the patient miscarried, after this excision. Two other cases, in which a hollow and voluminous polypus had been mistaken for the inverted uterus, are quoted by Levret from Cailhava and Guiot. Boudou had also removed a hollow polypus, and Saviard had discovered a similar one in the uterus, to the fundus of which it was attached. It was just such a polypus that was once successfully removed by Laumonier, although he brought away a small portion of the uterus at the same time; but, the tumor having returned, a new ligature, which involved the principal portion of this viscus, caused fatal peritonitis. We are ourselves (B) in possession of a tumor which was successfully removed by Professor Dubois, and which is so like the uterus, in consequence of the cavity in its centre, that it might deceive an incautious observer; and yet we have ascertained that the uterus of the patient is quite perfect. (Plate XIX, fig. 3 and 4.)

CASE.

Inversion, passed into a chronic state.

In a case of inversio uteri after labour, the patient, who was thin and of the phlegmatic temperament, was brought to

the Maison de Santé, August 18, 1825, six days after the occurrence of the disease. There had been no hæmorrhagy since delivery, and only a sense of weight felt in the pelvis, after, with slight pains in the iliac regions, and a constant desire to pass the urine. The vagina was expanded and filled with a tumor, of about two inches and a half or three inches in diameter, smooth on its posterior and right lateral surface, and rugous on its anterior and left. It was easy to raise the tumor; but it was impossible to reach its root, in consequence of its volume. The catheter could not be introduced, owing to the extreme sensibility of the meatus urinarius. The hypogastrium was so tender, that the patient could not bear the pressure of an examination. She was placed in the hip bath, and, on pressing the tumor backwards, as she had learned to do, was enabled to pass a little urine. On the following day, it was ascertained, by the use of the speculum, that the uterus was inverted, and that the placenta had been attached to its anterior paries, where we had felt some unevennesses on the former examination. The inversion was in the third degree, and reduction hopeless; it was nevertheless easy to push the body of the uterus in the direction of the cervix with one hand, while the other, applied exteriorly upon the hypogastrium, resisted the elevation of the whole viscus. Without this last precaution, we might have committed an error; for, the vagina yielding at each attempt at reduction, it might have been supposed that the fundus of the uterus was propelled through its cervix. The only remedies used were emollient applications to the abdomen, and similar injections into the vagina. On the twelfth day after the commencement of the affection, the urine passed without assistance. The uterus was less voluminous, harder, and less reducible than before. In the month of September, 1830, I found the patient surprisingly altered, being of a very full habit. Upon examination, I discovered a tumor, slightly flattened, about five lines in breadth and from eight to nine in thickness, not at all painful, and occupying the entire centre of the vagina: by the help of the speculum, I observed that the inverted surface was of a pale red colour, covered with small spots like flea-bites, of

a deeper red colour; but there was no appearance of the os uteri, which, in fact, closely encircled the neck. The inversio uteri had therefore remained, without any other change than a diminution of its volume. (Plate XII, fig. 1 and 2.)

SECTION FOURTH.

DISTENSION OF THE UTERUS BY FOREIGN BODIES.

CHAPTER I.

GENERAL REMARKS.

THE uterus, subject to considerable distension in the discharge of its natural functions, is liable to the same affection from morbid causes. The foreign bodies, which in such cases occupy its cavity, vary in their nature, consistence, and origin; they are either aëriform, liquid, or solid; and are the result of a natural secretion, or of a new formation, or of matters originally conveyed into it from without. The catamenia, for instance, or a sero-mucous fluid, like that which naturally lubricates the interior of the uterus, may be retained within its cavity. The former of these may form into masses, in consequence of the absorption or expulsion of the more fluid parts; the latter, changing its qualities, may sometimes harden into calculi. But, more frequently, masses wholly solid, or partly fluid, living for a longer or shorter period at the expense of the organ containing them, have been conveyed into the uterus, solely in consequence of imperfect impregnation, and constitute what are called *false conceptions*. Some of these affections are so rare as to require few general remarks; others, again, are secondary and subordinate to changes, which will be described elsewhere. Thus, retention of coagula, for instance, belongs, in some cases, to midwifery, and, in others, to *dysmenorrhœa*. False membranes may enclose blood, coagulated or not; and pus may be deposited in the cavity of the uterus, &c.

CHAPTER II.

OF PHYSOMETRA*, OR TYMPANITIS UTERI.

We have never known the existence of an *aëriform body* in the uterus, except in obstetric cases, as in retention of the membranes, or of portions of the dead fœtus, or of putrid coagula, causing gaseous exhalations, found in the uterus after death, or escaping, per vaginam, during life: this gas is sometimes inflammable (D). In such cases, the uterus may project, more or less, into the hypogastric region, and into the vagina, being resonant on percussion[1], and constituting a tumor circumscribed and proportionate to the quantity of gas it contains,—this quantity varying, especially, with the degree of inertia of the uterus†. Cases have been quoted of idiopathic physometra, which consists of intra-uterine gas, produced by morbid exhalation, or secretion, and not by chemical changes. A case of this sort will be found lately published in the Transactions of the Medico-chirurgical Society of Bologne[2]. A woman, forty years of age, supposed herself to be pregnant; the catamenia were checked, the abdomen was swollen, and the uterus was, in the fifth month, on a level with the umbilicus. One day she stooped down, when, all at once, a quantity of wind escaped from the uterus, and the abdomen completely collapsed[3]. This aëriform fluid is sometimes ino-

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* From φυσάω, to inflate, and μήτρα, the uterus.

[1] We must not receive literally all the cases given by the ancient writers, as belonging to physometra; they have, doubtless, in many instances, confounded it with abdominal tympanitis in puerperal peritonitis.

[2] Analysed in the *Revue médicale*, t. iv, p. 484, 1830.

[3] The same event occurred in the cases of two women of Padua, quoted by Frank (*De retent.* t. i, p. 74). *See* also Mauriceau, t. i, p. 74.

† Dr. Gooch observes, "Tympanitis of the uterus has been described under two forms; in one, the air is formed in the cavity of the uterus, is retained for several months, distends it to a considerable magnitude, and is then expelled: of this I have never seen one instance: for the other form, of which I have known several examples, a better name womld be *flatus* of the uterus. Air is formed in

dorous,—a circumstance which has led to the belief that it was only atmospheric air in the vagina. Real physometra is almost always chemical in its origin, even when it is not consequent upon labour, and arises from the change of certain secretions, which are disposed to putrefaction,—as the leucorrhœal mucus; or cancerous ichor, retained in greater or less quantities (*hydro-physometra of Frank*); or coagula, resulting from menorrhagia; or even the catamenia. The Transactions we have just quoted, furnish also a case in which the catamenia were checked by exposure to cold, followed by pains and swelling of the uterus, which extended to the umbilicus, and was resonant on percussion; with remittent fever. The finger was carried as far as the os uteri, upon which a portion of fetid gas immediately escaped; the abdomen collapsed, but soon became distended anew: a tube was introduced into the uterus, in order to apply fumigations; gas issued copiously, coagula followed, and the patient was cured. In the cases of two other persons, who had been affected for a long time with pains in the uterus, and fetid, aëriform exhalations, the uterus was found to be filled with putrid effluvia; its interior surface was ulcerated, and the os uteri closed by the swelling of its borders[1]. It is also to the putrefaction of certain products of conception, of which we shall speak hereafter, that the air-bladders or moles, mentioned in the same work, must be attributed. Lastly, this is the principle upon which Mauriceau explains two cases,—one occurring unconnected with pregnancy (*obs.* 105), the other during ges-

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this organ; but, instead of being retained, so as to distend the uterus, it is expelled with a noise many times a day. It has been doubted whether it really came from the uterus; but in one of my patients there was a circumstance conclusive on this point: she was subject to this infirmity only when not pregnant: but she was a healthy and breeding woman, and the instant she became pregnant her troublesome malady ceased. She continued entirely free from it during the whole of her pregnancy; but a few weeks after her delivery it returned."—An Account of some of the most important Diseases peculiar to Women, by R. Gooch, M.D., p. 241.

Dr. Denman observes, "of this (real physometra) I have never seen an example; but many cases have occurred to me of temporary explosions of wind from the uterus."—Denman, Introd. to Midwifery, vol. i, p. 116.—Tr.

[1] P. Frank. *Epitome de curandis hominum morbis, liber* vi, *de retentionibus, pars prima, Tubingæ*, 1811, p. 83—86.

tation and the life of the fœtus (*obs.* 110). No doubt, the gases originated, in the latter case, exteriorly to the membranes, and, as Frank says, in the very place where the *fausses eaux* are usually deposited; in the former case, in a putrid coagulum.

The symptoms of physometra are too characteristic to admit of any doubt, after careful examination: the prognosis arises out of that of the original disease; if idiopathic, it is of little importance; the affection is rather an inconvenience than a disease, and its results may be remedied by mechanical means.

The general treatment consists in cleanliness, baths, lotions, and injections, either of pure water, or of a slight solution of chloride of lime.

CHAPTER III.

OF HYDROMETRA*, OR DROPSY OF THE UTERUS.

THIS affection, which, like the preceding, is generally symptomatic, consists of an accumulation of serous, sero-mucous, or albuminous, fluid in the cavity of the uterus. We observed it to recur for a short time, and then disappear by copious evacuations, in a case of cancer of the uterus, of which we shall treat hereafter. We have also seen it follow chronic metritis, presenting, on examination after death, the cavity of the uterus filled with a large quantity of pus†, and the os uteri obliterated by adhesions. This sero-mucous fluid is almost always mixed with pus or blood: the uterus

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* From ὕδωρ, water, and μήτρα, the uterus.

† There is an interesting case of this kind published by Dr. John Clarke, as we have already noticed, p. 101.—TR.

is seldom found merely thinned and distended in these cases; its tissue is, most commonly, beset with scirrhus, ulcerations, hydatids, or polypi; and the os uteri is sometimes obstructed by a tumor, sometimes merely closed by tumefaction. It is erroneous, therefore, to consider these dropsies as idiopathic; for the name applies, in reality, only to a few cases. Before we enter fully upon the subject of hydrometra, we will say a few words respecting a serous fluid, which appears *only during pregnancy*, varying its situation in different cases, and occasioning, at times, serious results.

1. It is a known fact, that, in advanced stages of pregnancy, and especially about the fifth month, a large quantity of water may be discharged, without being followed by miscarriage. As the full period draws nigh, a slow, premature discharge of the liquor amnii, occasioned by some slight laceration of the membranes, has frequently been mistaken for these *fausses eaux*. Indeed, Madame Lachapelle, who was much engaged with cases of advanced pregnancy, questioned the reality of the fausses eaux[1]. On the other hand, it has been concluded that the amnion has been ruptured; and it has been a matter of reasonable surprise, that there was no subsequent miscarriage, when, in fact, the amnion was clearly uninjured[2]. This idea has been entertained, with more appearance of truth, in other cases: of these we have seen five (D), and others have been recorded by accurate observers[3]. Puzos has witnessed the recurrence of this discharge even four times in one pregnancy. Hence, some have supposed that this accumulation is formed in the allantoïs, that is, the cavity situated, in the first months of gestation, between the chorion and the amnion, near the placenta;

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[1] Baudelocque attributed the *fausses eaux* to transudation of the liquor amnii through the tissue of the membranes (§ 531), which appears to us impossible. The case of Fabricius Hildanus, in which we are told of the expulsion, in the fifth month, of a membranous sac, containing ten pints of water, could only relate to a double pregnancy, in which one ovum only escaped. (*Cent.* ii, *obs.* 53.)

[2] Maunoury and Lévêque. La Source. *Bibl. méd.* t. lxxvi, p. 88, &c.

[3] Noortwick, Camper, Geil and Nægelé. *Diss. de Hydrorrhœa uteri gravidarum.*

others consider it as formed between the laminæ of the deciduous membrane (*Nægelé*)—a space which we have never been able to discover. We incline, therefore, to the former view; and the more so, because there is always found, in the allantoïs, a gelatinous fluid, which might easily accumulate, and become morbid. Consequently, our opinion is, that the term *hydrallante* may designate an unnatural condition, not sufficiently characterised by the term fausses eaux.

The real liquor amnii accumulates sometimes copiously in this membrane; and the consequence is a morbid condition, which may be termed *hydramnios*. We hear of fifty pints of water being thus accumulated; but this is obviously an exaggeration, which is more readily conceived, because these cases are never pretended to be determined accurately. This condition sometimes brings on metritis, and even leaves traces of inflammation in the placenta and the membranes of the ovum[1]. Inflammation, in its turn, may be the cause of the dropsy. Lastly, hydrometra may arise from a universal serous diathesis, indicated by other dropsies, and, particularly, by anasarca[2]. In the last case, and in the instance quoted from Van-Swieten, the patient was pregnant with twins. We have seen a similar distension, in a case of twins, unattended with anasarca: dangerous peritonitis ensued, and premature labour came on; the children were born dead[3]. In another case, recorded by Dr. Duclos, delivery was also premature; but the child was born alive. Cases have occurred, in which the infant was born alive, but dropsical[4], or anencephalous, as we have witnessed,—the result, probably, of cerebral dropsy (D). These kinds of hydrometra may, again, lead to inertia of the uterus after delivery, and threaten uterine rupture during labour,—events which are best prevented by the well-timed rupture of the membranes*.

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[1] Mercier, *Bibl. méd.* t. xxxvi, p 101, and t. xxxix, p. 82.

[2] *Hildanus centur.* ii, *obs.* 54. See also *Bibl. méd.* t. xxxvi, p. 233, &c.

[3] A. Dugès. *Sunt-ne inter ascitem et peritonitidem chronicam certa discrimina quibus dignosci queant.* In 4to. *Paris*, 1824, p. 34.

[4] *Nouv. Bibl. méd.* t. vii, p. 441.

* A case of mortification of the uterus, occurring a few hours after delivery, is related by T. Graham, Esq. Med. Chir. Trans. vol. vi, p. 601. The uterus

Real hydrometra is sometimes brought on by general causes, such as debility, &c.; but it is more frequently preceded by acute inflammation, either local (a blow upon the hypogastrium, &c.), or chronic. It only occurs in married women, still young, and varies very much in its degree,—the uterus containing, sometimes, scarcely one or two pints of fluid, at other times, being so distended as to resemble pregnancy. The accumulation has, occasionally, been so great as to induce a belief of the existence of ascites; eighty-five pints of ichorous, oily matter having been found in the uterus *(Blanckard)*, and even, as it is said, an hundred and eighty pints of water[1] (*Vésale*)*.

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was very much distended by the liquor amnii, to which Mr. Graham attributed the fatal affection; he suggests the propriety of evacuating the fluid in such a case, before the full period of pregnancy.

Luroth also gives an excessive distension of the uterus as a cause of softening, whether it arise from twins, the large size of one fœtus, or the excessive quantity of the liquor amnii.—Repertoire générale d'Anatomie, t. v, p. 15.—Tr.

[1] See cases, equally remarkable, in the *Sepulchretum* of Bonet (lib. iii, sect. xxi, obs. 55). The author speaks of a uterus sufficiently large to enclose a child, ten years of age.

* The following case, related by Dr. A.T.Thomson, is one of the most striking instances of hydrometra on record:—Mary Ray, sixty-five years of age, mother of several children, was admitted into the infirmary in December 1823; she appeared somewhat emaciated, and complained of uneasiness and pain, connected with a tumor in the abdomen, which she first perceived about six weeks prior to her admission into the infirmary in April, although, from a sense of delicacy, she had not mentioned it at the time. It was situated at the lower part of the abdominal cavity, rising, as it were, out of the pelvis, and occupying the iliac, hypogastric, and umbilical regions. She appeared as large as if six months gone with child. An indistinct fluctuation was perceptible in the tumor, and the least pressure on it excited pain. It was suspected to be a diseased ovarium: but no examination was made per vaginam: nor could it be ascertained, from the account which the patient gave of its origin, whether it had at first appeared on either side of the abdomen. The accompanying symptoms, however, denoted a greater derangement of the system than usually attends dropsy of the ovarium. These were want of appetite, considerable nausea, furred tongue, the pulse quick and feeble, the bowels irregular, and the urine scanty and high coloured. In the beginning of March 1824, she died after amputation of the leg, which operation was performed in consequence of a dry gangrene which had attacked the limb.

Dissection.—The first object which presented itself, on the abdominal parietes being divided and turned aside, was a body, closely resembling the gravid uterus, occupying the whole of the pelvic cavity and the greater part of the abdominal.

The diagnosis of such cases may present some difficulties: the fluctuation will distinguish them from scirrhus, &c. the indistinctness of this fluctuation, and, still more, the distension of the uterus, ascertained by examination per vaginam, will remove the suspicion of ascites, or of dropsy of the ovarium. The absence of repercussion, of the movements of the fœtus, and of the pulsations of the fœtal heart, will prove the non-existence of pregnancy, which might else be confounded with hydrometra, in consequence of the swelling of the abdomen, and suppression of the catamenia[1]. Lastly, the absence of resonance, and the presence of fluctuation, will distinguish uterine dropsy from physometra.

Upon its anterior surface, and firmly adhering to it, was the urinary bladder, containing a small quantity of dark-coloured urine. On laying the flaps of the abdominal parietes together, the stretched bladder was found to extend within an inch of the umbilicus; so that it must have been perforated if the trochar had been employed to evacuate the fluid during the life of the patient, under the supposition that the disease was ovarian dropsy. The tumor was immediately ascertained to be the uterus, greatly enlarged and filled with fluid; it was partially sphacelated in its peritonæal covering, on the upper portion of the fundus. With regard to the other viscera, the liver was much diminished in size, and adhered to the diaphragm throughout; the gall bladder was large, and turgid with deep-coloured bile; the stomach, colon, and other intestines, with the omentum, were glued together in many places, and, in some, were in an evident state of sphacelation. This gangrenous appearance extended to the peritonæum in the hypochondriac region.

On removing the diseased uterus from the body, and making an incision into it, the quantity of fluid which it contained was found to measure eight quarts; it was of a dark brown colour, and coagulated slightly when heated in a spoon over the flame of a candle. The existence of a large hydatid within the cyst was expected; but this opinion was incorrect, the sac being merely the uterus, in the cavity of which the fluid was contained. The internal surface of the organ was not more irregular nor more spongy than its natural state; but none of the orifices could be found, for even the os uteri was, interiorly, as completely obliterated as if it had never existed; and, although its situation could be traced in the vagina, yet, even there, it was very faintly marked. The ovaria were small and flaccid, but otherwise natural.—Med. Chir. Trans. vol. xiii, part i, page 170.—Tr.

[1] It is difficult to imagine the co-existence of the catamenia with hydrometra, as stated by Monro. In this case there must have been an exhalation of blood per vaginam, as in some instances of pregnancy. (*Monro, Essai sur l'hydropisie*, p. 164.) It is easier to understand how a sort of hydrometra may be brought on by *retention* of the catamenia, morbidly altered, and by retention of the lochia in consequence of a sudden chill. (See *Frank, de retent.* t. i, p. 297.)

If we judge by its duration, which is sometimes protracted, uterine dropsy is not a dangerous disease; it varies however, in this respect, with its cause. The prognosis will be less alarming, when, the closure of the os uteri being incomplete, the accumulated fluid escapes from time to time. Fernel speaks of a case in which it disappeared in this way each month; even pregnancy has been known to take place twice, in the case of a person subject to alternate retention and evacuation of much serous fluid: and neither did these alternations hinder gestation, nor were they, in their turn, hindered by it,—the reason being, doubtless, that the exhalation proceeded only from a limited surface of the uterus[1]. This evacuation may take place near the full period of supposed pregnancy, or much sooner, producing, in the same way as that in physometra, disappointment; this would be of little consequence however, if, as Mauriceau, M. Nauche, and others have noticed, the cure be afterwards permanent.

Mechanical violence, like that of vomiting, &c. may, as Monro says, cause the expulsion of the fluid; at other times, the finger, or an elastic catheter, may be passed through the os uteri, and open a passage for the discharge. In the same way, it might be practicable to raise and remove a moveable tumor, the separation of which, were it possible, would perhaps lead to a perfect cure. The insufficiency of these means may render it necessary, in some important cases, to use the trochar; the puncture was practised successfully above the pubes, in one case, and evacuated fifty-three pints of thick, black, sanguineous fluid; the patient was fifty-three years of age, and there was no appearance of relapse, ten months afterwards[2]. The puncture was successfully performed in a dangerous case of hydramnios *(Noël Desmarais)*. It would doubtless have been better, as was observed by Dr. Laporte and M. Itard, to pierce the membranes through the os uteri, just as, in common hydrometra; the puncture of the cervix at the upper part of the vagina would be

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[1] Richard Browne, quoted by Itard, *Dict. Sc. méd.* t. xxii, p. 320.

[2] Wirer, *Ann. litt. méd. étr.* t. ii, p. 290.

preferable to that of the body of the uterus, through the abdominal parietes, and it would be easy to construct a trochar of sufficient length, and of a sufficient curvature, for this purpose. A case is recorded, however, in which the puncture was attended with a fatal result[1].

CASE.

Sudden and considerable evacuation of serous fluid.

A young woman, of strong constitution and sanguineous temperament, experienced severe pains in the hypogastrium, followed by a discharge, at intervals of four or five minutes, of a pint of transparent, colourless, inodorous fluid. I found the uterus lower down, its neck larger, the borders of the os uteri thicker and wider apart than in the natural state, without tenderness; there was no tumor above the pubes. I concluded, from the state of the cervix uteri, that the serum had proceeded from the uterine cavity. Was it an hydatid in the uterus, which had just burst? Or, was it an accumulation of serous matter, which had hitherto been prevented from escaping, by a spasmodic or inflammatory contraction of the os uteri? Had the flow been less copious, it might have been mistaken for one of those sero-mucous discharges which follow after hysteria. But we have observed these copious evacuations in cases in which severe diseases of the uterus, or of its internal appendages, have been experienced or threatened,—a circumstance which clearly proves that they may proceed from a source deeply seated.

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[1] Cruveilhier, *Anat. pathol.* t. i, p. 281.

CHAPTER IV.

OF CALCULI OF THE UTERUS.

We have already mentioned a case of deviation of the uterus, attended with obstruction of its cervix by calcareous concretions,—a circumstance which proves that the matter secreted by the diseased uterus, may concrete and assume the consistence of saline bodies. It appears also to have been proved that these principles may unite into large and compact masses, forming real calculi. Some pathologists, however, have not admitted this theory; and Professor Roux, in his 'Mélanges de Chirurgie,' attributes the formation of these calculi to the ossification of fibrous tumors, situated within the uterus, or upon its parietes[1]. One of these calculi, which was analysed some years ago, was found to be composed of a large portion of animal substance, combining salts of potassa, soda, and lime[2]. M. Amussat found another to be composed of phosphate of lime and gelatine. Most of the instances, known of old, have been collected in the Mémoire of Louis[3], which has been inserted among those of the 'Académie de Chirurgie'. An account is there given of a person, sixty years of age, affected with a calculus of the size of an egg, and weighing nine drams and a half, unattended by inconvenience beyond a sense of weight, uneasiness in walking, and pruritus: though very hard, the calculus lost more

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[1] Pecquet, after describing two calculi, found in the substance of the uterus, adds these expressive words: "*Adeo ut pro scirrhis lapidescentibus haberi debeant prædicta corpora.*"

[2] *Revue médicale*, 1824, t. ii, p. 301.

[3] For cases of still older date, though less conclusive, see Schenkius, *obs med.* lib. iv, p. 649; Bonet, *Sepulchretum*, lib. iii, sect. xxiv, obs. 18, § 10; Lieutaud, *Historia anatomico-med.* t. i, p. 340.

than a third of its weight on drying. Another calculus, weighing only four ounces, would have weighed a pound (? Tr.), according to Louis, if it had been more consolidated*.

In some cases, little inconvenience is experienced from a small calculus; in others the consequences have been very serious: they have been followed, if not preceded, by suppuration, ulceration, and morbid changes of structure; and the patients have died of exhaustion. In such circumstances, the uterus has been found changed into tuberculous matter,—or a substance compared with hard and dry suet,—and enveloping a calculus of five ounces and a half in weight: the parietes have been found even ossified around an insulated calculus. *(Mém. cit.)*

In some cases, nature has relieved herself of the extraneous body. Louis quotes three or four instances in which the mass was spontaneously expelled, or extracted by the vagina. The natural effort has been sometimes artificially assisted. Louis speaks of a calculus extracted by incision of the uterus, though he was not informed of the details of the operation; his own advice is, to seize the calculus with the forceps, after having sufficiently enlarged the os uteri by incisions. This was not necessary in the case related in the *Revue Médicale* (t. xiv, p. 31), from a journal of Turin: the os uteri being sufficiently open, it was only necessary to change the position of the calculus, which was then extracted by the assistance of the fingers, forceps, and a common spoon.

Previously, however, to any operation, the precise nature of the affection should be ascertained. Tumefaction of the hypogastrium, colic pains, a sense of weight, difficulty in passing the urine and fæces, hardness of the uterus, &c. are merely presumptive indications. The calculus ought to be

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* A case of calculous concretions in the cavity of the uterus is related by Dr. W. Batt. A woman, after abortion, was subject to frequent derangement of the catamenia, continual leucorrhœa, and pains in the abdomen, with a sensation of weight towards the region of the uterus. The leucorrhœa ceased for some time, but the other symptoms did not diminish. One day she complained of fulness and weight in the vagina. This was the effect of a chalky secretion which was found there and removed by the aid of the fingers.—Gazette Medico-Chir. de Saltzbourgh, vol. ii, p. 1806, quoted in the *Bibl. Méd.* t. xvii, p. 274.—Tr.

felt by the finger or the sound, and its consistence and hardness ascertained; portions should be detached from it, and examined,—care being taken to ascertain that they do not come from the bladder, by the urethra, or by some fistula.

CHAPTER V.

OF RETENTION OF THE CATAMENIA.

It would be useless to compare certain difficult evacuations of the catamenia (dysmenorrhœa), dependent upon functional derangement, with those closures of the passages of the catamenia, which occasion the retention of coagula, as well as considerable, and even fatal, distension.

This latter subject has been differently handled by different writers: by some it has been treated in an anatomical order; and malformations, of which the *result* is the same, are disjoined and distributed according to their seat in different chapters; by others, physiologically, amongst derangements of the catamenia,—thereby classing together diseases differing in prognosis and treatment. The *pathological* arrangement, which we prefer, sufficiently indicates the important and practical analogy between the retention and distension, observed in this affection, and those of the preceding chapter. There is a further objection to the anatomical distribution of this subject: the real importance of these affections is to be seen in the actual retention, and not in its cause; for this latter may exist, under particular circumstances, without occasioning the slightest inconvenience. In point of fact, the greater number of congenital closures exist, without danger, during infancy; and, in some instances, after having obstructed the flow of the catamenia, become

the cause of real *suppression* or *deviation*, and cease, then, to occasion the suffering and the dangers to which they give rise in other persons, at the period of puberty. We will only add, that these closures, if they occur accidentally only, at an advanced age,—that is, after the cessation of the catamenia,—may, in like manner, be unattended by any serious consequence. We have observed, in many cases of aged persons, the os uteri to be atrophied and obliterated, the utero-vaginal orifice to be contracted, and, in two instances, entirely to disappear, while the body of the uterus retained its natural condition. Such was, doubtless, the case with the uterus, which Fabricius of Aquapendente has described as closed[1]: and, with that of Morgagni (*Epist.* 46, *Art.* 17). We have already observed that we have seen the cervico-uterine orifice obliterated, and that this condition appeared to some persons the *natural* effect of age *(Mayer)*.

The closures, which are of serious consequence, are generally congenital; sometimes, however, they are the effects of disease.

We should naturally expect to find the latter kind of closure as a more frequent effect of difficult labours, during which the os uteri is distended and lacerated, or of deep or superficial ulcerations of the os uteri, if we did not know that mucous or ulcerated surfaces have little tendency to adhesion. Hence, we find, very often, after such affections, only a deviation in form, corrugation, contraction, of the os uteri, but not obliteration. Upon this principle may be explained the supposed obliterations of the os uteri at the conclusion of certain pregnancies. In a case given by Amand, the anatomical preparations of which were examined by Littre, the latter discovered a very narrow aperture which had been at first unperceived. In the case of a person, quoted by Simson as pregnant, having the uterus imperforate, the liquor amnii had been discharged before imperforation had been ascertained. This evacuation had, most probably, taken place in the case given by Dr. Cathral, in which there was

[1] *De chir. operat.* p. 94.

only a displacement of the os uteri backwards, during labour, and not an obliteration of that part[1]. We are obliged to give the same opinion of a case published some years ago, in the Italian journals[2], although the flow of the liquor amnii had been mistaken for that of an involuntary discharge of urine, and the regularity of the catamenia had been attributed, without sufficient evidence, to an incision made for the purpose of extracting the fœtus, and which remained unclosed. It is however supposed, and has been maintained by persons of undoubted credibility, that adhesion may take place after conception, and during gestation. *(Latour, Morland, Flamand, Martin.)* The vagina may be also obliterated in the same manner. This was seen in the case of a person who attempted to induce abortion by an injection, per vaginam, of half a glass of sulphuric acid. The two upper thirds of the vagina were obliterated, the uterus burst, and the woman died without delivery[3].

The doubts, which we have above suggested, will not appear unreasonable, when it is remembered that a simple contraction, with adhesions and rigidity, may impede parturition without having in any way prevented impregnation. In the cases, in which similar changes have been attended by retention of the catamenia, the closure must have been complete; of this, therefore, there are but few instances. In a case of Dr. Gauthier's[4], the os uteri was found closed, after delivery, in consequence of adhesion to the posterior paries of the vagina: an incision was made into the cervix uteri for the flow of the catamenia[5]. Lastly, Dr. Ségalas communicated, in 1825, to the 'Académie de Médecine', a case in which, the vagina being closed after a difficult labour, a similar result ensued. In another instance, independent of labour, the lacerated hymen had re-united, so as to form a complete diaphragm[6].

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[1] *Ann. litt. méd. étr.* t. ii, p. 484.

[2] *Ann. univ. di Milano, agosto* 1827.

[3] *Séance de l' Acad. de méd.* 22 *mars* 1831.

[4] *Nouveau Journal de Médecine*, t. vii, p. 30.

[5] P. Frank, *De retentionibus*, t. ii, p. 39.

[6] *Dict. Sc. médicales*, t. xxiv, p. 133.

A far greater number of cases of *congenital* closure might be adduced: these consist, for the most part, of an excessive expansion of the hymen. We have no time to enumerate the cases, in which the absence of the catamenia, distension of the abdomen, &c. have led to the suspicion of pregnancy. The simplest examination leads to the detection of a sac formed by the hymen, which is frequently thicker than usual, but distended by the catamenia retained in the vagina, as well as in the uterus and Fallopian tubes. A simple or crucial incision is all that is necessary. The blood which flows is inodorous, sometimes serous, sometimes coagulated and black, but more frequently partaking of both these qualities, and of a viscous consistence. This operation has succeeded in many cases, in which peritonitis would otherwise have ensued from rupture or distension. Further, the incision of the hymen, whether simple or crucial, longitudinal or oblique, has hardly ever been attended with serious consequences. The case of Dehaën[1] was an exception,—being followed by inflammation of the uterus and peritonæum; which, however, yielded in a few days.

In another case, imperforation was not occasioned by the hymen alone, but by a second membrane or transverse partition more deeply situated[2]. The latter burst spontaneously, and the incision of the hymen afterwards induced a complete cure. A similar structure was observed by Ruysch[3], in the case of a person pregnant and in labour,—a circumstance which seems to prove that the second membrane was perforated in some spot, as the hymen was in its centre; it was necessary, however, to divide both by incision, to allow of the termination of labour.

The prognosis is far more serious, the diagnosis more difficult, the treatment more doubtful, the operation more precarious and delicate, where, instead of a simple partition, the closure is complete, from absence of a part, or the whole of the vagina,—constituting *atresia*. The instances of this

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[1] *Ratio medendi.* t. iii, p. 40.

[2] *Nouv. Journ. de Méd.* novembre 1818.

[3] *Obs. anat.* xxii.

affection, though very few, bear so great a resemblance to each other, that the malformation in question might be ranked amongst those which present hardly any variation. The most ancient which has been minutely recorded is found in the *Ratio medendi* of Dehaën. A person, four and twenty years of age, who had for eight successive years employed various means for inducing the catamenia, observing the abdomen to become large and hard in consequence of a tumor which proceeded from the pelvis to the umbilicus, underwent examination, and the case was pronounced atresia. The hymen being supposed imperforate, an incision was made, which—as it appeared on examination, the patient having died in a few days afterwards—had only penetrated into the bladder through one of the parietes of the urethra. The vagina was replaced by a solid ligament of about an inch in diameter, a portion of it only being empty and unattached near the upper part, and that sufficiently enlarged to contain the head of an infant: some blackish decomposed blood filled this cavity, as well as that of the uterus, the parietes of which were an inch in thickness; and, also, those of the Fallopian tubes, which were considerably dilated into the form of a sac, and separated in several places by minute ruptures: there was also an effusion of the sanious matter into the abdomen.

Three cases of this unusual malformation[1] were observed, at the same time, at Paris, and may be found in Professor Boyer's treatise upon surgical diseases. We observed the one which terminated fatally at 'la Charité'; and Madame Lachapelle has furnished us with full details of the other two. In one of these latter, the patient was sixteen years of age, and well formed: in her case, as in every other, symptoms of general plethora, with pains in the abdomen and tumefaction of the hypogastrium, presented themselves at each return of the catamenia. Discovery was made, in fact, of a rounded tumor[2], the seat of a dull and doubtful fluctuation. A deep furrow

[1] There is a case mentioned in the anatomical theses of Haller, in which the uterus, as well as the vagina, was entirely wanting.

[2] In the case of Dehaën, the uppermost part of the tumor was transverse, and was formed by the two Fallopian tubes.

was all that existed externally, having, in the middle, a funnel-shaped orifice, viz. the urethra. Madame Lachapelle passed her finger, and, afterwards, the catheter, into the bladder. The finger, introduced into the rectum, felt, at a certain height, the same tumor which was found in the hypogastrium; lower down, there seemed to be only a partition of moderate thickness, between the intestines and the urethra. M. Dubois was at a loss what treatment to adopt, when another case occurred, presenting very nearly the same state of things, in a person of a more advanced age, and in a very dangerous condition. The tumor in this latter case, was pierced with the trochar through the rectum, and a quantity of blood issued from it, causing great temporary relief; the patient, however, died a few days afterwards, of peritonitis. In the former case, M. Dubois and M. Boyer discountenanced an operation, which was, however, performed by a third surgeon: the tumor was opened through the urethro-rectal septum, and considerable relief followed after the discharge of the retained blood: this patient, however, also died of inflammation in a very few days.

In a third case, resembling the preceding, the catamenia were discharged, for a short time, spontaneously by the urethra, with relief; but the patient eventually died of marasmus and hectic fever.

Previously to opening the body, one of us introduced the finger into the funnel-shaped urethra; at the depth of nearly half an inch, at the posterior paries of this canal, an orifice was felt, through which the finger was carried upwards into a cavity filled with blood. It was found, in fact, that the uterus and Fallopian tubes, distended with blood, were in communication with the superior portion of the vagina; the lower portion was wanting, and in its place there was an irregular fistula, leading to the lower part of the urethra. The uterus was soft, and of twice its natural volume; the Fallopian tubes formed two soft irregular sacs, with parietes much thicker than usual, and unruptured. Had the general state of the health been more favourable, this person might perhaps have recovered. We have read of a case in which the patient was delivered from her sufferings by a flow of

blood issuing from the urethra; the writer seemed to be under the impression that he was treating of the case of supplementary catamenia; but, as far as we can recollect it, the blood was changed, as if it had been confined in a closed cavity. The last case we shall adduce, attended with happy results, is one communicated to the 'Académie de Médecine' by Dr. Willaume, (May 25, 1826); an incision of two inches in depth, made between the urethra and the rectum, opened into a space formed by the vagina, of which one portion only was obliterated: but the cervix uteri having no orifice, it was necessary to make one with the pharyngotome. The inflammation soon subsided, and the artificial canal served, from that period, (two years and a half ago) as a passage for the catamenia.

There is another congenital malformation, which occasions retention of the catamenia, and of which we have an example communicated to the 'Académie de Médecine.' *(Hervez de Chégoin*, Nov. 24, 1829.) In this case, the exterior parts and the vagina were regularly formed, but the uterus was imperforate. A puncture was made with the trochar at the upper part of the canal, and the catheter introduced; blood, changed in quality, had not ceased to flow by this passage, when the operator described the result; but, on two occasions, it had appeared unusually red and fluid. A similar case was published, a long time since, by Benevoli; and two others may be found in the 'Mémorial' of Professor Delpech: in the former, a puncture was made with the trochar in the lower part of the vagina, with complete and permanent success (March 1830). In the second, seen by Dr. Desgranges, the labia pudendi were united by a membrane which it was necessary to cut, when it was discovered that another membrane closed the os uteri; perforation was performed with the pharyngotome, and the catamenia flowed regularly. (August 1830.)

CHAPTER VI.

OF MOLES.

MOLES, properly so called, must not be confounded either with the remains of the placenta after delivery, or with coagula from the catamenia or menorrhagia, as some authors have done by calling them spurious moles *(Morgagni)*. Still less should they be ranked among polypi which have broken off at their slender base and remained unattached in the uterus ; or with tumors, having a greater or less base, seated inside the uterus and remaining adherent[1].

We admit of three kinds of mole: 1, the false germ ; 2, the fleshy mole ; 3, the hydatid mole: within these limits they will always be a faulty product of conception, and their origin, necessarily, a consequence of impregnation[2].

I. If the cause of miscarriage frequently exist in the uterus, and in the general system of the female, it is no less certain that it may also exist in the product of impregnation itself. This product admits of changes, of diseases which may kill the embryo, and induce inevitable abortion. We ought not therefore to be surprised, if, upon opening some membranous envelopes, which exactly represent, in all its natural characters, the human ovum but little developed, we find only water, without an embryo, or, at most, some filaments adhering to the membranes, floating in the fluid,—the remains, probably, of the umbilical cord: this has occurred to ourselves, to Béclard, to Professor Orfila, to our colleague Dub-

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[1] This must have been the true nature of the pretended mole described by Fabricius Hildanus, and discovered upon opening the body of a woman who died of chronic peritonitis, and probably of cancer of the uterus. *(Centur.* ii, *Obs.* 55.)

[2] *Nusquam visa est mulier molam sine mare concepisse (Fernel,* t. i, p. 599). See further, on this subject, the details given by Dr. Murat, in the *Dictionnaire des Sciences médicales,* t. xxxiv. These details are far more convincing than the hypotheses of modern days, as set forth in the mere title of the following dissertation : *De uteri in efformandis molis vi formatrice ; auctore Dav. Mansfeld,* 1825.

rueil, and to others[1]. The embryo is so soft, small, and delicate, in the first weeks of gestation, that, as Dr. Murat observes, the growth of a small tumor[2] near the origin of the umbilical vessels, a trifling effusion of blood near the same spot, a partial detachment of the membranes, and, perhaps, mere derangement of the circulation from violence, or fright, &c. are sufficient to destroy it; and, in that case, if it only remain in the liquor amnii, it dissolves like a flake of gelatine. This is what should be specifically termed a *false germ;* or, as it is called, in birds, '*un œuf clair;*'—with this difference, that, in birds, the ovum has never been impregnated: this is never the case in the mammalia, although some writers have supposed it possible, and not of rare occurrence.

A false germ never remains for more than two or three months; and it is quite impossible to distinguish its existence from natural pregnancy at the same period, or its expulsion from miscarriage. It is generally expelled in its entire state; if it previously burst, the water escapes, and it becomes almost impossible to say, unless the period be rather advanced, whether an embryo, detached from its envelopes, has not been expelled with the water, unobserved amidst the coagula which had been passed previously to the membranes. These membranes consist of the amnion, the chorion, and the decidua; the placenta is more or less circumscribed, and more or less developed; its filaments are most commonly spread all over the surface of the chorion, and implanted in the deciduous membrane, which latter appears, accordingly, very thick, and increased, in consistence, by the infiltration of fibrinous coagula into its tissue and between the above-mentioned filaments. It is very difficult to detect this in false germs, which have been preserved for a long time in alcohol; they are then easily confounded with fleshy moles, which, in reality, only differ from them by their longer continuance in the uterus, and more complete changes.

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[1] *Ruysch; thès.* vi, no. 81.

[2] We have seen, in the membranes of the empty ovum, two small red and fleshy tumors, the larger of which was of the volume of a pea. M. Breschet has shewn us some designs, proving that he has frequently discovered similar ones in a sound egg, and one containing an embryo. (D)

II. If the false germ, or ovum, remain attached to the uterus, deprived of the fœtus, appropriating the blood destined for a fœtus, it will probably acquire a considerable volume and capacity; hence the varieties of which we are about to treat. We must premise, however, that this idea is not conjectural, but proved by the enlargement of the placenta after the death of the fœtus, in certain cases of more advanced pregnancy, and of premature labour[1].

A. Sometimes the fleshy mole is hollow at its centre, and contains water, though this cavity is always inconsiderable in proportion to the substance of its parietes. These are of an unequal thickness, of a red colour, compact, fungous, resembling the placenta in tissue, though more elastic and less filamentous. They constitute a mass of a somewhat rounded or oval form, occasionally lobulated, and, as it were, angulated, &c., and of a volume varying from that of a large egg, or the fist, to that of the head of an infant.

B. At other times, this mass, more misshapen and voluminous, presents no central cavity,—either in consequence of its being obliterated by the absorption of the fluid, which must have existed there at first, together with the embryo; or, because the water may have flowed away, and the embryo escaped with it, by some rent (*Murat*),—a circumstance which does not always prevent the adhesion and growth of the secondines in the uterus: for it is certain that, after ordinary labour, the same thing may occur in the case of the placenta, or of any adhering portion of it[2]. Enormous productions of this kind have been quoted; but most of them scarcely exceed the two fists in volume: their tissue frequently varies, being sometimes filamentous, and spongy like that of the placenta, sometimes compact and parenchymatous; they are beset with hydatids and fibrinous coagula, and, sometimes, present attached portions of the fœtus, and even entire bones and limbs. One of the most remarkable cases of this kind is figured in the *Thesaurus anat.* ii

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[1] *Prat. des Acc.* t. ii, p. 325.

[2] Ruysch. *Adv. anat.* i, ii, p. 32. Morgagni. *Epist.* 48, *art.* 30. Frank *Ret. mucoso-lymphatic.*

of Ruysch (pl. IV); several embryos seem to have been attached to this mole; and, in *Thès.* ix, we find another, bearing marks of being the remainder of the placenta, with a leg of the fœtus attached.

This change, induced in the fœtal envelopes, may in effect occur in double, as in single pregnancy, one of the ova only being affected; the other being developed as usual; in this case the mole is expelled with the secondines of the healthy fœtus, or some days afterwards[1]. Sometimes this complication has prevented the natural progress of gestation, and induced premature labour; but it is of much rarer occurrence to witness the premature expulsion of the mole, as at the seventh month, and the subsequent natural progress of gestation. It is remarkable that miscarriage is not the most usual event in such pregnancies, and that the changes induced in one of the ova are not communicated to the other. There are, however, scarcely any instances on record of the co-existence of two moles in the same uterus. In such a case, they might easily, indeed, be consolidated into one, as the case of Ruysch seems to prove,—with an increased number of fœtal limbs partly destroyed. Grafted, in fact, upon each other, and liable to various modifications of growth, these productions would readily unite, if it were only by adhesion, at first inorganic, and then organic, as the rest. Besides, the decidua belongs to both ova in the case of twins, and might envelope them upon being thickened throughout: it has been observed to be even encrusted by calcareous salts, and to constitute, over one mole, an osseous envelope.

It is very often difficult to ascertain the existence of a fleshy mole in the uterus, especially in the two first months, the symptoms being much the same as those presented in painful pregnancy: a sense of weight and uneasiness in the region of the uterus, with slight, but repeated, sero-sanguineous discharges, are the only sources of the diagnosis; and these are vague and uncertain. Afterwards, the abdomen enlarges, and projects further into the hypogastrium than in

[1] See, among others, *Fabr. de Hild. cent.* ii, *obs.* lii.

natural pregnancy. This projection seems of a more elastic nature than that of the uterus in its natural state: per vaginam, especially, this organ is found to be more compact, irregular, and weighty, than usual; and no repercussion can be felt. The sensation of weight increases, and the uterus seems to fall upon the side towards which the patient inclines. Lastly, in case of the period of labour being nearer at hand, the movements of the fœtus and the pulsations of the fœtal heart would be sought for in vain. We have very recently witnessed the birth of an infant, in the fifth month, in a case, in which the placenta, attached to the cervico-uterine orifice, had been gradually separated; this was followed by continued discharges, in a great measure serous, especially toward the termination, though always tinged with blood, and always debilitating. All the symptoms just detailed—even the absence of repercussion* (owing to the situation of the placenta near the cervix), the hardness and unevennesses of the uterus —had presented themselves, and there would have been no doubt of the existence of a mole, had not the patient been confident of feeling the movements of the fœtus. It was difficult to draw any inference from the size of the abdomen, owing to the uncertainty which the occurrence of the discharges threw upon the period of gestation. (D.)

It often happens, therefore, that the nature of the mole can only be ascertained upon its expulsion. This effort, generally painful and slow, and preceded, like abortion, by repeated hæmorrhagies, is, at times, easy and expeditious. If protracted, this is probably owing to adhesions formed between the mole and the uterus, in consequence of the partial detachment of the one, or the diseased state of the other. The fleshy mole is commonly expelled from the uterus some months later than the false germ: this is tantamount to saying, that the same production, early expelled, is a false germ; if later, a fleshy mole. It is, in fact, by its continuance in the uterus that its consistence and volume are determined: those

* This is one of the cases in which the *hypogastric repercussion*, (see p. 16, note), is of great value.—Tr.

of considerable dimensions have exceeded the period of natural pregnancy (the eleventh or fourteenth month, *Baudelocque*); but the greater number of them are expelled in the third or sixth month, and, most frequently, about the former of these two periods. The hæmorrhagy, which precedes or accompanies this expulsion, is sometimes serious: Delamotte observed it to terminate fatally. This event is, happily, rare; and there is no reason for alarm for future pregnancies and labours, although, in some cases, there may appear a predisposition to this affection.

The treatment, in this case, as well as in that of the false germ, is almost entirely of a palliative nature. Sometimes it will be necessary to adopt the plug, in cases of alarming hæmorrhagy; at other times, the ergot of rye, stimulant enemata, fumigations, hip-baths, and injections, should be used, to induce contraction of the uterus, detachment of the mole, or dilatation of the cervix uteri. For the attainment of the last object, an ointment prepared from the extract of belladonna is very useful; lastly, the fingers, perhaps the whole hand, the forceps contrived for this purpose by Levret, or the soft crotchet of Fabricius Hildanus (l. c.), will be of service, in cases of tardy and incomplete expulsion.

III. A *vesicular or hydatid mole* is occasioned by another kind of morbid change in the fœtal envelopes. But, in this case, the change appears to be the cause of the destruction of the embryo, and not the effect, as in the preceding cases[1].

A. *Natural state.* When the filaments, which rise from the chorion, and merge in the deciduous membrane, for the formation of the placenta, are carefully examined in the first

[1] With respect to the cause of this change of structure, it seems to have been hitherto impossible to decide upon it. We have proved, elsewhere, that it has no reference to the age of the mother; for in no point has there been more variety in the known cases of hydatid pregnancy. Sometimes there seems to be a predisposition in particular persons; some women have been affected, at different periods, with hydatid moles; but, in most cases, the hydatid mole has been preceded or followed by one or more natural labours.

months of pregnancy, they are found to be knotty,—that is, alternately swollen and contracted in the form of a string of beads. Hence it is, that ancient writers have mistaken them, sometimes for lymphatics distended as if injected with mercury, sometimes for glands. Hence the opinion of Vallisnieri[1], that hydatids of the uterus are swollen vessels given off from these lymphatics; and that of Ruysch, that the hydatids of the placenta are only dilatations of the glands, which are generally very small. This opinion has been revived and illustrated with all necessary details, in the present day, by MM. Velpeau, Désormeaux, and ourselves[2]. The improbable part of it only has been rejected, viz. the vascular or glandular nature of the distended villi of the chorion, and the filaments of the placenta, which are purely cellular, and of a spongy structure, as is proved by the investigations of Baër, and of MM. Velpeau, Breschet, and Raspail.

B. *Vesicular mole containing the embryo.* The knotted filaments, mentioned above, are merely a little harder occasionally, and present rather more appearance of hollowness at the surface of some abortive ovula: Albinus indicates this state of transition between the natural and morbid structure[3], in words too distinct to be passed over on this occasion: *vasa placentulæ soluta, libera, per intervalla contractiora, mediis locis capaciora, et tanquam si inceperint in hydatides degenerare*[4]. Hence the opinion of Vallisnieri, already quoted,—and that of Reuss[5], who considers the hydatids merely a kind of placental varices, originating from imaginary valves. The opinion we have adopted will be no longer questioned, since the chorion has been observed to enclose the embryo, as

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[1] *Storia del parto vesicolare.*

[2] *Nouvelles Recherches sur l'origine, la nature et le traitement de la mole vésiculaire;* par Madame Boivin, 1827.

[3] We are in possession of a human ovum, which presents exactly the same form; it has been described in the researches mentioned above (*observ.* 6).

[4] *Annotationes acad.* lib. i, p. 69.

[5] *Novæ quædam obs. circa structuram vasorum in placenta,* etc. 1784.

usual, and to be covered with villi, some of which are simply granulated, others beset with knotty projections, and others, again, constitute a chain of vessels, of which some present the volume of those found in bunches of hydatids, without embryo, and without a central cavity. Upon this point we refer to the accurate plate by Gregorini[1], and to the case published by Professor Dubrueil[2]. It is, in fact, to the deciduous membrane that the latter person refers the pediculated vesicles which he saw on the surface of an abortive ovum; but a circumstance which might induce the belief that the hydatid filaments only traversed this membrane, while they really belonged to the chorion, is, the adhesion which existed between these two membranes. In the same class should be reckoned the cases of Vallériola, Malpighi (*quoted by Vallisnieri*), Wrisberg[3], and Leray[4], in which the whole ovum was covered with hydatids: and that of Ruysch, in which half of the placenta was converted into vesicles. We have observed similar appearances upon the chorion, near the cord of the placenta, at the full period. (*Madame Boivin, fourth case.*)

C. *Hollow vesicular mole.* In the case of Professor Dubrueil, the embryo had undergone a change, which perhaps indicated a faulty or feeble nutrition, although the change, induced in its envelopes, had been inconsiderable: the embryo was *anencephalous*. In the case of Leray, there was a still greater change; the embryo, some lines in length, adhering to the amnion by an oval vesicle, only presented the liver, the heart, and the aorta, distinctly. There is no reason, then, for surprise, upon finding, in an ovum covered

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[1] *De hydrope uteri et de hydatidibus in eo visis, etc.*

We would also refer to a figure, by Paul Portal, annexed to the end of his *Pratique des Accouchements*, if it were not evidently made from imagination, and not from nature. The fact, however, remains; the hydatid ovum was encrusted by a fibrinous coagulum, and contained an embryo.

[2] *Revue médicale*; novembre 1831.

[3] *Novum Commentum Gotting.* t. iv, p. 73.

[4] *Nouveau Journal de Médecine*; mai 1822.

with hydatids instead of a fœtus, only a vesicle suspended by a thread (*Sandifort*), or a small cluster of vesicles (*Madame Boivin, fifth case*). Lastly, this thread, a rudiment of the umbilical cord, appeared as the only solid remains of what the amnion had formerly contained: and these imperfect traces have been entirely wanting in other cases, although the cavity of the amnion was large and regular[1].

D. *Clustered vesicular mole.* We have hitherto spoken of small collections of vesicles, the volume of the mass being determined by that of the ovum. It appears that a prolonged retention of these clusters of hydatids may lead to their increase in size and number; while, at the same time, as in the case of the fleshy mole, the central cavity becomes obliterated, and the amnion disappears. The centre, however, generally presents some fungous substance, resembling the tissue of the placenta; and the whole is enveloped in a thick membrane, which is in immediate connection with the uterus; and which, though frequently overlooked, in consequence of the mangled state of these hydatids, when expelled, we distinguish as being constant,—as being, in fact, the deciduous membrane. We have given a figure of this membrane in the 'mémoire' published by one of us upon this subject, and it will thereby be seen that the cluster is made up of vesicles of different size, from that of the head of a pin, to that of an olive; that their shape is generally oblong, often terminated in two points, each of them answering to a pedicle, which attaches the vesicle to the rest; that these pedicles sometimes spread, adhering to other membranous vesicles, at other times given off in great numbers from one of them, always appearing, however, to preserve a close connection with those proceeding from the centre, in different degrees, and irregularly ramified, in their eccentric progress. These remarks were sufficient to overthrow the opinion of modern pathologists, so particularly insisted upon by the late Percy,—viz. that these hydatids were, like the

[1] *Burdach, de læsione partium fœtus nutritioni inserventium, etc. in thes. Schleg.* t. ii, tab. III.

acephalocysts, entozoa resembling cysticerci, *cœnuri*, &c. A closer examination would have shewn the difference which exists between the vesicular mole and the true hydatid. The membrane of the latter is soft and pulpy, tolerably thick, and easily detached. That of the vesicles of the uterus is thin, tough, or leathery, resembling serous membranes, presenting blood-vessels sometimes upon its parietes,—a fact which we have both ascertained; these are very similar to the small serous cysts which often surround the ovaria and Fallopian tubes, to which they are attached by long stems, and also to those which the choroïd plexuses frequently contain, and are not to be confounded with the vesicles found occasionally in the human brain, and, more commonly, in that of the ruminantia.

The symptoms, duration, and termination[1] of the vesicular mole will be much the same as those of the fleshy mole. It may be said, however,—1, that the uterus is, generally[2], less weighty in the former case, and less hard, though its fluctuation is not more distinct: 2, that the duration of the vesicular mole is often of a longer period (from three to ten months)[3]: 3, that these false hydatids are generally expelled piecemeal, and, consequently, at intervals. It follows that the repetition of the hæmorrhagy and pains are often attended with serious consequences, and even death has several times preceded the expulsion. The symptoms of diseases so analogous will be almost identical.

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[1] The hydatid, as well as the fleshy mole, has been sometimes complicated with pregnancy; but this is of rarer occurrence in the former case than in the latter.

[2] An instance of a contrary nature will be given among the cases, proving merely the uncertainty of the diagnosis in particular circumstances. As to the expulsion of hydatids, which many writers consider as the only pathognomonic sign,—we would observe that this indication is never obtained until the expulsion has commenced.

[3] We shall relate a case of hydatid expulsion in the third month; we are told of a hydatid mole, of fifteen pounds weight, being found in the body of a person, in whose case the abdomen had been distended for five or six years. This case, as well as those of the fleshy mole, retained for several successive years, are exceptions to the general rule.

CASES.

1. *Expulsion of a hollow hydatid mole, twelve months and a half after conception.*

Madame D——, thirty-four years of age, presented all the symptoms of pregnancy,—suppression of the catamenia, frequent nausea, and lowness of spirits; and, during five or six months, the abdomen was somewhat enlarged. At the ninth month there were no pains; but, in the thirteenth month after the first suppression of the catamenia, there were violent pains, with profuse hæmorrhagy. M. Lambert extracted a mole containing eight ounces of fluid in its cavity, which consisted of the amnion and chorion.

The membranes lining this cavity were beset with transparent hydatids, varying in size from that of an almond to that of a grain of sand; several projected into the cavity, and one cluster of them seemed to originate in the remains of an umbilical cord. Exteriorly, the mass was lobulated and granulated, like the external surface of the placenta. There was no enlargement of the mammæ; no hæmorrhagy during the gestation; the lochia flowed several days.

2. *Expulsion of a hydatid mole at the fourth month.*

Madame L. D——, twenty-three years of age, regular from her eleventh year, subject to leucorrhœa and constipation, had been pregnant six times in the space of four years. The first pregnancy was natural; in the second, a fleshy mole was discharged at three months; the third went on, though painfully, to the full term; the fourth and fifth were miscarriages; during the period of the last pregnancy, there were irregular hæmorrhagies, with much exhaustion, paleness, swelling, nausea, painful draggings at the region of the stomach, vomitings, obstinate constipation, pains in the loins

and hips, transient fever, œdema of the legs, rapid enlargement of the abdomen, so that it was as much distended in the fourth month as is usual in the seventh. The hypogastric tumor was wide, soft, inclined to the left, without fluctuation, and easily depressed; the cervix uteri was much raised, its external orifice widely open, its internal orifice strongly closed. The expulsion of the hydatid was indicated by increased pains, the opening of the cervico-uterine orifice, considerable softness of the os uteri, and the descent and sudden hardening of the uterus itself. The cervix was soon obliterated, whilst a soft mass was felt, as uneven as the external surface of the placenta; at first, a portion of the hydatid mole was expelled, and, afterwards, the rest; the whole was concluded in ten hours. The mole, being put into warm water, as done by Percy, manifested no signs of life*.

The patient recovered after two months, and was safely delivered, on the following year, at the full period.

3. *Expulsion of a hydatid mole at the eighth month.*

Madame Claire D——, twenty-eight years of age, had been four times pregnant in six years, after the cure of an anteversion:—the first, at the full period; the second and third, *without pains;* the fourth, attended with vomitings, dryness of the skin, and coldness of the limbs, with slight hæmorrhagy at three months. The uterus remained very low down, with its cervix long, thin, and folded forward; there was no fluctuation perceptible. At the sixth month there were loss of flesh and swelling of the mammæ, and continuation of the hæmorrhagy. At the eighth, the uterus was no larger than at the fifth of real pregnancy; the cervix was large and prominent; the expulsion of the hydatid indicated by sharp pains and hæmorrhagy. A granulated mass appeared in the cervix uteri, and a little blood flowed at each contraction. The hydatid was expelled at twice.

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* A slight galvanic shock should be passed through the water. This would certainly induce contraction, if irritability existed.—Tr.

4. *Expulsion of a hydatid mole at the seventh month*[1].

This is the case of a person, twenty-eight years of age, who had been pregnant four times; the first three reached the full term. During the period of the fourth, there was much weakness, with hæmorrhagy. The os uteri was open, seven or eight lines in breadth, the cervix long and thick: there was no repercussion perceptible: the uterus was much enlarged, though its fundus was not above the umbilicus: it was thought to be the seventh month. At four separate times were successively expelled a cluster of vesicles and three portions of a vesicular mole, followed by a spongy mass resembling a putrefied placenta; the whole weighed four pounds; the hydatids appeared to be from four to five thousand in number.

We infer, from this case, that repeated pregnancies predispose to the vesicular mole.

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[1] Case communicated in 1819 to Madame Lachapelle, by one of her early pupils.

SECTION FIFTH.

EXCRESCENCES AND MORBID CHANGES OF STRUCTURE.

CHAPTER I.

GENERAL REMARKS. CHANGES OF STRUCTURE AND EXCRESCENCES.

SOME of the changes of structure, to which the tissue of the uterus is liable, may be explained in a few words, while others will occupy separate chapters. We shall not include in our division those slight excrescences which arise from acute or chronic inflammation: of these, and of ulcers, properly so called, we shall treat elsewhere, merely saying a few words, at present, respecting the fungi, which occasionally grow from them.

We proceed to distribute changes of structure and excrescences into seven kinds:—the vascular, cellular, fibrous, osseous, tuberculous, steatomatous, and cancerous.

A. *Vascular change of structure.*

1. The first kind of which we shall treat under this division presents those soft and granulated fungi, which, by their rapid formation, their probable source, and the readiness with which they discharge blood, on being touched, seem to indicate a texture consisting essentially of newly-formed capillaries. These have been distinguished, by Levret, under the name *vivaces*; they are, in fact, distinct from real polypi, though it has been usual to class them together. Still there is much vagueness in our knowledge of this subject, and it is a question whether the ulcerations which produce

them are originally cancerous, or merely disposed to become so. The readiness with which they are reproduced seems to favour the former idea. We subjoin two cases recorded by Dr. Hervez of Chégoin, which will, no doubt, determine the point.

A woman, fifty years of age, had been subject to repeated hæmorrhagies for a whole year. M. Hervez discovered, on examination, upon the prominence of the os uteri, at the posterior labium, a fleshy, granulated production, fungous and bleeding, three inches in length, and so soft that portions were readily detached from it. It was cut through by a ligature, carefully applied to its root, and the hæmorrhagy which followed was checked by the plug. For eight months there was no appearance of return, only the point of the insertion of the tumor continued to be a little raised. Six months afterwards a similar fungus appeared, of the size of an almond, and several tumors, at the same time, around the uterus; the pulse was febrile, complexion yellowish, debility rapid; in a word, there were evident symptoms of cancerous cachexia.

In another case, in which the person was forty-eight years of age, and subject to hæmorrhagies, with acute pains in the uterus, growths were discovered through the os uteri, which was partially open; and granulated portions of them, of a red-brown colour, united by membranous filaments, were expelled from time to time. Some similar excrescences were observed upon the os uteri, and a cancerous diathesis, more decided than in the former case, terminated the life of the patient. It seems to us, therefore, that these excrescences, frequently having a large base and uneven surface, granulated, red, bleeding, and without exterior membrane, are only a result,—a form of cancer, similar to that which we shall describe under the head of fungous cancer.

2. There is another vascular change of structure, which we shall refer to that kind of cancer which is termed hæmatodes. We have often seen cases of persons, subject to frequent hæmorrhagy per vaginam, in which no other affection was presented, except painful swelling of the os uteri, and softening, sometimes superficial erosions, of a violet colour, and with a remarkable tendency to bleed upon the slightest

touch. This condition, in cases of persons subject to uterine hæmorrhagy, is sometimes followed by a real change in the structure of the cervix uteri, which is of a violet or brown colour, bleeding readily and profusely,—either spontaneously or from external irritation,—and eventually becomes swollen and extremely softened, then ulcerated and entirely destroyed. We shall give some cases of this kind hereafter, when it will be seen how much these changes resemble some cancerous affections of the external organs, in which the encephaloïd mass appears to be saturated, like a sponge, with blood, which it is continually discharging, in greater or less quantities, from the numerous vessels which are spread through the molecules of the cerebriform substance: the whole resembles a tough coagulum. This kind of cancer is called, in England, *fungus hæmatodes*,—a name, with us, bearing a very different meaning,—viz. that of their *aneurysm by anastomosis*, and our *morbid erectile tissue*,—an affection of too rare occurrence to have been sufficiently considered in relation to the uterus. We are, in fact, of opinion that it is to cancer hæmatodes, and not to the erectile change of structure, that the *hæmatoma* of Hooper must be referred,—a soft substance, as he says, in some respects resembling a coagulum of venous blood, though containing small portions of a more solid tissue. This same change of structure has been lately described by Dr. Duparcque, under the name of sanguineous cancer.

B. *Cellular excrescences.* The word polypus, M. Breschet observes, ought to be erased from the dictionary of medicine, its signification being vague and indefinite. The name has, in fact, been assigned to very different kinds of excrescence; cancerous growths have frequently been thus designated and distributed into sarcomatous or scirrhous, fungous, and granulated polypi. The same title has been also given, with the addition of cellular, mucous, or vesicular, to soft productions, generally pediculated, frequently multiplex, and almost always of a moderate volume: sometimes violet-coloured, though more commonly yellowish externally, consisting of a cellular tissue, saturated with a viscous fluid, and

having its exterior covered with a thin and vascular membrane. These excrescences, so common in the nostrils, are very rare in the uterus, and many writers have admitted their existence from analogy, and not from observation. With respect to the nasal excrescences, it appears that the mucous follicles of the pituitary membrane constitute a great part of them; for the matter with which they are imbued presents the consistence of mucus, and seems to be contained in cells, from which it may be made, partly, to issue upon compression. The uterus, interiorly, is very different in its texture from the interior of the nostrils; this, doubtless, explains the rare occurrence of the vesicular or cellular polypi, which would imply a new production; whilst, in the nostril, they are only the result of hypertrophy of tissues originally existing. We will extract some facts, in illustration, from the memoir of M. Hervez of Chégoin.

A woman, fifty years of age, had been subject to hæmorrhagy for seven months. A smooth prominence, of a rounded form, and free from pain, was felt within the os uteri; a ligature was applied, but the excrescence slipped from it; a hook was inserted, but the texture gave way; it was afterwards secured by the forceps, and the ligature was applied as high as possible; but it cut through, and brought away a polypus, shaped like a fig, of an inch and a half in length, and of a red brown colour. Blood flowed from it when pressed, and thus its size was considerably reduced*.

In some other cases, these kinds of polypus have been produced upon the os uteri,—on that part where the mucous membrane of the vagina still exists. One of these, of which there had been no symptom during life, had assumed the form and volume of the kernel of a plum-stone: it was soft, of a brown-red colour, streaked with minute vessels, and easily detached from the surface, from which it hung by a

* In a case of this kind, which came under my care two years ago, the little polypus had produced hæmorrhagy, occasionally, for eight months, and was expelled from the uterus by the use of the secale cornutum. It was removed by a ligature, the application of which was much facilitated by the use of the speculum.—Tr.

thin stem. Three others were found in the same case, on examination post mortem, of nearly the same volume,—two situated at the fundus of the uterus, and one in the cavity of the cervix. A remarkable circumstance is the continuation of the exterior part of these small tumors with the tissue of the uterus: this tissue, accordingly, constitutes their envelope. This polypus was also, interiorly, in continuation with the substance of the uterus, which proves that it was only an extension of that substance,—become more cellular and filamentous. For ourselves, we have frequently had occasion to observe similar small polypi; but they appeared to us to resemble, in their organization, the voluminous, fibrous, or fleshy polypi, of which we shall speak hereafter, and of which they were, doubtless, only the beginning (B). We infer, therefore, that these small bodies should not be considered as mucous or vesicular polypi, and also that these latter are very rare. The diagnosis and treatment are much the same as those of the fibrous polypi. They might possibly be torn from the uterus, as in the case of the nostrils. The practitioner will be guided by the softness and pliability of the tumor, ascertained by examination.

C. *Fleshy and fibrous change of structure.* By this term writers appear, sometimes, to designate scirrhus of little hardness, incipient cancer; sometimes fibrous tumor. In point of fact, there is a certain number of these last, which, with more vascularity and redness, and less of hardness, than the rest, do, to a certain degree, resemble the dense muscular substance, and even the tissue of the uterus. It is these which pass most readily into cancer, and most frequently occasion hæmorrhagy; but they are not the most numerous; they differ little, apparently, from changes which are unquestionably fibrous; the appearances are frequently intermediate; and the transition, in different cases, insensible from the one to the other. Fibrous or albuginous growths are often attached to the interior of the uterus, under the form of pediculated excrescences,—a form constituting essentially what is commonly termed *polypus;* these tumors are, however, sometimes found with a large base; sometimes they are

concealed in the substance of the parietes of the uterus, or even project from its exterior surface; this affection is of such frequent occurrence, and so important, as to claim to be discussed in a separate chapter.

D. *Cartilaginous and osseous changes of structure.* The tumors, of which we are about to treat, sometimes harden so much as to acquire the consistence of cartilage, and even of bone. There are some tuberculous changes of structure which appear also to concrete and assume the hardness of stone: hence, the formation, in the first instance, of calculi in the uterus; then, of cartilaginous productions, ossifications, and petrifactions,—exterior or interstitial, partial or total. When total, they are doubtless the result of an universal fibrous change of structure; in other cases there is only a calcareous or stony deposit beneath the peritonæum, which covers the uterus; when partial, they are frequently blended with other changes,—as the fibrous, the tuberculous, the steatomatous, and the cancerous.

In the 'mémoire' of Louis upon calculous concretions of the uterus, there are three cases of petrifaction or ossification of the whole of that organ*. One of these, in which the subject died of consumption, at the age of sixty, and had been affected with a hard tumor at the hypogastrium from her twentieth year, presented an osseous uterus of considerable size, covered with the peritonæum, and filled with pus; the parietes were four lines in thickness. In the same 'mémoire' may also be found drawings of two osseous uteri, one of which belonged to the anatomist, Verdier, the other to De la Fitte. The former of the two, very voluminous, contained a fluid lymph; an insulated calculus was found inside the latter. Hooper speaks of a case in which he observed the uterus, of the ordinary volume, with an uneven surface, consisting of an osseous mass, covered with a layer of fibres, and, in some points only, with the peritonæum. Its chemical ele-

* There is a case of ossification of the uterus recorded in the Medical and Physical Journal, vol. iii, p. 422. Carus mentions a case of the same kind, in which the ossified uterus weighed five pounds and a half. *Lehrbuch Gynäkologie*, vol. i, p. 311.—Tr.

ments, he says, were principally phosphate, and a little carbonate, of lime, and a large quantity of animal matter; this is what he calls osteoma of the uterus.

The same 'mémoire' of Louis contains some instances of partial ossifications, or of stones embedded in the uterus. Other partial osseous and cartilaginous formations have been described in a dissertation published at Berlin, in 1830, by F. A. Moritz[1]; but these changes of structure were never simple or unattended by others, as we also have witnessed. Hooper, on the other hand, seems to have noticed cartilaginous fibres (chondroma), isolated and circumscribed, even in the substance of the uterus. But were not these simple fibrous tumors, possessing considerable consistency? It is well known that this consistence is very variable, from that of sarcoma, to that which borders on the osseous state. This opinion is further corroborated by the title he gives to fibrous changes of structure, viz. sub-cartilaginous.

The prognosis in these cases is more unfavourable than is generally supposed, inasmuch as the patient may sink under exhaustion, and die. In such a case, the symptoms are seldom observed to become rapidly fatal. A person, still young, died in a very few months of ascites, preceded by fever and pain in the hypogastrium; the uterus, with its volume little increased, was cartilaginous and almost osseous, according to Lieutaud[2]. But it is in advanced age that such a termination commonly takes place, and the resources of art are then no less unpromising than the disease itself. The diagnosis would be valuable only so far as it removed the impression of some other affection, more serious or more curable. We shall return to this subject in reference to amenorrhœa, which usually accompanies this affection, as well as fibrous and scirrhous tumors, &c., with which osseous changes of structure might be confounded. It is easy to understand that the distinction between these diseases is founded upon the degree of hardness of the tumor presented by the uterus, or the part affected of that organ.

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[1] *Obs. in uteri morbos organicos,* observ. 1, 3, 4, 9, 21.

[2] *Historia anatomico-medica,* t. i, p. 320.

E. *Tuberculous change of structure.* This morbid change is one of those rarely found isolated in the uterus, but much more frequently in connection with others* ; the diagnosis and symptoms are accordingly complicated and doubtful. It has also been frequently confounded, even anatomically, with steatoma and scirrhus. In the present day, the term is better defined ; by tubercle, is signified that change or production in which the substance of an organ is infiltrated, covered, or nearly separated, by an accumulation of concrete matter, white or yellowish, rather albuminous than otherwise, not fatty, and of a consistence varying from the firmness of a chesnut to that of pus ; we, with Dr. Baron, are convinced, from much investigation of the matter, that tubercle consists in a new production, at first vesicular, small, colourless ; then, increasing in volume, consistence, and opacity (B). In other cases, it cannot be denied that tubercle consists of a simple deposit of a kind of concrete pus in the meshes of the affected tissue, in the natural cells of an organ, and sometimes upon a free surface. These may be said to constitute the greater number of the tuberculous productions to which the uterus is liable ; they are seldom seen in the substance of its parietes, but most frequently on its interior or exterior surface.

1. Exteriorly, the tubercle is sometimes isolated, prominent, of a rounded form, encysted beneath the peritonæum, though adhering by a broad base to the tissue of the uterus : we have seen a case of this kind, on examination after death, occasioned by meningitis with softening of the brain, in the middle of the eighth month of pregnancy. The person was small, but of strong constitution ; the uterus contained a fœtus, so placed as to present the vertex at the brim in the second position. On the posterior surface, and towards the higher part of the uterus, a prominent tumor was observed, as large as an egg ; it consisted of a flattened cyst, situated beneath the muscular layer, and readily separable from the adjoining tissues to which it was attached only by some filaments and

* Of 358 cases accurately observed by M. Louis, only *one* was free from tubercles in the lungs, and only *one* had a tubercul ousaffection of the uterus.—Tr.

cellular laminæ of little consistence. It contained a spoonful of purulent, thick, reddish matter, and a white substance compact and similar to soap: it was evidently a tubercle partly softened (B). We have sometimes met with similar tubercles in post-mortem examinations, in connection with more serious affections, of which we shall treat hereafter. In this case, the matter has been grumous and of the consistency of mortar; but it is much more common to see tubercles on the exterior of the uterus after repeated peritonitis, passed into a chronic state, and after metritis accompanied with protracted inflammation of the hypogastric and pelvic peritonæum. They are observed in the midst of adhesions formed between the uterus and its appendages, and the other serous surfaces near it; there exist also, beneath the peritonæum and in the cellular tissue which connects it with the uterus, masses of greater or less volume, though generally of the size of millet seed, sometimes few and isolated, sometimes numerous, close together, almost continuous, of tuberculous substance, of a greyish or white colour, and even mixed with colouring matter of a deep black. We have quoted examples in several works, to which we refer for the details[1].

2. Interiorly, the uterus, in some cases of amenorrhœa occasioned apparently by chronic inflammation, is observed to deposit a concrete, adhesive, thick layer, of a white or whitish matter, in every respect like that of the encysted or infiltrated tubercles of parenchymatous organs. We have already spoken of the resemblance which exists between this production and certain calcareous concretions (see case 4, of Retroflexion, p. 111); and perhaps there is no other difference between tubercle and the production of false membranes, of which we shall treat hereafter *(metritis and dysmenorrhœa)*, than exists between the acute and chronic states. We will however add, that, in the cases which we have here referred to tubercles, there was an evident scrofulous diathesis, a predisposition or organic state indispensable to that kind of suppuration, which may, to a certain extent, be con-

[1] See *Mémoire sur les causes de l'avortement*, par Madame Boivin, observ. i, 3, etc. *Diss. Sunt-ne inter ascitem et peritonitidem chronicam certa discrimina etc.* Ant. Dugès, p. 29 & 30.

sidered as *sui generis*. In the cases we are about to quote, tubercles also existed in many other organs, in those the most distant from the uterus, as well as in those the nearest to it.

Two cases of this kind have been published[1] by Dr. Renaud. In the first,—that of a mother of seven children,—the lungs were adherent, and tuberculous at their summit; the peritonæum was beset with tuberculous grains, the vagina pierced with small ulcerations, and the uterus lined with a layer of tubercles of one line in thickness. The surface of this layer was easily scraped off; the deepest portion of it was connected, in some way, with the tissue of the uterus, and blood vessels transversed its substance. In one of the parietes of the uterus there was a hard tubercle, as large as a pea. The Fallopian tubes were full of the same kind of matter, one of them being obliterated at the pavilion. The ovaria presented several serous cysts. In the second case,—also that of a mother of seven children,—the catamenia had ceased for six months, which circumstance she attributed to her age (forty-five years). The lungs were found to be tuberculous, cavernous, adherent: there were tuberculous granulations of the peritonæum, the uterus was voluminous and covered with similar granulations; its parietes hard, like cartilage, from seven to eight lines in thickness, of a white colour, especially near its interior surface, which was also covered with a layer similar to that described above; the Fallopian tubes were filled with tuberculous matter.

The following case came under our own observation:—Mademoiselle V. C.—— had been very ill nursed in her earliest infancy, and suffered serious effects from it for a long time afterwards. At the age of puberty, she was affected with copious leucorrhœa; the catamenia ceased, after having been regular from the twelfth to the middle of the sixteenth year: at the same time there were habitual constipation, enlargement of the abdomen, with pain on the *right side:* afterwards, diarrhœa, vomitings of greenish matter, profuse menorrhagia after the use of warm hip-baths; continued fever,

[1] *Archives de Médecine*, Août 1831.

and complete marasmus. M. Duméril ascertained the existence of mesenteric phthisis, which soon terminated the patient's life.

Upon examination *post mortem*, we discovered some firm adhesions of the lungs to the dorsal region of the parietes of the thorax; their summits hard and thick set with tubercles, as large as hempseed, in a close mass: the omentum changed into a granulated mass, adhering to the abdominal parietes, the serous membrane of which was also beset with tubercles. A hydatiform vesicle, as large as a pigeon's egg, was suspended by a thread from the small intestines; the stomach appeared healthy: the ascending colon dilated, its parietes hard, almost cartilaginous; the pancreas very red; no remarkable change in the kidneys. The left ovarium was as large as a small hen's egg; its surface uneven, its consistence hard, its substance composed of several isolated encysted lobes of tuberculous matter, white and easily crushed. The corresponding Fallopian tube was sound; that on the opposite side, tortuous and knotty, owing to three encysted tubercles of the size and form of a pea; the fimbriæ of the pavilion were imperceptible beneath a mass of white, elastic, tuberculous granules. The right ovarium was oblong, soft, of a blackish blue colour, filled with a mucous substance of the same colour.

The uterus, externally, was red; internally, lined with a white, granulated matter, resembling that of the left ovarium and right Fallopian tube. The layer, formed by it, one line in thickness, was apparently divided into furrows, arising from its little consistence; it was easily scraped off, so as to present a thick fluid resembling pus. The surface of the uterus, laid open, was soft, spongy, saturated with this white matter; its cervix was soft, almost smooth interiorly; the vagina and pudenda were unaffected. (Pl. XVI).

F. *Steatomatous tumors.* This term has been improperly applied, sometimes to tubercles, sometimes to cancer; the two terms,—steatoma and scirrhus,—have been used in the same paragraph, to designate the morbid change in the uterus, depicted by Louis in his 'mémoire' upon calculi of

that organ. Real steatoma is of rare occurrence, especially in the uterus,—if by this term we mean encysted accumulations of fatty matter[1], white or yellowish, varying in consistence from that of hard suet to that of firm butter, marked sometimes with hairs, with, or without bulbs, short and white, or long, black, hard, and curly. We have met with some cases of this kind, and others may be found in different works; but, besides the equivocal nature of the appearances above mentioned, steatoma with hair may, in some cases, have been confounded with some productions of extra-uterine pregnancy; either the embryo may have been developed in the Fallopian tube or ovarium, which have afterwards closely adhered to the uterus; or, the gestation may have taken place in the substance itself of the parietes of that organ (interstitial pregnancy, *Breschet*[2]). One of these equivocal cases is that of Professor Delpech, in which the hair, bones, and fat, were spontaneously expelled, or extracted by the urethra, a communication being formed between the cyst and the bladder[3]. Such, perhaps, is the case quoted by Fabricius Hildanus, in which the uterus was filled, partly with a yellowish ichor, partly with a fatty matter mixed with pale-coloured, woolly hairs. Some cases of a less doubtful nature are recorded in the dissertation of Moritz. But, generally speaking, the steatoma is found in connexion with other morbid changes,—the osseous and the cartilaginous.

G. *Cancer.* This term has been expunged from the vocabulary of pathological anatomy, owing to the want of precision in its use; we shall therefore prefer using it, as a means of embodying some purely practical remarks, separate from any anatomical data, which would be vague, incomplete, and very inapplicable to clinical observations. By *cancerous* we shall designate every affection which, by converting, in its progress, the texture of the uterus, has a natural tendency to

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[1] According to Hooper, this matter is contained in the membrano-vascular areolæ; it melts by heat, and forms soap, when combined with alkali.

[2] *Repert. d'anat. et de physiologie pathol.* t. i. It is sufficient just to mention this kind of extra-uterine gestation in this place; it belongs to midwifery.

[3] *Chirurgie clinique de Montpellier,* t. ii, supplément.

increase, to propagate itself all around, and ultimately to destroy itself by ulceration beginning at its centre.

Cancerous affections, thus defined, will be divided into several forms, presenting their peculiar signs, progress, and indications. We shall hereafter distribute them into four chapters, under the titles of the scirrhous, the fungous, the ulcerous, and the hæmatode.

CHAPTER II.

OF NON-PEDICULATED FIBROUS TUMORS.

A. *Preliminaries.* It is not without design that we have adopted this title for the present chapter, in preference to that of fibrous change of structure in the uterus. The tumors of which we are about to speak, are, in fact, very often superadded, as it were, to this organ, springing from its tissue or surface, without involving its substance (though cases have been known in which even this has occurred). Hence the term *fibrous body*, which Bayle and others have devised. The entire mass of the viscus has certainly been observed, in some cases, to pass into a fibrous, dense, white, tough tissue, creaking beneath the scalpel: but these cases are exceedingly rare; and this affection, noticed by Bayle and Hooper, may possibly be referred to chronic inflammation, and *hypertrophy*, which sometimes follows it, or to scirrhus.

B. *Anatomical details.* Fibrous tumors, properly so called, have been for a long time confounded with scirrhus, and with tubercle, by which name Morgagni has designated them: they constitute, in the present day, one of those affections of the uterus which, being the most common, are the best known. They consist of masses of tissue, sometimes reddish, rather vascular, and resembling the compact muscular substance of the uterus itself;—sometimes white or

greyish, beset, in some instances, with cellular, areolar spaces, or with knots or kernels of a yellowish grey colour, frequently softer, sometimes harder, than the rest. These masses appear to be composed, for the most part, of fibres, or of tough, filamentous laminæ, arranged in layers irregularly concentric, or in fasciculi rolled up in various ways: sometimes the layers are so regular, that the tumor seems to be formed of a successive deposition of new matter (*Hooper*). These fibrous bodies, white and hard, are apparently devoid of blood vessels, or contain very few in their exterior layers; at all events, the injections used by Abernethy failed in penetrating their substance. In the first of these two forms, which, according to Bayle, would be the first degree of formation, the tumor has sometimes received the title of *sarcoma;* in the second, it is an *albuginous* tumor,—to adopt the expression of Chaussier. The consistence of these tumors may even approach to that of cartilage or bone; this, however, would imply another kind of change in structure, such as we have already spoken of. The fibrous bodies are usually multiplex, though a single one is occasionally observed at some point of the uterus, or on one of its surfaces: generally, however, they are more numerous, and especially if they are very small. Their form, though variable, is seldom angular, but generally rounded or flattened; we have observed them to be invariably globular, when they are situated in the substance of the uterus, and occupy its tubular angles; but more oblong and flattened, when they border on the median line. These differences are easily explained by the representations of the structure of the uterus, given in the Atlas. Moreover, when these tumors are numerous, they interfere with each other, become flattened by compression, are blended together, and united into lobulated masses: these lobules may also arise from irregular development. The difference in volume is much more considerable than that in form. We have found, in the substance of the cervix uteri, vast numbers of small, white bodies, as hard as cartilage, closely adhering to the surrounding tissue, and smaller than a lentil; while, in several other parts of the uterus, they are found of the volume of an egg, of the fist,

and even of the head (*Bayle*, *Baillie*, *Hooper*). One of these weighed even thirty-nine pounds (*Gaultier de Claubry*). It sometimes happens that the tumors, which are enclosed in the parietes of the uterus, are very firmly united, and nearly continuous with the muscular tissue; but they are much more frequently found adhering solely by slender filaments, or small vessels, and are so readily detached, that they might be thought to be encysted. Adhesions, equally slight, are found to exist between the uterus and those tumors which project from its exterior surface; but the peritonæum supplies them with an envelope, connects them with the uterus, and sometimes furnishes them with a real pedicle, containing a few vessels and cellular filaments: these constitute, in such cases, a kind of exterior polypi, resembling, in their origin, form, and nature, those which will be described in the following chapter. Without being pediculated like the interior polypi, the fibrous bodies may also project into the cavity of the uterus, fill it, and derange its form. This organ increases considerably, in such cases, not only in its dimensions, but also in its mass, and its fasciculi become large and distinct, as in pregnancy. On some occasions, however, its parietes become thin (*Bayle*): this is the case, at least, with that opposite to the attachment of the tumor. We have observed a somewhat singular change in form, owing to a similar cause (B): the uterus presented a cone, of ten inches in length, the summit of which was formed by its superior angle on the right side; from the summit to the base,—that is, to the os uteri,—the cavity measured nine inches, and its form was that of a canal of little capacity. (Plate XIV.)

C. *Causes.* It is extremely difficult, perhaps impossible, to assign to this disease any certain, or even probable, origin; our observations must, at least, be very multiplied, since, according to the calculations of Bayle[1], fibrous bodies are found, on examination, in a fifth part* of all the cases of

[1] *Dictionnaire des Sc. méd.*

* This calculation, judging from my own observation, is incorrect; I have been looking, for the last year, for this affection, for the purpose of injection, and have not been able to meet with a case, although in that period I must have examined thirty bodies.—Tr.

death occurring after the thirty-fifth year. We are, however, of opinion that the phlegmatic are more subject to them than others. According to the same writer, the unmarried state is favourable to their production, and there is no exception in persons who continued in that state beyond the fortieth year; in proof of which remark, we have several examples. Married women, if barren, are also most frequently affected with this disease; but, in this question, it is difficult to determine what is cause, and what is effect. A somewhat advanced period of life is, according to Bayle, an indispensable condition for the production of these tumors. Perhaps, he remarks, they are never developed before the thirtieth year. Our cases agree with the former part of this rule, though not absolutely with the latter. In the case of one of our patients, the existence of a fibrous body was ascertained at the age of eighteen; another person, who died in pregnancy at the age of twenty-five years, presented several, of different sizes: lastly, a tumor of tolerable size was ascertained to project into the uterus (B), in the case of a young woman in her seventeenth year.

This is all that can be said with certainty relative to the cause of fibrous bodies. Do they, however, locally considered, depend upon morbid and organic secretion, or upon an elongation and extension of the uterine fibre? Their being almost entirely isolated would sanction the former view; but their structure would favour the latter. Is inflammation, then, the origin of this new production,—this local hypertrophy? This appears very improbable; and there is nothing to favour the idea, except their vascular and fleshy structure, when in their incipient state.

The local causes, to which this disease has been attributed, might give an air of probability to this idea, were it not evident that no such causes generally exist; and, in the few cases which appear to form exceptions, it is simply from conjecture that its origin has been attributed to contusions. This remark may be applied to the supposed *steatoma* of thirteen pounds' weight discovered in the substance of the uterus by Dehaën, and attributed to external violence during pregnancy[1].

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[1] *Ratio medendi*, t. iii, p. 378.

D. *Course, progress, change.* According to Bayle, fibrous bodies are observed to increase gradually in consistence, from their first sarcomatous form, to their last stage of osseous concretion. To this it might be replied that the least considerable of these tumors are fibrous, cartilaginous, osseous. But here we shall answer, with Bayle, that, amongst the sarcomatous tumors, there are some which have a tendency at once to maintain a soft consistence, and to increase in size, and that it is principally these which acquire those considerable dimensions spoken of above, tending also to reach the surface, and to become pediculated. Others, on the contrary, with less tendency to increased volume, acquire rapidly a greater consistence: thus it happens that the smallest are those which harden most rapidly; or, it may be said, that the early induration checks all further increase.

The condensation of the tumor is not so gradual as to present all its parts, cartilaginous or osseous, simultaneously: ossification sometimes begins at the centre, though more generally in a great variety of parts. Independently, however, of these changes, which are in a certain point of view primary and natural, there are others which are secondary. According to Bayle, tumors, which have become osseous, may pass into a carious state. We are not aware of any actual case; but many pathologists have given an opinion that fibrous bodies may pass into scirrhus, attended with all the symptoms of cancerous diathesis. Bayle denies the possibility of this fact; and, though we do not agree with him absolutely, we are constrained to say that it may have been rather imagined than observed, scirrhus having been mistaken for fibrous tumor[1]. Even, according to Bayle, the sarcomatous tumor is liable to inflammation, in its first stage[2]; and may not this inflammation

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[1] According to Professor Dupuytren, it would only be possible in the case of tumors in which there was cellular tissue blended with the fibrous. (*Revue méd.* 1829, t. ii, p. 386).

[2] Dr. Dance (*Mémoire sur la phlébite utérine*) observed, in one case, in the centre of an abscess formed in the parietes of the uterus, a fibrous body attached to the adjoining parts by four pedicles. This body was red, and seemed to be inflamed itself, but it was especially evident that it had, as a foreign body, occasioned inflammation in the surrounding tissue,—a circumstance of rare occurrence, and of which we are not acquainted with so satisfactory an instance,—that is, of any case in which inflammation has been carried so far.

lead to scirrhus? A mere denial of the fact appears to us unreasonable. But, after the tumor has become fibro-cartilaginous, or osseous, it is no longer subject to inflammation, nor indeed to cancerous modification, unless by propagation and continuity of tissue.

E. *Prognosis.* Fibrous tumors of the uterus are less alarming than many other morbid affections of that organ, and their consequences, when serious, are, in general, purely mechanical. The great size they are capable of acquiring, added to their multiplicity, renders their existence injurious to the uterus and the neighbouring organs. The bladder and rectum are compressed and flattened, and the urine is forcibly evacuated, with little intermission; or, the urethra and rectum are compressed, and there is retention. In such a case, it sometimes happens, that, as the volume of the uterus continues to increase, these inconveniences proportionably subside, upon the same principle as that which often renders the first months of pregnancy more painful than the subsequent periods. No longer able to remain in the pelvis, the enlarged uterus rises above the brim, and relieves the organs from its increased pressure.

In regard to the uterus itself, the mechanical obstacles, occasioned by fibrous tumors, may be divided into four kinds: 1, retention of the catamenia, from obstruction of the cervix, or os uteri: 2, sterility, from the same cause, and from obstruction of the Fallopian tubes: 3, abortion, from impeded development of the uterus during pregnancy; and, 4, difficult parturition, when the tumor, situated at the cervix, or os uteri, has become sufficiently large to prevent the passage of the fœtus.

The first of these effects must be of rare occurrence, in consequence of the advanced age at which these tumors, if considerable, generally appear. We have, however, read of a case of this kind, in some of the journals. As for sterility occasioned by obstruction of the Fallopian tubes, or of the cervix uteri, we have seen several patients in whom this was most probable. It is indeed more remarkable that pregnancy should occur, notwithstanding the existence of considerable tumors at the cervix uteri. When they occupy the body of the

uterus, they do not present an obstacle to impregnation, but to enlargement of that viscus. Among the examples of abortion arising from this cause, we may quote a case proving that this is not the most serious consequence of pregnancy thus complicated. Abortion took place in the sixth week; the abdomen afterwards swelled, and a tumor, which must have previously existed, was now more clearly indicated by the inconvenience it occasioned, and felt upon examination of the hypogastrium. A second pregnancy took place: the abdomen was considerably enlarged; the pains and uneasiness became excessive, and the patient died. On examination post mortem, Dr. Troussel discovered in the uterus a fœtus of about four months and a half; an enormous tumor in the abdomen, fibrous exteriorly, and internally of a pale reddish colour, lardaceous and encephaloïd. Four or five other fibrous tumors were adherent to different parts of the uterus. This fact seems to prove that this was the original nature of the principal mass; and that it afterwards passed, in consequence of the second pregnancy, into a carcinomatous state. (*Acad. de méd.* 29 janvier 1829.)

But it is especially at the period of delivery that these tumors may bring on serious results, and such cases are not absolutely of rare occurrence: the fact, however, which we are about to subjoin, is of an opposite nature[1]. The person in question died, after delivery, of peritonitis, and presented, at the parietes of the cervix uteri, a fibrous tumor, as large as the fist; the labour had been protracted, and very painful; the head of the fœtus could only pass by becoming crushed against the parietes of the pelvis. Voigtel speaks, according to Zeller, of a tumor termed atheromatous, which prevented the delivery of the fœtus for thirteen days; it adhered to the cervix of the uterus, and filled the pelvis[2]. Rupture of the uterus, and death, were occasioned by a similar obstacle in a case recorded briefly by Fabricius Hildanus (*cent.* i, *obs.*

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[1] See also a similar case, excepting that the tumors were very small, and remarkable only for their number, *Nouv. Bibl. méd.* 1826, t. ii, p. 238.

[2] *Semiol. obstetric.* p. 59.

67). In the instance already quoted from Dehaën (*Causes*), the patient died of hæmorrhagy, after a labour of seven days, undelivered, just at the moment when the practitioner was going to turn; the shoulder presented, and spontaneous delivery would thus, perhaps, have been prevented by this position, had there been no tumor; but the tumor was the probable cause of this unfavourable position of the fœtus.

In cases in which a fibrous tumor co-exists with pregnancy, the danger is not entirely past upon delivery*. In a case which occurred at the Maternité at Paris, a fibrous body, of large volume, occupying the posterior paries of the uterus, prevented this organ from duly contracting after delivery, and the patient died of hæmorrhagy. This case has been published, with one of the preceding, by Professor Chaussier[1]. There is another case[2] of delivery, under the care of Professor D'Outrepont, in which the patient died also of hæmorrhagy, and three cartilaginous tumors were found in the body of the uterus, the largest of which was ten inches in breadth in one direction, and five in the other. These had prevented the dilatation of the fundus uteri in the last months of pregnancy, and the fœtus was retained only by the excessive enlargement and thinning of the cervix of the viscus.

Even in the ordinary state of the uterus, this distension might produce a similar effect, by dilating the orifices of the

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* In a case related by Dr. Marshall Hall, there was profuse menorrhagia during twelve years of unfruitful marriage: the patient became pregnant; the tumors were distinctly felt in the parietes of the distended uterus; parturition was accomplished well; but the fibrous tumors became inflamed, and this led to a fatal disease.—Principles of Diagnosis, 2d edit. p. 307.

Dr. Gooch relates a case in which a very large polypus, which had been felt previous to the birth of the child, was expelled through the os externum, with intense pains like those of labour; the pains continued violent for many hours, till the patient sank and died. The tumor was found attached, by a thick stalk, to the posterior lip of the os uteri, which orifice it had dragged down to the os externum. Some way up its neck it was livid, and weighed three pounds and fifteen ounces. There was no hæmorrhagy.—Gooch, p. 291.—Tr.

[1] *Bulletin de la Faculté de médecine*, fevrier 1823.

[2] *Archives de Médecine*, mai 1830.

uterine sinuses, and occasioning frequent hæmorrhagy, which would be further promoted by the irritation of the tumor. Hence it often happens that the health is gradually impaired, and that complete, and, eventually, fatal marasmus ensues. This is, however, not always the case: small tumors, and even large fibrous bodies, situated upon the exterior surface of the uterus, and, more particularly, excrescences, pediculated, and suspended, as it were, from the uterus, stationary or of very slow development, may exist for many years without danger, or any inconvenience beyond that of pressure upon the bladder, the rectum, and the uterus,—producing, severally, strangury or dysury, constipation, prolapsus uteri, anteversion, and retroversion. It also happens, as we have shewn above *(Course)*, that, notwithstanding the continued increase in volume, fibrous tumors, alarming and of long standing, cease to be painful, either in consequence of having changed their situation, or because the adjoining organs cease to be irritated by their contact; or, because the patient has reached a period of life in which, the catamenia having ceased, there is no longer any danger from their recurrence or derangement; or, lastly, owing to the obstruction of the vessels of the uterus by compression. Bayle gives a very remarkable case of this kind, and it is not the only one we are able to adduce[1].

The office of the physician, in cases of little urgency, is confined to simple observation; in more serious cases, still unable to remove the disease, he will endeavour, as much as possible, to mitigate its consequences. In parturition, for instance, the practitioner will push a pediculated, moveable tumor, if possible, above the brim, or he will apply the forceps, or deliver by the feet; possibly he may have recourse to division of the symphysis, or to the cæsarian section. These rules, however, belong to midwifery. Medicine cannot effect a cure, although some physicians *(Clarke)* have supposed these tumors capable of resolution[2]. Those persons, how-

[1] *Dict. Sc. Méd.* t. vii, p. 80.

[2] Repeated bleedings and strict diet might be tried in the robust, and prepara-

ever, who have not confounded them with simple inflammatory indurations, agree in considering them as incurable. But the very want of indications in this case renders the diagnosis, between these tumors and those which resemble them, absolutely essential.

F. *Diagnosis.* The symptoms, of which we have spoken, might lead us to suspect the existence of fibrous tumors. Their diagnosis is, in many cases, very obscure, even after examination; much more so, if we were to confine ourselves to the symptoms only. Amongst these last we class irregularities, and sometimes delays of the catamenia, though, far more commonly, the increased frequency and quantity of the sanguineous discharge; the continuance of these discharges beyond the period when the catamenia usually cease; profuse leucorrhœa, sometimes tinged with blood, sometimes continuous, then intermittent, returning after fatigue, effort, or shock; and, lastly, the wasting which follows, together with other local symptoms arising from compression of the bladder or rectum (constipation, sense of weight, &c.),—or of the uterus (dragging in the loins and groins),—or of the veins and lymphatics of the lower members (œdema of the feet). Most of these symptoms, especially the hæmorrhagy, present themselves principally in cases in which the fibrous tumors occupy the fundus, or the body, of the uterus, and are hidden in its substance: and they are wanting in cases in which the tumor is situated at the surface, and not in the parietes, of the organ; the diagnosis must then be determined by examination.

External examination frequently leads, in cases of thin persons, to the discovery of fibrous tumors, either pediculated or having a large base, sometimes with, sometimes without tenderness, at other times rolling about, or moveable from side to side, in a manner sensible to the patient; and, lastly, fixed,

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tions of iodine and mercury, with sulphurous mineral waters, in the phlegmatic, when the disease is yet in an early stage, and the tumor rather fleshy than fibrous: but no hope should be entertained of a complete cure.

—that is, as much so as the uterus itself. To this examination must be added that by the vagina or rectum, when the fibrous tumor occupies the substance of the organ; its volume, consistence, and, to a certain extent, its form, are ascertained by this means. Whilst the finger, introduced into the vagina or rectum, pushes the tumor, the hand should be applied to the hypogastrium; the tumor is then readily moved backwards and forwards between them, and in this manner its direction, elevation, weight, and mobility are ascertained. We proceed to give some further particulars, which may distinguish the present disease from others which resemble it.

1. Fibrous tumors of the uterus, when they have acquired a considerable size, may pass, it is said, for incipient, or false pregnancy. Irregularity of the catamenia and hardness of the tumor might lead to the latter mistake; the former would never occur to the experienced practitioner, if the uterus had only reached the period of its fluctuation, and it were possible to ascertain the repercussion. In every case, the slow growth of the tumor, and the rapid enlargement of the uterus in pregnancy, whether with a fœtus or a mole, will furnish distinctive characters of the two states, whilst the other modes of examination will establish the uniformity of the enlargement of the uterus in cases of gestation, and the irregularity, &c. in opposite cases.

2. This uniformity of enlargement will be useful for distinguishing cases of induration, occasioned by chronic inflammation; in which there are, besides, pain and tenderness. If the induration be partial, it will not be circumscribed, abruptly elevated, or pediculated, like the fibrous tumor.

3. The induration of one of the ovaria constitutes a tumor, which might be mistaken for a fibrous, pediculated body. The lateral and deeply-seated position of these organs, when they are loose in the abdomen, renders them difficult of access, and affords but a transient contact on examination: this circumstance may be of service in determining the diagnosis, which, however, is only useful in reference to the prognosis. Even in this respect the pro-

gnosis would not be of a serious nature, unless the ovarium were cancerous; and, in such a case, the lancinating pains might at least suggest tolerable conjectures about the disease. If the ovarium descend into the pelvis, behind the uterus, or upon one of its sides, the diagnosis may become still more indistinct and conjectural. Examination per rectum will then afford the most important indications.

4. But there are affections more easily confounded with the fibrous tumor: partial scirrhus of the uterus is not always painful; its progress is sometimes slow, and ulceration follows very late; it may form lobulated, circumscribed, very prominent, and hard tumors; and while it remains in this state the diagnostics are uncertain.

We have yet to speak of polypi, which, being of the same nature as the fibrous tumor, may, in some cases, be also confounded with it, not only in regard to the diagnosis, but in the actual examination post mortem; there may be a fibrous body, which, situated in the parietes of the uterus, projects towards the interior, having, however, a broad base and a rounded body; this may be the rudiment of the future polypus, and the finger, if it can be introduced into the os uteri, may lead to the conjecture that there is already a polypus. We shall see, in the following chapter, how this error may be avoided, and the diagnosis established on surer grounds.

CASES.

1. *Fibrous tumors ascertained by anatomical examination.*

1. In the case of a negro woman, who died, in her forty-ninth year, of inflammation of the lungs, there was merely a longitudinal projecting line, in room of the vaginal orifice: the urine and catamenia had passed by a narrow circular aperture in front of the perinæum; the obstruction, which

was probably owing to some operation performed in infancy, after the custom of certain African tribes, covered the meatus and the clitoris with a cutaneous membrane. Three fibrous, or rather *sarcomatous* tumors, soft, and of a deep red colour, were situated in the tissue of the uterus,—two of them from fifteen to eighteen lines in diameter, occupying the two angles; the third, a smaller one, being behind. The mucous follicles of the cervix uteri, which was larger than usual, were greatly developed; two whitish tumors, evidently fibrous, of the form and volume of a lentil, were found in the substance of its anterior labium, which was much elongated.

2. In another case, the patient died in her forty-fourth year, four days after an operation for strangulated hernia. We found the uterus beset with fibrous tumors, some of which were of a rounded form, pediculated, and covered merely with the peritonæum; others, of an oblong form, without pedicles, covered with the serous membrane, and also with the fibro-cellular coat, which lies immediately beneath it; one of the last was hard and calcareous. The cervix uteri was soft; a reddish, soft, sarcomatous tumor, of the size of a small cherry, was attached to its orifice. Within the body of the uterus was found a production of a rounded form, knotty and compact, composed of a mass of small tumors, adhering to the parietes of the viscus by a lamellated tissue of little consistence; at the upper part of the vagina was a small semi-transparent cyst, as large as a pea; one of the ovaria was atrophied; the other tuberculated; a substance resembling concrete albumen, or caseous matter, was found among its vesicles.

3. Madame R—— had been affected with a tumor above the right groin; from her fourteenth to her thirtieth year, it had continually increased; at that period she was married, and became subject to pains in the region of the uterus; retention of the catamenia, for nine months successively, induced a suspicion of pregnancy; the abdomen, however, continued small in size. Désormeaux considered it a case of extra-uterine pregnancy. Nine years afterwards, another disease terminated the life of the patient. She had laboured particularly from a difficulty of breathing, delirium,

and paralysis of the extensor muscles in the fingers and wrists.

On examination, serous effusion was found within the head; the thoracic viscera were in a healthy state. The pelvis was occupied by the uterus: several fibrous tumors were found in its parietes, imparting to it a conical form, its base being situated at its lowest part; one of these tumors occupying the left side of the organ, was as large as the fist, and oblong; two others were smaller, flattened, and irregular; a fourth and fifth, as large as an orange, occupied the cellular tissue round the cervix uteri:—smaller bodies were found in various parts of the viscus: all of them were white and compact; the os uteri was much contracted, and filled with sanguineous fluid; the cavity of the uterus was five inches in length, and one in breadth, in every part; the right tubular orifice constituted the highest point; the right Fallopian tube, contracted in several parts, was largely developed at its pavilion; its fimbriæ were of a deep red colour; the rest of the generative system was healthy, with the exception of a serous, pediculated cyst, of the size of a pigeon's egg, attached to the anterior surface of the uterus. (See plate XIV.)

2. *Projecting and pediculated tumors on the exterior of the uterus.*

Madame Vaut died, in the fifty-fifth year of her age, of inflammation of the lungs. *On examination*, we found a serous effusion in the thorax; adhesions of the pleura; hepatization of the lungs; the uterus of twice the volume usual at that age; three tumors, as large as full-sized cherries, on its posterior and superior surfaces,—two of them joined together, adhering by a broad base to the substance of the uterus, and covered by the sub-peritonæal coat of that viscus; the other occupying the surface of the fundus, with a very narrow pedicle or neck, about one or two lines in length, appearing to be covered only with the peritonæum, traversed with numerous blood-vessels.

The tissue of the uterus was extremely soft, and, with the Fallopian tubes, and the ovarian and super-pubic ligaments, of a deep red colour; the veins of the ligaments were much enlarged; the cervix, as well as the body of the uterus, was soft; the anterior labium of the os uteri was much longer and thicker than the other; in the cavity of the cervix there were three small pediculated tumors, each as large as a pea, and containing an albuminous fluid.

3. *Pregnancy, complicated with fibrous tumor in the uterus.*

1, 3*.

2. Madame Joséphine U——, twenty-nine years of age, and mother of several children, was attacked with hæmorrhagy in the seventh month of pregnancy; this was attributed to the insertion of the placenta upon the cervico-uterine orifice; a plug was introduced into the vagina; the labour proceeded, and, when the cervix uteri was sufficiently open, the turning of the fœtus was effected; the placenta was spontaneously expelled; but the patient died on the eleventh day after labour, owing to weakness, occasioned by the previous hæmorrhagy, for there was hardly any afterwards.

On examination, we found some reddish serum in the thorax; the right lung adhered to the costal pleura. The heart was pale and soft, containing no blood. On the right side of the uterus, there was a tumor, about three inches and a half in diameter, of firm tissue, of a bluish black colour, weighing twelve ounces and a half; it was continuous with the substance of the uterus. Traces of the attachment of the placenta were discovered within the uterus, on the anterior paries of its body, and not on the cervico-uterine orifice.

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* The cases, which immediately preceded and followed that just given, are omitted, as imparting no useful information whatever.—Tr.

CHAPTER III.

OF PEDICULATED FIBROUS TUMORS, OR POLYPI.

It has been our object to distinguish sarcomatous and fibrous polypi, the subjects of the present chapter, from those growths which are termed 'vivaces,' and usually arise from a cancerous surface; and from those small, cellular tumors which resemble the vesicular polypi of the nose. In the latter class must be included the cellular and vascular polypi, described in the journals, from the clinical practice of Professor Dupuytren[1], and which properly belong to one or the other of the two diseases we have mentioned. They present, it is said, symptoms similar to those of cancer of the cervix uteri, and, owing to their smallness, often escape detection, even on the closest examination. Their symptoms are discharges of a white or red fluid, occasioned by the slightest contact, and at the approach of the catamenia, generally accompanied by a sense of fatigue in the loins, of dragging in the groins, and of weight at the anus; exhaustion both of mind and body, quickly brought on by hæmorrhagy and pains. The finger, carried as far as the os uteri, and into the circle formed by this part, detects two, three, or more small bodies, elongated, pediculated, and attached to the inferior extremity of the cavity of the cervix uteri; their volume varying from the size of a pea to that of a French bean, and bleeding upon the slightest contact. By means of the speculum, the cervix and os uteri are observed to be of a red colour, dilated, and filled with small bodies of a reddish colour, elongated and pediculated. We have witnessed all the symptoms here enumerated, though accompanied with scirrhus of the os uteri, and, as we think, the result of a

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[1] *Journal universel hebdomadaire de médecine et de chirurgie pratiques*, no. 42; juillet 1829.

cancerous affection; our opinion has been but too much confirmed by the progress of the disease. M. Dupuytren proposes to tear off the cellular and vascular polypi, with a slender forceps*: this method would be proper if the case be really that of cellular polypus, but improper and dangerous in cases of cancerous fungus. We now proceed to the description of real polypi,—those of the most common occurrence.

A. *Anatomical details.* Those fibrous tumors which, whether pediculated or otherwise, are at first fleshy, of a red colour, and charged with blood, have frequently been considered as a distinct species, and designated as sarcomatous. It is but recently that Professor Cruveilhier and Dr. Dance have compared their tissue with that of the uterus, and considered their production as an exuberance of some point of this organ,—a kind of partial hypertrophy[1]. Their formation has been assigned, still more recently, by Dr. Blandin, to some fibrinous deposit, checked in the uterine vessels and then organized; but this would account neither for their further growth, nor for their changes. With reference to the latter point, we have already suggested that it is not the largest that become the most dense, the most clearly fibro-cartilaginous, the most akin to the osseous or petrified state; yet the fibro-cartilaginous texture will perhaps be found to exist in these small polypi less frequently than in the tumors situated in the substance, or on the exterior of the uterus; it is observed sometimes in those of moderate size, where it presents the appearance we have described, and which has been accurately drawn in the se-

* Herbiniaux describes a particular kind of polypus, characterized by being soft and small, and by arising from the cervix uteri, through which it projects but a few lines; its pedicle is comparatively large; and it gives rise, notwithstanding its small size, to a dangerous degree of hæmorrhagy. The smallest of these polypi may be twisted off; the larger ones may be removed by the ligature. In one case only did hæmorrhagy follow the operation. I have seen one such case: it was removed in an attempt to apply a ligature of wire: there was no hæmorrhagy, and no return of the polypus.—Tr.

[1] *Revue médicale*, 1830, t. xxxviii, p. 408.

cond figure of the dissertation of Dr. Simson[1]. Sometimes the concentric laminæ, constituting the layers of the fibrous tissue, are so distinctly presented by them, as to have been compared with those which constitute the substance of the transparent cornea *(Siebold)*; at other times, on the contrary, their fibres appear to be so interlaced and plaited, as to resemble the filaments of the placenta. These latter were also, undoubtedly, very vascular and sanguineous, as is sometimes the case. The sarcomatous polypi, already observed by Levret, and of which we have also seen several cases, are evidently of the same nature; they are red, and bleed upon the slightest pressure, occasioning, spontaneously, repeated hæmorrhagies, and appearing, in a manner, *erectile*, inasmuch as they admit of becoming hard and tumid with blood at certain periods, particularly at that of the catamenia.

Ought these different degrees of vascularity and consistence, which unquestionably dispose the polypi to different morbid changes, to be considered, as many pathologists have viewed them, as constituting distinct diseases? The recent progress of pathological anatomy has led to an opposite conclusion upon this subject. Still less ought we to assign a distinct character to those polypi which contain, in a slight proportion, substances differing from those which we consider as constituting its primitive texture,—as, for instance, pus; serous or viscous fluid; blood coagulated in cells; tuberculous or atheromatous matter, with or without hairs, &c. &c.

The fluid substances are sometimes, in a manner, infiltrated, or contained in the cells distributed throughout the mass; sometimes they are collected in a large cavity in the centre of the polypus*. *Hollow polypi* are, indeed, of suffi-

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[1] *De polypis uteri horumque resectione; Berolini*, 1828.

* The following case seems to me one of interest, particularly as it is related by so able a pathologist as Mr. Langstaff. "Mrs. ———, aged fifty-nine, in whom, a few days previous to death, there was a large polypus in the uterus projecting into the vagina, died with hæmorrhagy, before a ligature was applied.

"*Dissection.* The body of the uterus and its parietes were much larger than natural, yet there were not any signs of carcinoma or fungus hæmatodes.

"A polypus had formed at the superior part of the fundus of the uterus, which

ciently frequent occurrence to claim the attention of the practitioner, especially because mistakes are so likely to be made in determining their diagnosis. These mistakes have been sometimes made, not merely before any operation, but even after the polypus has been separated by excision or the ligature. It is in such cases as these that the uterus has frequently been supposed to be extirpated, when merely a slight portion of it has been removed, and when it has not even been touched.

There are figures in the atlas (pl. XIX, fig. 3 and 4) of an enormous hollow polypus, which was removed by the ligature; blood, and other fluid matter, which sometimes collected in its cavity, issued from it by several orifices. Similar cases have been related in the records of medicine. Saviard (*obs.* 36) discovered, on examination of a person who died of exhaustion, a tumor as large as a bullock's heart, adhering to the fundus of the uterus by a slender neck; it was hollow throughout, its cavity filled with blood. Other cases are quoted by Levret in the 'Mémoires de l'Academie de Chirurgie' (t. iii, p.526 and 527)*. In one of these, taken from Boudou, the tumor presented a sac, interwoven with

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seemed to have had its origin in the muscular coat; it had projected into the mucous surface, and proceeded along the cavity in the form of a large pedicle, nearly equal in size to its base, and the growth had passed through the os uteri into the vagina, where it had acquired the magnitude of a large peach, and assumed the appearance of a fungoid tumor.

"The mucous surface of the tumor in the vagina had been destroyed by ulcerative absorption; it was coated with coagulated blood, which appearance induced me to suppose that the hæmorrhage had proceeded principally from this part, and not from the vessels belonging to the internal surface of the uterus. On cutting through the whole extent of the polypus, I found the cervix of a dense structure, exactly similar to that of the uterus; but, to my astonishment, when the incision was extended through that part of it which had entered the vagina, I found, in its centre, grumous blood, contained in a dense cyst, surrounded by coagulated blood."—Med. Chir. Trans. vol. xvii, p. 63.—Tr.

* Chaussier describes a tumor which protruded through the os uteri, and apparently consisted of a false membrane, which became distended by blood at each catamenial period, and then resembled polypus:—

"If the false membrane, formed and shaped within the cavity of the uterus, be of considerable consistence, it may be detached, expelled entire, and separated from the cavity of that organ, though still adhering to its cervix, and propelled by the blood which accumulates at each catamenial period, so as to pass through the

fleshy fibres; in two others (*Cailhava*, *Guiot*), the cavity was filled with gelatinous matter and hair, or with fat mixed with hair. There are two other cases on record of hollow polypi, (*Hoin*, *Laumonier*), which were mistaken for the uterus, even after their extirpation; we quoted them when treating of the inversion of that organ.

The colour and consistence of a polypus must necessarily result from its texture and interior structure; but these appearances, as well as its exterior, which is commonly smooth, though sometimes uneven, rugated, and as if varicous, &c.—depend, according to most writers, upon the membrane with which it is covered. This membrane, which has generally been regarded as an expansion of the interior coat of the uterus, is frequently not more distinct from the tumor than the supposed mucous membrane of the uterus from the tissue of that organ. Dr. Breschet declares that he has continually observed polypi covered with a thin, smooth, glossy membrane (*Dict. de Méd.*); in other cases[1] this membrane, distinct, fleshy, and becoming thinner and thinner towards the pedicle, in voluminous tumors,—thicker, on the contrary, when the tumor is of a moderate size,—but, in every case, an evident continuation of the fleshy fibres of the organ in which the polypus originated, was distinctly formed of the interior layer of these fibres, forced inward and drawn to the surface of a fibrous body, originally situated in the substance of the parietes of the viscus. Lastly, in certain cases, we have found this envelope soft, and have been inclined to attribute its production to an albuminous exudation, secreted by inflammation of the internal surface of the uterus, and afterwards organized, by a distinct process, about the ex-

os uteri, and become elongated in the vagina, and eventually form a tumor of greater or less projection, presenting the appearance of a polypus. Chaussier has observed a very interesting case of this kind of tumor, and thinks that the three cases published in the work of Collomb (*Œuvres médico-chirurgic*, Lyon, 1798), and considered as instances of tumors occasioned by the separation of the internal membrane of the uterus, were also owing only to false membranes formed in the cavity of the uterus."—*Etudes anat. phys. et pathol. de l'œuf dans l'espèce humaine*, par G. Breschet, § 41.—Tr.

[1] Hervez de Chégoin; *Remarques sur les polypes de la matrice*, *Journal général de Médecine*; octobre 1827, p. 8.

terior of the tumor, which had, at the first, occasioned the inflammation. This tumor may, in fact, contain in itself the elements of a similar process; some modern writers are greatly mistaken in denying the existence of blood vessels in polypi* *(Meissner, Simson)*; these very persons admit the fact in reality, when they speak of *sanguiferous* canals being found in them, though not traceable so far as into the pedicle. It is certain that fibrous tumors contain but few vessels in their substance; it may be that, enlarging only in their circumference, they eventually have none near the centre; and that to their disappearance must be attributed the gradual condensation and ultimate petrifaction of these tumors: or, if they retain greater vitality, it is produced by newly formed blood vessels, as Dr. Breschet thinks[1]. But what appears more conclusive, is, that the arteries or veins, which are known to exist, are only found at the surface of the polypi, and in the fleshy coat which they receive from the uterus, as Dr. Hervez remarks; a similar result was observed in the case recorded by Levret in his remarks upon polypi, and is coarsely represented in the figure annexed to them. In the case already quoted by Saviard, mention is made of two very small arteries, and of two veins as large as the crural; a description is also to be found in the 'Ancien Journal de Médecine' (t. xxix, an 1768) of a polypus containing two arteries and a vein in its pedicle; and the case of Vacoussain, recorded by Levret, so remarkable for the pulsations felt in the pedicle of the tumor, is well known. These facts serve to shew that the section of the pedicle is not always so safe an operation as several practitioners have supposed.

To these remarks upon the organisation of polypi we have only a few words to add: 1, upon their form, which is commonly oval or rather pyriform, sometimes knotty, flattened, strangulated, cylindrical, irregular; 2, upon their volume, which varies from that of a pea to that of the head, or there-

* The proof of the vascularity of polypus seems to be afforded by a preparation in the Museum of Bartholomew's Hospital: an injection was thrown from the uterine vessels into those of a polypus, apparently of fibrous texture.—Tr.

[1] *Dict. de méd.*, art. *Polype*, t. xvii, p. 334.

abouts[1]; 3, upon their number, sometimes multiplex, though more frequently solitary when the polypus is tolerably large; 4, upon their insertion, which is generally accomplished by a neck, about as thick as a third of the circumference of the tumor, sometimes by a thinner and more elongated pedicle, and at other times by a broad base;—attached, in every case, to some point of the uterus, generally to its fundus or to the interior of its body, sometimes within its cervix, sometimes upon the edges of the os uteri or even upon its exterior surface,—that is, near its insertion in the vagina, to which similar tumors may be also attached; 5, lastly, upon the part they occupy, which varies not merely in consequence of their insertion, but also, of their form, volume and duration: a polypus, in fact, after having occupied the fundus of the uterus, may descend into its cervix and even into the vagina, either by the elongation of its substance, or of its pedicle only, or by the depression,—that is, the inversion,—of the fundus uteri to which it is attached. These displacements are readily understood upon post-mortem examination in a case of voluminous polypus: the uterus is found to be not only distended, but also thickened and softened; it has become more red, vascular and fleshy, and its fibrous fasciculi are as obvious as those of the pregnant uterus; it is equally capable of contracting in order to propel the tumor outwards, and equally liable to inversion by the draggings in the interior.

B. *Predisposing causes, &c.* We have already remarked that the lymphatic temperament is probably one of the principal predisposing causes of albuginous or fibrous tumors of the uterus; we may make the same observation with respect to polypi; but we have sometimes observed a coincidence, worthy of remark, between the existence of polypus attended with profuse discharge by the vagina, and cancer of the mammæ, the liver, or even the face. Perhaps this affection

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[1] One of these has been known to weigh ten pounds and a half, measuring eighteen inches at its base, and thirteen inches and eight lines in length; it was composed of fleshy and reflected fibres; it was inserted upon the os uteri. (*Ancien Journal de médecine*, t. lxiii.)

operated only like other debilitating causes, under the influence of which pediculated tumors of the uterus arise. We have, in fact, observed that this disease attacks principally the weak, those who live in low, damp places, and persons of sedentary habits; that it has been preceded by leucorrhœa, and that the catamenia had appeared early and in abundance. In several instances, this flow had been accompanied with membraniform growths; or abortions had taken place, attended with difficult and slow expulsion of the fœtal appendages: all which circumstances might bring on, or manifest, congestion, and habitual, or frequently recurring, inflammatory state of the uterus. It is also at the age and under the particular circumstances in which this congestion usually occurs, that these excrescences appear; seldom observed in the case of the very young*, and still less in the unmarried[1], they are equally rare after the cessation of the catamenia, and they are most commonly discovered in cases in which parturition has taken place one or more times, though their origin cannot generally be attributed to any decided local cause.

C. *Symptoms, course.* The symptoms, though very indistinct when the disease has already taken place, are as follow:—1, sympathetic affections, the least indicative of all, as efforts at vomiting, paleness, and anasarca; 2, leucorrhœa, sometimes preceding the formation of the polypus, sometimes occurring a long while afterwards, and existing alone, chiefly when the tumor arises from the cervix uteri; 3, frequent, abundant, and prolonged menorrhagia; 4, profuse hæmorrhagy† (especially when the polypus occupies the body of the uterus), occasioning debility, exhaustion, and death; 5, sense

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* Pfaff describes a case of polypus which occurred in a female child of two years old. The ligature was applied thrice; and thrice the tumor returned; it was eventually and permanently removed by the forceps; the operation was followed by retention of urine and swelling of the abdomen, which soon subsided. Richter, Bib. Chir. v. vi, p. 538.—Tr.

[1] Siebold has observed three existing at the same time in the case of a person in whom the hymen was perfect. (*Simson*, p. 22).

† Sir C. Clarke mentions an appearance in some cases of polypus, not noticed by the authors: it is that of rings of coagulated blood formed round the polypus,

of weight in the hypogastrium, and afterwards upon the rectum, a feeling of distension within the pelvis, draggings in the loins and groins, and sometimes retention of the fæces and urine*. The coincidence of the last symptoms implies considerable volume in the tumor; which also facilitates the discovery by examination. But, so long as the polypus is concealed within the uterus, all that can be ascertained is the increased size of that organ. If the polypus be situated at the os uteri, or at the cervix, already begun to be dilated,—or, later in the disease, if suspended from the fundus,—it may be ascertained by an examination per vaginam. The uterus, changed in its texture, as we have before mentioned, becomes so pliable, that its parietes are easily stretched and its orifices dilated; a similar enlargement of the uterine sinuses and their orifices occasions repeated hæmorrhagy; the vessels of the tumor are generally too small to give origin to such discharges. As soon as the cervix of the uterus has begun to expand, the os uteri partly opens, and, the finger being introduced, the convex surface of the tumor is felt, and the nature and cause of the affection become probable. Before the tumor has protruded from the os uteri, this mode of examination may be assisted by pressure upon the hypogastrium—the uterus, already low, by reason of the weight of the polypus and the relaxation of its own ligaments, being further depressed by that pressure. The diagnosis is sometimes more easily determined at this stage of the disease than at a later period; the point of the insertion of the tumor, and the state of the uterus can then be better ascertained, than when the polypus has advanced through the os uteri, occupies the vagina, or pelvic cavity, or even protrudes beyond the os externum. In some cases the uterus is reflected and dragged along; at other

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and afterwards expelled, retaining this peculiar form.—Diseases of Females, vol. i, p. 247.—Tr.

* "Polypus sometimes passes through the uterine orifice, gradually and insensibly, sometimes suddenly, during the action of the bowels. I have known several instances in which patients, after this action, have been suddenly seized with retention of urine, and, on examination, a polypus was found in the vagina compressing the urethra."—Gooch, p. 258—Tr.

times, it remains projecting at the upper part of the polypus, and may be felt by pressure on the hypogastrium; this occurs when the tumor springs from the os uteri, and constitutes a source of diagnosis, which, though not to be overlooked, must not be considered as decisive.

In the early stages of the disease, when the uterus has already begun to open, the speculum may assist the examination, by displaying a tumor, generally smooth and whitish, seldom uneven or ulcerated, sometimes red and bleeding, though exclusively so in those rare cases of sanguineous polypi, as it were erectile and tumefied, together with the uterus, at the periods of the catamenia*.

D. *Diagnosis.* There are many affections with which polypus of the uterus has been sometimes confounded; some of these need not detain us long: the early period of pregnancy, for instance, is said to be simulated by this disease, in consequence of the enlargement of the hypogastrium, the sense of weight in the same region and the pelvis, and the pain or contractions which sometimes take place when the tumor has acquired a considerable volume[1]. Now the fact is, that regular pregnancy is never attended with this sense of weight, and the enlargement of the hypogastrium takes place only after several months, and follows the disappearance of the catamenia; whereas the uterus, when containing an excrescence, not only continues to discharge the catamenia, but in greater quantities and more frequently than usual; then the softness, dull fluctuation, and depression are features peculiar to pregnancy: and, as for the pains on expulsion, a much longer period than nine months would generally be required for the growth of a polypus, which should exhibit phenomena similar to those of labour. It is also

* A case of this kind is given in the Bib. Médicale, v. xxxix, p. 235. The volume of the tumor was very variable; when it was gorged with blood, it descended beyond the orifice of the vagina and was seen externally; but the loss of blood which the patient experienced each time caused it to return, and then it could only be perceived by the finger. It was in this state that it was extirpated without any hæmorrhagy.—Tr.

[1] *Séances de l'Académie de Médecine*, 24 juillet 1828.

said that vaginal hernia may lead to a similar mistake[1]; such a mistake, however, must result from ignorance or inattention. A rounded tumor in the vagina is not sufficient to constitute a polypus; the large base of a vaginal hernia (*élytrocele*), the softness and reducibility of the parts it involves, the point of its origin, independent of the uterus,—are circumstances which would preclude the possibility of a mistake, whether the hernia, situated forward, were vesical, or whether, situated behind, it contain the omentum or some portion of intestine: the breadth of base, and the adherence of this base to some other part than the uterus, or its orifice, will be sufficient to distinguish this case from polypus, however large, from an encysted tumor, and from extra-uterine pregnancy, occurring between the vagina and the rectum. The larger portion of the surface of a polypus is always unattached, and its point of adherence is high up when it has come down into the vagina; these are the signs which serve to distinguish it also from non-pediculated fibrous tumors exterior to the vagina, though projecting into it, and originating in the uterus and its cervix or orifice, as we have mentioned elswhere. Voluminous scirrhus of the uterus could only be mistaken for polypus from the increase in volume; sometimes the lobes of the scirrhus occupying the cervix or os uteri, may occasion an uncertainty; a careful examination, however, with the help of the speculum, will lead to a detection of the error. It is almost impossible thus to fail of ascertaining that the rounded prominences, of doubtful nature, are neither pediculated nor encircled by the os uteri; there will be other symptoms besides, which are wanting in polypus, and which characterise scirrhus, as lancinating pains, continued sero-sanguineous discharges, ulceration and destruction of the excrescences; their irregular and uneven form, observable almost from their first appearance. We have, however, met occasionally with pediculated scirrhus, and polypi have been observed to become scirrhous; a mistake in such cases would be excusable: but the diagnosis would become a matter of great importance; for it would be

[1] *Levret*, mém. cit. *Herbiniaux*, t. ii, p. 80.

almost useless, and even dangerous, to remove a pediculated scirrhus, accompanied, as it commonly is, with other similar morbid changes, the progress of which would only be promoted by such a step; whilst, on the other hand, polypus, in its altered state, ought to be removed with the utmost expedition. It would be advisable, however, in a doubtful case, to adopt the treatment proper for polypus. What we have just been saying respecting cancer of the os uteri would apply to cancerous tumor within the uterus. A remarkable case of this kind will be found in the treatise of Herbiniaux (t. ii, p. 40): after two ligatures had been unsuccessfully applied, the tumor increased rapidly, and numerous growths appeared on the other parts of the uterus and vagina. The writer ought to have been aware, as he himself confesses, of the nature of the disease, from the previous existence of a cancerous cachexia, the softness (? Tr.) of the tumor, the shortness and thickness of its pedicle, and the unevennesses of its surface.

These, however, are not the only sources of uncertainty; the following may be considered in the same point of view:

1. A tumor, fibrous or otherwise, without pedicle, but projecting into the cavity of the uterus, will easily lead to mistake. It will always be desirable to wait till the supposed polypus becomes more accessible by its descent; and the practitioner will not apply the ligature until he is satisfied, by the use of the probe, that the body of the tumor is wholly unattached.

2. False pregnancy imparts to the uterus a volume, hardness and weight, of a questionable nature; and induces serous and sanguineous discharges which are calculated to mislead; even the expulsion of a condensed mole may lead to a doubt whether it may not be a detached polypus. The diagnosis, in most of these cases, would be suggested by the rapid growth of the uterus in false pregnancies, the early expulsion of its contents, the serous quality of the previous discharges, the fungous, uneven, spongy appearance of these productions, either after their expulsion, or upon their presenting themselves at the os uteri; lastly, by their anatomical structure.

3. Prolapsus of the uterus, especially when that organ is congested or diseased, may, it is said, be mistaken for polypus, and vice versâ[1]. Now, the shortness of the vaginal cul-de-sac surrounding the cervix uteri, together with the existence of this latter orifice at the lower part of the tumor, would seem to preclude all possibility of a mistake; but, when it is remembered that the uterus is frequently much elongated in its descent, that its cervix projects considerably, the os uteri being perhaps effaced, its labia disfigured by swelling,—and, moreover, that some polypi present upon their surface depressions which might be easily mistaken for the os uteri[2], the value of a careful diagnosis will be readily understood. In doubtful cases, the finger should be carried as high as possible between the tumor and the parietes of the vagina, and will discover either the cul-de-sac encircling the cervix uteri,—the surface of which continues uninterruptedly with the tumor (prolapsus); or, the os uteri itself yielding with open orifice to that tumor (polypus); or, lastly, one of the borders of the os uteri in continuation merely with the pedicle of the polypus growing from its surface. If the prolongation from the cervix uteri be not pediculated, we might think it one of those elongations of which we have spoken elsewhere. Examination per rectum may lead to some confirmation of the diagnosis: that by the hypogastrium will be of little use; for the fundus of the uterus cannot be felt either in cases of prolapsus, or in those of polypus descending into the vagina, dragging with it the fundus of the uterus to which it is attached.

4. But the affection most liable to mislead the practitioner is that of inversio uteri. Levret says, in his memoir (art. 1[er]), that it is necessary to read the curious cases in which

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[1] A polypus, weighing five pounds and two ounces, has been known to be removed by the ligature followed by excision, after having spontaneously protruded beyond the os externum. This polypus had for a long time been mistaken for prolapsus uteri: and had been supported by a pessary, which it at last forced down. *(Anc. Journal de méd.* t. xxix.*)*

This mistake has been, in some cases, the more easily committed, as the polypus, when projecting from the os externum, might have been returned without difficulty, and supported without much uneasiness in the upper part of the vagina *(Vater, Disp. chir.; Hall.* t. iii, *ad finem; Herbiniaux,* t. ii, p. 47).

[2] *See* Velpeau, *Anat. chirurgicale,* t. ii, p. 336.

polypi have been removed by the ligature or excision, and mistaken for the inverted uterus. We have already spoken of hollow polypi which have particularly occasioned this confusion, and we have also said (inversion) that some practitioners have been so far deceived in this respect, as to maintain that the uterus had been extirpated, although the catamenia had re-appeared afterwards, and the patient had even become pregnant. We have also observed that, in some cases, the ligature or knife has been injudiciously applied to the uterus, from an impression that the tumor was polypus. There are several symptoms, and circumstances discoverable on examination, which, in fact, apply to both these affections; such as hæmorrhagy, mucous discharges, draggings, the form and situation of the tumor: the sources of their diagnosis are as follow.

We must first notice the events which marked the origin of inversion at the very moment of delivery, and which we have detailed in one of the preceding chapters. If, at this early stage of inversion, in the first degree, the existence of polypus be suspected, it may easily be ascertained, on external examination, that the rounded tumor, felt by the finger in the os uteri, exactly corresponds with a similar depression of the fundus of the uterus; and simple reduction would, in most cases, remove all doubt. But when the affection has been of longer continuance, and the tumor has passed through the os uteri into the upper part of the vagina, the diagnosis may present greater difficulties: it will nevertheless be right to consider—1, that it is only in cases in which the polypus has descended almost to the os externum, that the fundus uteri has been so far depressed as to be no longer felt upon examination by the hypogastrium, and may even then be reached by forcing back the polypus into the vagina: 2, that the fundus uteri is of a rounded form; or, if depressed, not proportionably so with the sinking of the tumor in the pelvis; 3, that this latter tumor, being fairly examined between the fingers placed above the pubes and those introduced into the vagina, is much larger (twice as large at least) than the uterus, as ascertained at the same time. Leaving these conjectures, however, it might be ascertained, by the finger or the elastic

catheter, that the inverted uterus is encircled at its neck with a cul-de-sac of little or no depth; whilst, in a case of polypus, the sound will be carried very far along its pedicle, beyond the os uteri through which it had passed. We will just add that the consistence of the uterus is usually softer, allowing it to become rugous and furrowed longitudinally, in consequence of the cavity in its centre;—remarks which may therefore apply to the hollow polypus. These polypi, indeed, generally filled with fluid, are liable to evacuate their contents at intervals by some fistulous orifice, frequently inducing considerable changes in their form and consistence. We shall not dwell upon the deep colour and ecchymoses of the uterus, because polypi also present numerous appearances of this kind; but we may observe, with Levret and others, that the uterus is painful and tender to the touch, while polypus, when touched, scratched or pricked, remains insensible.

A voluminous polypus, protruding from the os externum, may easily be distinguished from inversion of the last degree; its pedicle is found to be contracted and solid, and encircled to some depth by the vagina; while the base of the inverted uterus is large, soft, containing a portion of the rectum and of the bladder, together with the matter collected in those organs. This base, constituting the parietes of the vagina, itself inverted, is continuous with the borders of the os externum, and the finger cannot be pressed deeply into any point of its contour.

E. *Prognosis.* It is seldom that polypus of considerable volume exists long without causing alarming symptoms, which, however, vary in importance with the size, and especially with the nature and situation of the tumor, and with the idiosyncrasy of the subject. In cases of previous debility, with tendency to hæmorrhagy, a fleshy polypus, attached to the fundus uteri, may occasion such profuse discharges that fatal exhaustion[1] will ensue, even before the tumor has passed through the os uteri, or become sufficiently dilated for its

[1] It is worthy of remark, that this exhaustion, however serious, has sometimes passed away, and complete restoration ensued, after a proper operation.

existence to be clearly ascertained. In such a case, extreme debility may take place, even without any discharge of blood externally;—if, for instance, the os uteri be entirely obstructed by the polypus, the uterus then becomes enlarged, and projects so far into the hypogastrium that the tumor, raised by the actual distension of the fundus uteri, allows the blood to pass. A polypus, however, situated in the cervix uteri, will seldom occasion dangerous hæmorrhagy, according to Levret,—not, as he again observes, in consequence of the tumor undergoing a less degree of compression, but rather because the fundus of the uterus is not in such a case distended, or its venous sinuses enlarged and opened as in the preceding case. Polypus may also become inflamed, ulcerated, and subject to different morbid changes of structure. The inflammation is sometimes severe enough to produce pus in the substance of the tumor, and, by extending to the uterus, prove fatal. One of its effects, which are of less ordinary occurrence, though it has been observed by Levret[1] and ourselves, is, the adherence of the tumor to the uterus by one or more points, or even by the whole, of its surface*. We have met with an instance in which the tumor was thus attached at all points to the parietes of the uterus by cellular adherences, which, though very lax, were sufficient to prevent it from passing the os externum (B). In the case, however, of mere superficial inflammation involving only the external membrane, and without the existence of inflammation of the substance itself, polypus may become ulcerated and painful, yield a purulent sanious discharge, and strongly resemble malignant tumor, though unattended with its danger, at least in an equal degree. There are especially soft polypi, fleshy throughout, and as it were erectile, which are liable to inflammation, ulceration, and malignant change; some of these are found to pass into a scirrhous and cancerous state, occasioning death by the cachexia with which they are combined,

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[1] *Observ. sur les polypes*, p. 393.

* There is a case related in the Bib. méd. v. xxxv, p. 311, in which a polypus, attached to the cervix uteri, adhered in its whole extent to the posterior surface of the vagina.—Tr.

either as cause or effect. On the other hand, there are hard and fibrous polypi, which become cartilaginous, or osseous, and which, detached sometimes from their pedicle, constitute what have been called calculi of the uterus—a morbid change involving consequences less serious than the preceding.

Judging from a certain number of cases, it appears that this destruction of the pedicle may have occurred in polypi which have undergone no malignant change, or induration: we shall illustrate this in the annexed cases; the medical journals also contain a great many examples of the same kind[1]. In such cases the polypus has generally come down into the vagina, or has even protruded beyond the os externum; and sometimes it is the dragging and lengthening of the pedicle until it breaks[2], at other times inflammation, ulceration, and gangrene, which cause its separation[3]. In this last case, it has frequently been supposed that both of these effects are attributable to the compression of the polypus by the os uteri; but we have ascertained that this orifice is generally too soft and relaxed to produce such an effect; and it may be observed, in several detailed cases of this kind, that hardly any compression had been made in any part of the tumor. The dragging which the pedicle undergoes, especially if thin and softened by inflammation, is sufficient to account for its being broken, if we consider the violence with which it is sometimes extended. The expulsion of some large polypi is in reality a laborious parturition; and the fundus uteri, if the pedicle remain unbroken, is inverted by the dragging of the tumor in its progress through the os externum, and by the compression of the abdominal muscles[4]. If this incomplete and gradual inversion be not always attended with fatal results,—if, on the contrary, the uterus be observed to rise again and regain its natural position, as soon as the excrescence has been spontaneously or artificially removed,—there are other cases in which the patient, exhausted by loss of blood, and even by

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[1] Levret, *l c.* art. 4.

[2] Hervez, *mémoire cité*, p. 27.

[3] See the annexed cases.

[4] Goulard, *Hist. de l'Ac. des Sc.* 1732, p. 42. Denman, *Medical comment.* vol. iv, p. 228, &c.

the efforts of expulsion and inevitable pain, has died before any relief could be administered[1], or in a short period, in spite of every remedy[2].

Such is the usual progress of polypus, as it gradually increases and yields to its own weight, and to the contraction of the organs which at first contained it. In some cases the result has been somewhat different, as in that recorded by Professor Roux, in which the polypus had passed through a rupture in the parietes of the vagina, and was situated between that canal and the rectum.

But, besides the danger resulting from these polypi, there are other considerations relative to the functions of the affected organs. Can the uterus, thus diseased, be impregnated? or, can pregnancy proceed to the full term? or, can the delivery take place without serious consequences?

There are numerous cases which prove that sterility is not an inevitable result of this disease: we[3], with others, have had occasion, however, to observe that pregnancy may not proceed to its usual period; and abortion, in this case, has been sometimes serious, and even fatal[4]. In other cases no serious result has occurred beyond that of common abortion. The same remarks may be made respecting pregnancy proceeding to its full time; delivery may take place naturally, though there are instances in which hæmorrhagy, or other consequences, have proved serious, and even fatal[5].

F. *Treatment.* 1, *Tearing away.* The spontaneous detachment of the polypus, which has sometimes been followed by a cure, would seem to indicate the operation of tearing it away at the pedicle: in some cases, however, the pedicle, being thick, resists and drags down the uterus, &c. This fact is

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[1] *Ancien Journal de méd.* t. lxiii. The tumor was fibro-sarcomatous; it was entirely detached after death by dragging it and breaking the pedicle.

[2] An instance of this is seen in a case in which the inverted uterus was reduced after the extirpation of the tumor adhering to its fundus. *Zwinger,* Ephém. nat. cur.

[3] See the annexed cases and those of Madame Boivin already published in the *Journal hebdomadaire,* t. iv, p. 204, &c. See also the 'mémoire' of Levret, art. 2.

[4] Deneux, *Ac. de méd.* 25 mai 1829.

[5] See *Annales de litt. méd. étr.* t. ii, p. 294.

sufficient to shew us what would be the consequences of attempting to tear away the polypus; viz.—inversion and laceration of the uterus, with frightful and even fatal sufferings: this operation, recommended by some writers, in imitation of that performed for polypus of the pituitary membrane, has only been practised in particular cases,—as, when the polypus was soft, of little volume, having a thin pedicle of little consistence. In such circumstances, the pedicle is twisted until it is easily broken, and the tumor is removed entire. The polypus is taken between the fingers or the forceps, and twisted upon its axis five or six times, or even more, until the facility with which this motion is effected indicates its complete detachment[1]. It was in this manner that Boudou succeeded, according to Levret, after having in vain attempted to apply the ligature to a tumor fixed at the fundus uteri; this tumor was of a considerable size (as large as a billiard ball), and it was with the fingers that he performed, with the greatest care, the torsion we have described. A polypus has sometimes been torn away, by direct or irregular traction, without torsion, with equal success[2]: a case has been witnessed in which a tumor was detached which had been mistaken for prolapsus uteri, and had resisted all attempts at reduction (*Lapeyronie* and *Levret*). We have quoted, in the first chapter of this section, the cases of Dr. Hervez, who undesignedly removed by a simple act of pulling, or *traction*, some vascular and cellular excrescences, of a different nature indeed from those of which we are now treating. At the end of this chapter there is also an instance of tearing away, without premeditation, a polypus of considerable consistence and of a fibrous nature.

2. *Excision.* The traction, which constituted the pre-

[1] To prevent the uterus being twisted instead of the pedicle, it has been advised to fix it above the insertion of the polypus with forceps adapted to this purpose; this implies much room and liberty for operation.

[2] It is even said that a tumor attached to the os uteri might be torn away, together with the entire uterus, unfollowed by death, as either an immediate or remoter consequence of this cruel operation. (See Herbiniaux, *Traité sur divers accouchements laborieux*, etc. t. ii, p. 20.)

ceding operation, is often a necessary preliminary to the present one; for, although the ligature may be conveyed higher than the fingers can reach, the scalpel may not; the traction, therefore, becomes necessary, in cases in which the pedicle is situated high up, and the instrument cannot reach it, on account of the volume of the tumor, and the consequent want of space in the vagina. Many practitioners have not scrupled, in such cases, to apply the forceps and drag the tumor through the os externum; sometimes they have been unable even thus to draw it outwards, notwithstanding its mobility, in consequence of its having exceeded in its dimensions the capacity of the outlet of the pelvis (*Hervez*). The simple polypus forceps, or those recommended by Levret for the extraction of moles, or the hooked forceps of Museux, may be sufficient in cases of less difficulty. The last are generally preferred by M. Dupuytren, who occasionally adds to the number of blades. When the pedicle of the tumor can be reached with the fingers, its volume ascertained, and its attachment perfectly distinguished from the uterus itself, the blunt-pointed bistoury, or the curved scissors, are introduced along the finger, and the polypus separated by one or more incisions. This operation, recommended by the ancients, alarmed practitioners in consequence of the fatal hæmorrhagy which ensued in the case recorded by Zacutus; but this has been hitherto a solitary case, notwithstanding the numerous instances in which this operation has been performed in the present day. Professor Dupuytren has been among the foremost, in this country, to remove the difficulties; and numerous facts are recorded in the journals of medicine, and particularly in the 'mémoire' of M. Hervez, already quoted: the dissertation of Simson is also especially directed to extol the benefits and safety of this operation, supported by the practice of Osiander, Siebold and Mayer. The readiness with which polypi could be tied, by the contrivances of Levret, Desault, and others, had contributed much to the abandonment of an operation which was erroneously considered so formidable: the impression was such, that it was proposed to combine the two methods, in order to secure the advantage of immediate separation, without its supposed

risk. Excision has been used after the ligature; but this was a long and painful operation, instead of a simple and easy one, and ought only to have been adopted in cases in which the pedicle evidently appeared to contain large vessels perceptible to the sight or touch (pulsations). In such cases, the ligature alone would perhaps be preferable, and the only advantage of subsequent excision would consist in diminishing a little more expeditiously the mechanical uneasiness occasioned by the tumor, and in removing the source of the putrid exhalations, arising from its decomposition.

3. *Ligature.* If the use of the ligature do not induce hæmorrhagy, it is nevertheless attended with other objections, which suggest, in many cases, the greater advantage of excision: the stricture upon the envelope of the polypus may drag the uterine fasciculi; it may even involve that part of the uterus to which the tumor is attached, if this be drawn inward, elongated, inverted, or if, as is usual with polypi in an early stage, the tumor be very near the paries of the uterus from which it springs, and be scarcely pediculated, or supported merely by a thick short neck. It is in such circumstances as these that M. Hervez judiciously advises that the ligature be carefully tightened, and every precaution taken that it may be loosened when required. As an instance of the necessity of this precaution we will quote from him the following case[1]:—A person, thirty years of age, had been affected with an enormous polypus for eighteen months, attended with abundant hæmorrhagy and leucorrhœa, but no uneasiness. The pelvis, which was small, was entirely filled by the tumor, which was also felt in the hypogastrium, while the body of the uterus was forced towards the umbilicus. It was not possible to draw the tumor beyond the os externum by the application of the forceps: a ligature, consisting of five waxed threads, was then fastened above it, and was not tightened till the third day afterwards; at the end of twenty-four hours, the supervention of pain, behind the pubes and in the iliac fossæ, compelled the surgeon to relax the ligature,

[1] See also Denman, vol. i, p. 94. Herbiniaux, t. ii, obs. 17.

which was alternately tightened for twenty-four, thirty, or forty-eight hours, and then relaxed ; this was done for several weeks. Thus, the ligature had already been drawn through the canula to the extent of two inches ; the tumor had come down considerably and begun to putrefy : the patient becoming daily weaker, the mass was drawn beyond the os externum with the forceps, and the pedicle cut, being an inch in thickness ; not a drop of blood flowed from it, and the organs recovered in a very short time.

The great advantage of the ligature consists, as we have just seen, in the facility of its application in cases where excision would be quite impossible : the small size and the great length of the instruments admit of their being introduced more readily, and to a greater depth than the bistoury or scissors. Besides, it is not necessary for this purpose, as it is in the case of excision, either that the tumor should be low down in the vagina, or capable of being dragged down either through, or near, the os externum ; it is sufficient that the diagnosis be correct, that the finger or the probe be passed completely round the tumor, and that the os uteri, if closed, be sufficiently opened to allow the passage of the instruments and room for the operation. The merit of these improvements, in an operation, previously applicable only to polypi situated close to the os externum, is due to Levret ; tumors situated near, or protruding beyond, the os externum, may be simply tied with a noose of thread, by the guidance of the finger ; if the pedicle be thick, it may be traversed with a needle, in order to tie each portion separately[1]. The instruments of Levret might convey the ligature as far as to the upper part of the vagina ; they consist of two tubes, either soldered together longitudinally, or fastened across each other so as to move like the ring-forceps.

Herbiniaux proposed to tie the pediculated tumor, even within the uterus ; he modified the canulæ of Levret, rendering them moveable or fixed upon each other ; with one of them, the noose was passed round the pedicle in order to tie

[1] Case of Vater, (*Disput. chir. Halleri,* t. iii, p. 623); and of Vacoussain (*Mém. de Levret, Ac. chir.* t. iii, p. 533.)

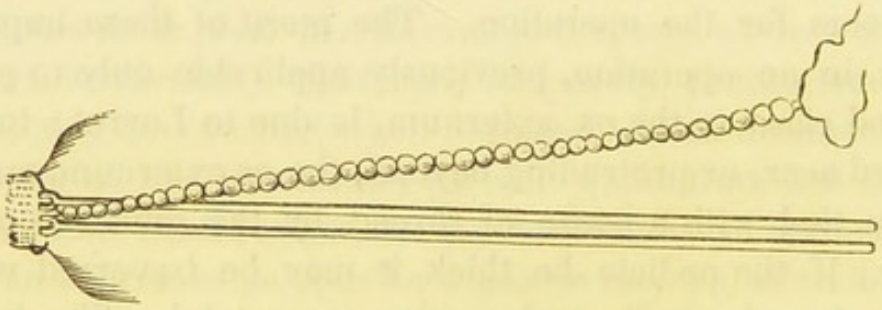
it; it was then withdrawn, the two ends of the thread having been previously passed into that which was to remain, to enable the operator to tighten the ligature.

The instruments of Desault, adapted to the same purpose, are more complete, and more easily used: but his manipulation is perhaps too complicated. Dr. Bouchet of Lyons has substituted a string of perforated ivory beads, which receive the two ends of the noose; these are afterwards rolled round, and attached to a small bar of ivory, situated externally. This instrument is ingenious, but not indispensable*.

M. Paul Dubois proposed a speculum provided with a double sheath, which seizes the polypus and applies the ligature to its pedicle; but this instrument could not be conveyed into the uterus, even when that organ had been brought downward by pressure upon the hypogastrium; and could, besides, only grasp excrescences of moderate dimensions†.

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* Carus has given a plate of this kind, which I have had copied in the annexed wood-cut, to which I subjoin the following description:—



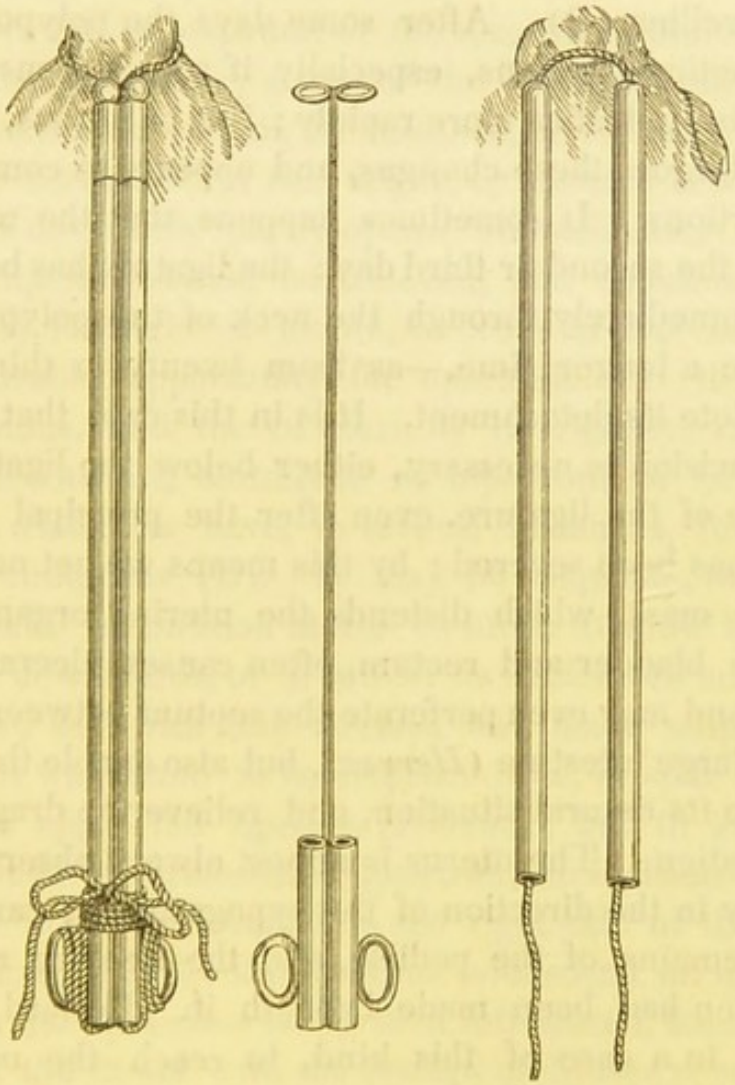
"This instrument consists of a string of beads and two conducting rods, made of whalebone, each of them nine inches in length; the highest and lowest bead have each of them two holes; the two ends of the ligature are passed through both the holes of the former, then through a single hole in all the intervening beads, and through the two holes of the latter. The noose projecting from the highest bead is, by means of the whalebone rods, pushed up to the back part of the root of the polypus, and then the two rods are carried round the root of the tumor, till the string of beads lies on the front of the polypus; the ends projecting from the two holes of the lower bead are then drawn, (this carries the string of beads upwards), and then tied."—*Lehrbuch der Gynäkologie*, vol. i. p. 327.—Tr.

† For the removal of polypus of the uterus, the ligature is usually preferred by the practitioners of this country. Its application is generally readily made by the instrument first contrived by Nissen (*De polypis Uteri et Vaginæ novoque*

It has often been observed that the polypus enlarges and swells after the ligature has been applied, and sometimes becomes the source of profuse sero-mucous or sanguineous discharges. This result, which is particularly observable when the pedicle is large, cannot be, as some maintain (*Simson*)

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ad eorum ligaturam Instrumento, Gotting. 1789). This instrument has been improved by various subsequent authors, but especially by the late Dr. Gooch; that gentleman's contrivance is represented in the subjoined wood-cut.



When the polypus is attached to the fundus uteri, that part is dragged down when the tumor descends. In applying the ligature, it will be necessary, therefore, to avoid the textures of the uterus itself; this will be done by making that application *low* upon the pedicle; the part, left, separates, as Dr. Gooch observed, like the portion of umbilical cord left attached to the umbilicus.

It is more difficult to apply the ligature to small polypi. This was evinced in a case published in the Lancet, for January 1833. I have succeeded in such cases by using the speculum of M. Récamier: the polypus is brought into view; it is steadied by means of a wire hook; and the ligature is then easily applied.—Tr.

merely mechanical; it is, no doubt, the consequence of some change in the circulation, and especially of the compression of veins, always larger and less resistent than the arteries. Pains in the abdomen are equally felt, even when the uterus is not actually involved in the ligature. We have seen a case in which the patient died of peritonitis in a very few days after the application of the ligature to a tumor, situated within the cervix uteri very near the orifice*: on examination, the point of insertion could hardly be detected; it presented merely a small swelling (D). After some days the polypus withers, and sometimes softens, especially if sarcomatous, in which case it also putrefies more rapidly; if it be fibrous, its surface only undergoes these changes, and appears to come away in fetid portions. It sometimes happens that the mass comes away on the second or third day; the ligature has been known to cut immediately through the neck of the polypus; but it may take a longer time,—as from twenty to thirty days,—to complete its detachment. It is in this case that the subsequent incision is necessary, either below the ligature, or at the place of the ligature, even after the principal part of the pedicle has been severed: by this means we not only remove a putrid mass, which distends the uterine organs, presses upon the bladder and rectum, often causes ulceration of the vagina, and may even perforate the septum between this canal and the large intestine (*Hervez*), but also enable the uterus to return to its natural situation, and relieve the draggings and inflammation. The uterus is almost always observed to rise suddenly in the direction of the hypogastrium, carrying with it the remains of the pedicle, and the ligature also, if the the section had been made beneath it. Beclard, finding it difficult, in a case of this kind, to reach the neck of the polypus, which had been previously tied, with the bistoury, divided the tumor vertically, with a view to detach the halves, severally, by excision[1]. In less serious cases, all that is ne-

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* M. Blandin has observed fatal uterine phlebitis, after the ligature of a polypus.—*Archives générales*, t. xix, p. 187. Doubtless, some injury was inflicted upon the uterus itself —Tr.

[1] *Ac. méd.*; 27 janvier 1825.

cessary is to enjoin cleanliness and the use of injections, either simple or containing the chlorides.

Among the means of cure, we have not adverted to the method of cauterising, recommended by the ancients, as it is of no use in reference to the excrescences of which we are treating; it would be available only in cases of growths arising from some non-cancerous ulceration, situated at the os uteri, perceptible to the eye, and accessible to remedies applied through the speculum.

We have hitherto spoken of the surgical treatment only; but there are preliminary stages of the disease, attended with serious uneasiness,—when, for instance, it is first suspected, or scarcely accessible to the finger, or situated at a distance from the os uteri, only partly open. In such cases the most urgent symptoms should be relieved, and examination renewed every fortnight or month, in order to take advantage of a favourable opportunity for operation. If the tumor be voluminous, and the os uteri, by its rigidity, retard its progress downward, ointments or injections of belladonna should be used; we have, in several instances, found this means advantageous (B). It may be requisite, in certain cases, to make an incision at the os uteri, to allow the polypus to pass downwards, or to render its neck more accessible. In one case, in which this attempt was made with a small lithotome, it was found to be impracticable, in spite of these incisions, to apply the ligature (*Hervez*); but, in an operation performed by Professor Dupuytren, an incision of some lines, made with the bistoury on the right side of the utero-vaginal orifice, allowed the polypus to descend an inch into the vagina; the speculum being then introduced, the operator laid hold of the tumor with the forceps of Museux, conveyed through the conductor, which was immediately withdrawn. The polypus was dragged beyond the os externum, and, just as the knife or the ligature was about to be applied to the pedicle, the tumor was torn away, and the patient was cured[1]*.

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[1] *Revue méd.* 1829, t. ii, p. 382.

* The use of the ergot, as exemplified in the case given, p. 168, note, is very valuable. It is unnoticed by the authors.—Tr.

CASES.

1. *Hæmorrhagy, owing to the presence of a small polypus; fallacious symptoms of disease of the heart.*

An unmarried woman, fifty-five years of age, and mother of two children, had for some time been subject to copious hæmorrhagy of the uterus, occasioning paleness, œdema, and debility. Irregularities of the pulse, and palpitations of the heart, led to the suspicion of disease of that organ*.

On post-mortem examination, however, there were only found a disease of the intestine, and a fibrous concretion, as large as the first joint of the thumb, adhering by a very small surface to the cavity of the uterus.

The tissue of the body of the uterus was of a reddish-brown colour, while the cervix, which was much elongated, presented a dark livid appearance.

2. *Polypus of the uterus, accompanied by scirrhus of the mamma.*

1. Madame U——, forty-nine years of age, underwent an operation for scirrhus of the mamma, in the month of May 1827: the catamenia had ceased for four years. In two months' time, a fresh tumor appeared; a sense of weight was felt in the pelvis, and an affection of the uterus was suspected.

By the help of the speculum, we found the os uteri dilated, and containing in its orifice a polypus as large as a full-grown cherry, and of a violet-red colour. By introducing

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* See two papers by Dr. Marshall Hall, in the Med. Chir. Trans. vol. xiii, p. 121, and vol. xvii, p.250, on the subject of the Effects of the Loss of Blood.—Tr.

the finger between this tumor and the parietes of the cervix, the pedicle was discovered to be inserted near the orifice. The small size and situation of the tumor explain the absence of hæmorrhagy.

2. A young woman, of full habit, who had undergone two operations for scirrhus of the mamma, died of menorrhagia, occasioned by the presence of a voluminous polypus in the cavity of the uterus. During the interval which occurred between the operations, she had been married a second time; and it is supposed that some organic affection existed without being perceived, as in the case recorded by Darney. The patient had borne no children by her former husband.

3. *Tumor of doubtful character, with swelling of the right leg**.

4. *Polypus, with swelling of the lower limbs, mistaken for scirrhus, tied and cured*†.

5. *Cases of polypus destroyed by gangrene, or detached by the rupture of the pedicle*†.

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* The details of this case are omitted, as the patient left the Maison de Santé before its nature was accurately ascertained. Madame Boivin makes the following remark, in which she is supported by Dr. John Clarke, Dr. Denman, Dr. Gooch, and others:

—— "In cases of doubt, we should not hesitate for a moment to recommend the ligature for the removal of a tumor situated in the vagina, if it occasioned serious inconveniences, as menorrhagia, strangury, constipation, tumefaction, inflammation of the lower extremity, or the entire loss of its motions. The present case is interesting in this last respect, inasmuch as it shews how easily mistakes are made respecting the sources of certain diseases More than twenty times have we seen the lower extremities attacked with pains and congestions, attributed to rheumatism, but, in reality, depending upon disease of the internal uterine organs."—Tr.

† The details of these cases are omitted, as containing nothing more than the mere facts announced above, which are fully explained in the body of the work.—Tr.

6. *Cases of successful and unsuccessful use of the ligature.*

1*.

2. A person, about forty years of age, who had been regular from her eleventh year, married in the sixteenth, delivered eight times at the full period, and once at the third month, had experienced violent emotions, and consequent temporary delirium, at the period of her last confinement (1817). A sense of uneasiness was felt in the uterine organs; three years however elapsed, when the catamenia, though regular, became too abundant; constipation ensued, and difficulty in passing the urine; icterus occurred at three different times; pain was felt in the loins and femora; the patient became exhausted by menorrhagia and diarrhœa: an enormous polypus was discovered in the pelvic cavity. M. Dubois applied the ligature, October 25, 1825. On the following day there was an abundant discharge of ichorous and fetid matter: the patient gradually fell into a sinking state, and died on the ninth of November. The remains of the tumor had continued in the vagina for seventeen days after the operation. It was difficult to detect the traces of its original organization.

Would it have been prudent to draw the tumor with the forceps beyond the os externum, and, after applying the ligature, to sever it? Had this mode of separation been possible, it would probably have saved the patient, who was too weak to bear the presence of an enormous sarcomatous tumor in a state of putrefaction†.

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* This was a case of polypus, rather doubtful as to its nature, on account of its softness, and of a discharge of pus from a part of its surface; it was first punctured, then tied and cured.—Tr.

† This would have been readily accomplished by means of scissors, the cutting edges of which, of a crescent form, are fixed at the ends of blades of the usual form, and sharp near their points. The polypus seized by these scissors is severed at once.—Tr.

3. This is a case of polypus which was easily tied; the operation was followed by pain in the hypogastrium; the patient took spirits and improper food, and nausea was superadded. The polypus separated on the fourteenth day; fever arose, with tympanitis; the patient died on the twenty-first, with all the symptoms of acute peritonitis.

7. *Cases of polypus, which did not prevent impregnation**.

8. *Several tumors in the vagina, leading to errors in the diagnosis.*

The subject of this case was forty-five years of age; the catamenia were irregular, with severe headaches; at the age of nineteen, the nose and cheeks were affected with *acne rosacea* in its extreme form; there was scorbutus of the gums, and loss of teeth; at thirty there was considerable obesity; at forty-three, extreme fever, with delirium, threatening to become mania; and, soon afterwards, menorrhagia and the exit of a polypus from the vagina, mistaken at first for the uterus, replaced, and fixed by means of a pessary.

A year afterwards, there was a reappearance of tumor at the os externum; the pessary was extracted, and the tumor was thought to be polypus, and was then tied; ten days afterwards, an attack of vomiting protruded another tumor, which it was difficult to distinguish from hernia; yet M. Dubois applied the ligature, determining to remove it if there was the slightest pain (28th January, 1830).

All went on well as usual; but on February 8th, the patient was exceedingly exhausted, constantly lying on her right side; and on the 12th, a third tumor appeared, with tenderness and fluctuation of the abdomen, and a solid moveable tumor a little below the umbilicus; the patient sank on the 17th.

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* It is obviously quite unnecessary to give these cases, as they contain only the facts given above.—Tr.

Examination. A very large tumor of a fibro-cellular texture, of which the authors give a diffuse description, occupied the hypogastric region, attached to the posterior part of the cervix uteri; a smaller one was attached to the anterior; the uterus was compressed between these two tumors, and the cervix elongated.

This case appears to us so interesting in reference to the diagnosis, that we cannot resist the desire of making some further reflections upon it:

The steatomatous fibrous tumors, which are formed in the pelvis, have been particularized by several anatomists, and that, in cases in which the presence of similar bodies was an obstacle to delivery; they have succeeded in extracting them by excision[1].

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[1] *See* Denman, vol. ii; Merriman, *Med. and Chirurg. Trans.* vol. iii, p. 47. See also Sandifort, *Obs. anat. path.* Pelletan relates several cases of fibrous, fatty tumors of the pelvis, extirpated by means of incision of the vagina. Burns met with one of these tumors in a case of pregnancy at the full term, which filled the pelvis, and which he extirpated, preferring this mode of facilitating delivery to that of the cæsarian section, practised in France in several similar cases. The following details are taken from Burns:

"A few hours after slight labour pains had come on, an incision was made on the left side of the orifice of the vagina, perinæum, and anus, through the skin, cellular substance, and transversalis perinæi. The levator ani being freely exposed, the tumor was then touched easily with the finger. A catheter was introduced into the urethra, and the tumor separated from its attachments to that part. It was next separated from the uterus, vagina, and rectum, partly by the scalpel, partly by the finger. I could then grasp it as a child's head, but it was quite fixed to the pelvis. An incision was made into it with the knife, as near the pelvis as possible; but, from the difficulty of acting safely with that instrument, the scissors, guided with the finger, were employed, when I came near the back part, instead of going quite through, I stopped when near the posterior surface, lest I should wound the rectum or a large vessel, and completed the operation with a spatula. The tumor was then removed, and its base or attachment to the bones dissected off as closely as possible. Little blood was lost. The pains immediately became strong, and before she was laid down in bed, they were very pressing. In four hours she was delivered of a still-born child, above the average size. Peritonæal inflammation, with considerable constitutional irritation succeeded; but, by the prompt and active use of the lancet and purgatives, the danger was soon over, and the recovery went on well. In the month of May the wound was healed. On examination per vaginam, the vagina was felt adhering, as it ought to do, to the pelvis, rectum, &c. The side of the pelvis was smooth;

These kinds of tumor are perhaps the same as that observed in the case given p. 145, excepting only in consistence; but the symptoms were different. The tumor, in the present case, though filling the whole pelvis, and having pushed the uterus and its appendages above its brim, was soft, very elastic, and presented no obstacle to the passage of the fæces or urine; it produced little or no influence upon the circulation of the blood in the vessels which traversed the pelvis, or upon the nerves contained in that osseous cavity. M. Dubois, who applied the ligature to the first tumor, probably suspected neither the existence nor the nature of the one remaining.

The case would have been different, had there been a voluminous tumor of solid consistence; the symptoms would then have suggested the proper means for ascertaining its real cause. But it was quite the reverse. The first tumor was, for a time, mistaken for prolapsus uteri, and the pessary applied; yet the tumor re-appeared; and the practitioner, at that time, considered it to be a case of polypus. After the application of the ligature, and the separation of this tumor, the patient was supposed to be recovered. Had the *speculum* been applied at that crisis, it might have led to the discovery of an unusual opening, occasioned by the ligature, and the colour of the tissues might have determined the nature of the disease. Examination per rectum would have ascertained the volume and dimensions of the tumor. But as these means were not employed, the appearance of the second tumor created, of course, much surprise, and involved the results of the proposed ligature in great uncertainty.

It was only after the tumor had projected the third time, that it was ascertained to have been produced, on

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and a person ignorant of the previous history of the case, or who did not see the external cicatrix, could not have discovered that any operation had been performed.

"The tumor adhered from the symphysis pubis round to the sacrum, being attached to the urethra, obturator muscle, and rectum; intimately adhering to the brim of the pelvis, and even overlapping it a little towards the acetabulum. It was hard, somewhat irregular, and scarcely moveable."—*The Principles of Midwifery.*

each occasion, by a morbid substance, forming a hernia into the vagina; for, even then, it was not understood that the mass was situated within the pelvis. The tumor which was observed above the pubes, formed by an agglomeration of fibrous tumors with the uterus, led to the belief that all the others proceeded from unnatural portions of the peritonæum or omentum. I was myself the first to be of this opinion. I had expressed a wish, on this occasion, that an incision should be made into the second tumor, in order that we might know how to proceed; but M. Dubois judiciously preferred the ligature, as we have described above. Had the tumor been maintained in its place, while the nature of the disease was known, and the mucous membrane of the vagina secured from atmospheric influence and the contact of the urine, the patient might, perhaps, have lived some weeks or days longer.

We are far from thinking that the patient died of disease of the uterine and pelvic organs, or in consequence of the attempt to remove the tumors; on the contrary, we are of opinion that chronic hepatitis, (which in fact occasioned the acne rosacea), produced a morbid effect upon the digestive organs, extending, perhaps, to the organs of generation[1]; that the muscular system was, in this case, reduced to a state of complete emaciation; that the unnatural productions formed behind the posterior paries of the vagina were calculated to increase the weakness of this canal, and consequently to facilitate the projection of bodies disposed to escape from the pelvis.

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[1] This idea respecting the influence (? Tr.) of the *acne rosacea* in certain cases, is not new. It has been very lately (? Tr.) brought forward again by Darwin, who speaks of a *gastric* and *hepatic acne*.

CHAPTER IV.

OF TUBEROUS CANCER, OR CANCEROUS TUMORS.

Preliminary observations. We have already remarked upon the vague and undefined application of the term *cancer*, especially when it is employed in practice, and not in pathological anatomy. In this latter point of view, it may be considered, as Professor Andral says, purely metaphorical, and, without having any determinate signification, as applicable "to all the diseases, whether of nutrition or secretion, which terminate in ulceration, spreading more and more, either upon the surface, or within the substance." We have already defined it in terms almost similar (p. 176). Whether there be, or be not, a deposit of new matter in the interstices of the original tissue of the organ, assuming this or that appearance; whether the altered structure be enclosed, or not, in a cyst, our definition is still applicable in cases of real cancer; by which we mean a disease occasioning, in the first place, the *local* disorders alluded to above, then invariably communicating them to other organs, or, at least, giving origin to a *general* infection, termed the *cancerous diathesis*. This is, in fact, the inevitable conclusion, on considering all those ulcerations, which have been so variously named, either because different writers have viewed the same objects differently, or because they have applied their terms to structures essentially distinct. There is a great want of agreement in pathological science respecting the number and character of these structures; and, if the scirrhous and cerebriform states are those which appear to be the most correctly determined, it is not quite clear that we can always class, under one or the other of these heads, the morbid structures termed sarcomatous, medullary, pancreatic, hæmatodes, melanotic, &c. We have no intention of entering at present into these discussions, which are of very little value in relation to practice;

and, whilst we admit that there is a great difference between the scirrhous and encephaloïd structures, and even agree that there may be peculiar circumstances characterising the progress and diagnosis of each, yet, as we look upon these circumstances only as degrees in the rapidity of the extension, destruction, and consistence of the tumors, &c. we shall not take them as the groundwork of our divisions. On the contrary, as the diagnosis and symptoms, deduced from the daily observation of facts, furnish other divisions of essential advantage, we ought rather to occupy ourselves with the latter. It is of little moment whether the ulcerous cancer be originally ulcerous, or the second degree of scirrhous or encephalosis: it has its peculiar signs, prognosis, and treatment; and these are the same, whether the cancer be fungous or hæmatode. Nevertheless, to avoid perplexity, and to obviate any important omission, we will substitute, for scirrhous, the term *tuberous cancer*, meaning by it, cancerous tumor or congestion.

We shall accordingly designate by the term tuberous cancer every partial or general tumefaction of the uterus, arising from some morbid change of texture, incapable of resolution, and inevitably extending and becoming ulcerated, unless the diseased tissues be removed by art.

We now proceed briefly to offer some conjectures upon the nature, origin, and proximate cause of cancer, and of tuberous cancer in particular.

Some writers, misled by the metaphorical expressions of older authors, seem to have considered this disease as being a parasitic animal; some of them attributed its origin to some animalcule, because, in a certain number of cases, hydatids were discovered in the cancerous substance. But it is enough to say that co-existence is not identity, and that accidental causality does not imply necessary and invariable connection. With respect to the former of these two opinions, it has been so modified that cancer has been plausibly defined as a *new organ*, the dreadful functions of which consist in self-augmentation, at the expense of the body in which it has its seat. There is no doubt, that in very many cases the tissue, presented in cancer, is a new formation; yet it is

not formed of substances foreign to the organ affected*. The total or partial disappearance of the diseased organ proves that it has served as a seat for the morbid production, whatever may be its volume or nature; and the circumscription of a tumor by a cyst, evidently of casual formation, furnishes no more proof against this opinion than the admitted appearance of vessels formed in the very centre of the tumor. If it were otherwise, why should the cancer, in ulcerating, destroy the original organ? Why should it extend itself from the centre to the circumference? We have clearly detected, in cancers of the encephaloïd, and almost hæmatode, kind, those numerous varicous vessels, as tortuous as those of the decidua, or those of all false membranes; and we have also clearly seen that the centres of recent and voluminous scirrhi, and encephaloses little softened, were frequently destitute of vessels, or nearly so. Those which had previously existed in the diseased part, have, in this last case, been as it were effaced in the morbid substance; in the former case, some new ones had been formed.

What is the nature of this substance which appears to replace the natural tissues, or changes their nature at least, by combining with them? This is a question also variously determined. Is scirrhus any thing but hypertrophy of the cellular tissue? This opinion of hypertrophy being the real and only cause of scirrhus in most cases, given by Professor Andral, appears to us irreconcileable with the facts†. Why should this hypertrophy have such a tendency to spread and

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* Dr. Carswell states that the heterologous deposit, forming the different varieties of carcinoma, takes place either as a production of nutrition or of secretion; in the former case, it is deposited as the nutritive element of the blood, enters into the molecular structure, and assumes the arrangement of the tissue or organ into which it is thus introduced; in the other case, it appears on a free surface, as on serous surfaces. *Pathological Anatomy*, 2d Fascicul.—Tr.

† The deposition of the carcinomatous matter in the molecular structure of organs, its effusion on the free surface of serous membranes, and its separation from the blood contained in its proper vessels, clearly show that it is not, as described by Andral, hypertrophy of the cellular tissue; inasmuch as this disease occurs frequently in situations in which this tissue is either small in quantity or does not exist. *Path. Anatomy*, by Dr. Carswell; 3d Fascicul.—Tr.

to ulcerate? In what respect does the scirrhous tissue differ from those fibrous cicatrices which Delpech calls *inodules*, and which might certainly proceed to thicken and retract to a certain degree, though not to invade distant organs, and infect the whole system? It may, no doubt, be alleged that this scirrhous hypertrophy is accompanied by a modification *sui generis;* but this would be to return with an additional term to the mere enunciation of the fact, and to involve the matter in its original vagueness and uncertainty. It cannot be denied that the swelling and hardening of the tissues, brought on by chronic inflammation, very often resemble scirrhus, and prove the source of this disease and pursue its stages. But is there nothing but hypertrophy in these indurations? Are we to give this name to the infiltration of albuminous or gelatinous substances, more or less concreted, and combined with the tissue of the diseased organ? We think not. There already exists, in the case of simple induration, a kind of change, owing to the deposit of principles, foreign to the natural tissue of the organ chronically inflamed; this deposit, however, is capable of being separated by absorption, and removed from the original and natural fibre by which it had been surrounded; it is, perhaps, to a further degree of combination,—to a thorough penetration of this fibre by the morbid matter, that the production of scirrhus, like that of tubercle, should be attributed: the change is then complete and resolution impossible[1]. As respects the uterus in particular, it is very evident that scirrhus is by no means hypertrophy; most certainly, the tissue of the uterus, simply hypertrophied, or slightly changed, in tumors called fibrous, is not scirrhous, even if the consistence were found in both cases to be fibro-cartilaginous; the general aspect and structure are very unlike: scirrhus is, it is said,

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[1] *Lympha sanguinis, morbosâ vasorum actione immutatâ, vel in his ipsis, aut in cellulosa vicina intercepta et stagnans, in polyposam interdùm ac callosam duritiem degenerat, cum ambientium membranarum canaliumque superficie concrescit, cavitates opplet, infarcit, humorumque in illis ac in vicinis partibus circulationem delet omnem, aut magnâ ex parte remoratur.* Frank, *De cur. inflamm.* § 129.

lardaceous, of a white or greyish colour, homogeneous, like a raw potatoe, or scarcely traversed by filaments and adhesive layers; these layers, however, are not at all distinct, or composed of fibres like muscle, or those, almost aponeurotic, of fibrous tumors; the scirrhous tissue appears, on the contrary, to be sometimes even granulated, constituting what the English physicians call pancreatic sarcoma.

With respect to the encephaloïd matter, the appearance and consistence of which is sufficiently indicated by the name, it has been thought that a great discovery was made: as it is in this matter that the formation of new vessels is most evident, it may have been thought that it really consisted in an interstitial deposit of matter, at first fluid, soon becoming concrete, organized, animated, gifted with a life of its own, and appropriating new materials of increase, &c. The fibrin of the blood has been found, in several post-mortem examinations, to be coagulated in the vessels themselves,—as in the inferior vena cava,—and to present appearances much resembling those of cerebriform cancer; other portions of this disease being found in the same subjects *(Velpeau*)*; we ourselves saw and described, some years ago, a preparation which was very interesting in this point of view, though taken from a bird[1]. On one side was found, in a continuous mass, some coagulated fibrin, similar to that which is contained in aneurysms of long continuance; at some distance it was homogeneous, and resembled the tissue of the liver, and contained some large vessels, like those which are seen in false membranes: these vessels, filled with blood, presented, in some points, the appearance of the erectile tissue; in others, the cerebriform matter was also clearly traced, and the whole was beset with hydatids. To these facts may be added those of M. Bouillaud[2] and M. Andral[3], confirmative of the obser-

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* The carcinomatous matter is not found in the arteries, but in the capillary and venous system. *Path. Anatomy*, by Dr. Carswell; 2d Fascicul.—Tr.

[1] Dugès, *De l'influence des Sciences médicales et accessoires sur les progrès de la Chirurgie moderne*, p. 40.

[2] *Dict. de Médecine et de Chirurgie pratiques*, art. Cancer, t. iv.

[3] *Anat. pathologique*. Paris, 1829, t. i, p. 381, and t. ii, p. 334.

vations of Hunter and Home upon the formation of vessels in sanguineous coagula, either extravasated[1], or contained in the heart and the large vessels; and this theory will thus become more probable, and furnish an explanation of the frequent occurrence of cancer of the uterus, an organ so often penetrated with blood, and traversed by large and numerous vessels, necessarily containing coagula, produced in them at certain periods,—as, after delivery. We would observe, by way of caution, however, that scirrhous affections of the uterus are more common than the cerebriform; and that its cervix, less vascular than its fundus, is the part most frequently attacked by cancer*. Perhaps its close texture renders it more liable to chronic inflammation, and imparts a peculiarity to its induration, from which it passes, by a transition almost insensible, into the scirrhous state.

Causes of tuberous cancer. The uterus, naturally liable to periodical congestions, to sudden and considerable changes in nutrition and vitality, must, in consequence, be much more exposed than many other organs to these diseases of texture. Of seven hundred and seven cases of cancer observed in the principal organs of the body, those of the uterus constitute more than half, amounting, in fact, to four hundred and nine. The organs of generation are the principal seat, in both sexes, of this alarming disease; in the female, it usually happens, most frequently, in the uterus, then in the ovarium, and then in the mamma.

The development of cancer in the uterus is found to be analogous, in frequency of occurrence, with the degree of activity of that organ: thus, the disease appears invariably after the period of puberty, and especially towards the term when its functions are about to cease, seldom shewing itself

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[1] *Anat. Pathologique*, t. ii, p. 604.

* Sir C. Clarke has attributed the greater frequency of cancer in the neck of the uterus to its more glandular structure; vol. i, p. 208. Dr. F. J. Beyerlé considers this circumstance to be dependent on the more frequent exposure of this part of the uterus to injury. *Ueber den Krebs der Gebærmutter*, p. 29. Wenzel agrees with Dr. Beyerlé, *Ueber die krankheiten des uterus*, p. 56.—Tr.

when the uterus has become inactive from old age. The periods of its most frequent occurrence are, first, from the fortieth to the fiftieth year, then from the twentieth to the thirtieth, and, lastly, from the thirtieth to the fortieth; and it has been less frequently observed in early youth than at the periods quoted, though much more so than after the fortieth year[1]. Persons who are pale, thin, nervous, and phlegmatic, labouring under tuberculous disease, subject to periodical depression, and of solitary, inactive habits, are more subject than others to cancer of the uterus. Though found to occur in the unmarried, it is of much rarer occurrence in such persons than fibrous diseases, which it resembles in its great induration and slow progress. It is a fact, that local violence tends to produce this disease. It has not been observed that repeated labours constitute a particularly frequent cause, though the contrary remark has been made in the case of abortions, irregularity of the catamenia, and repeated menorrhagia, either because these affections are the cause, or the effect, of congestion of the uterus, or of scirrhus of this organ*. It is very evident, in fact, that whatever tends to maintain the uterus in a state of such congestion or of chronic inflammation, may at length give rise to cancer; syphilis has been known to lead to it indi-

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[1] In the four hundred and nine cases of cancer of the uterus, we have made the following enumeration:

Under twenty years of age - -	12
From twenty to thirty - - -	83
From thirty to forty - - - -	102
From forty to forty-five - - -	106
From forty-five to fifty - - -	95
From fifty to sixty - - - -	7
From sixty to seventy-one - - -	4
Total -	409

* In all cases where frequent abortion or premature labour takes place, the uterus should be examined: it will very frequently be found to be diseased.

This may be expected to be the case, more especially if there be frequent, very slight discharges of blood during the early months of pregnancy. In two cases of this kind, which recently occurred to me, I was induced to examine the uterus in consequence of the discharge continuing some weeks after the abortion had taken

rectly; but we are speaking now rather of the ulcerated than of the tuberous form*.

Cancer very often appears without any assignable cause. MM. Bayle and Cayol[1] observe:— "we have known persons of the greatest profligacy to die of cancer of the uterus,—unmarried women, in cases in which the hymen was perfect,—married women who have borne many children, and others who had never been pregnant." This disease is sometimes the result of a diathesis already manifested by scirrhus of

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place; in both cases I found disease. In the first, premature labour took place three times with dead children: the other case resembled it in many points; but in this the ovum was expelled four times at the fourth month. The disease was carcinomatous, and ultimately destroyed the patients.—Tr.

* It is extremely important to distinguish cancer of the uterus from a syphilitic affection of that organ. Mr. Pearson observes, that "women who are exposed to the contagion of venereal matter, have sometimes the uterus the first and only part contaminated. When this is the case, the primary symptoms produced by the virus, are, a sense of heat, and darting pungent pains about the uterus; but these are not always accompanied with a puriform discharge, nor is the fluor albus necessarily increased by this affection. The patient generally discovers the nature of her complaint by having communicated the disease, she herself being free from any external characters of venereal taint; they can only acquire a knowledge of their own condition from the injury they do to the other sex. They also complain of suffering very acute pain at the superior part of the vagina *in congressu*; this is likewise frequently attended with the discharge of a fluid, tinged with blood; and sometimes pure blood is evacuated. When men are infected by women in this peculiar condition, a chancre is commonly the first symptom of this disease.

"When the uterus is examined, it seems to be rather enlarged, and excites the sensation of preternatural heat; considerable uneasiness will be produced, even by gentle pressure; and small ulcers may be distinctly perceived about the os uteri. The disease may continue in this state during many months, without producing any secondary symptoms of the lues; but the health of the patient gradually declines, and she sometimes becomes hectical.

"In every case of this kind that I have yet met with, the uterus retained its natural pendulous state: there was no eversion, nor remarkable dilatation of the os uteri; the ulcers were smooth and even; there were no fungi, nor any unnatural alteration in the structure of the vagina; the pain attending this form of the disease was neither constant nor acute. The venereal ulcers of the uterus yield to the same mode of treatment that is generally employed for the lues venerea." Pearson, *Principles of Surgery*, p. 120.

Mr. Travers speaks of a case in which a large ulcer on the cervix uteri, considered cancerous, healed, and the woman recovered speedily under a course of mercury, the supposed cancer being a venereal ulcer. *Med. Chir. Trans.* vol. xvi; p. 349.—Tr.

[1] *Dictionnaire des Sciences médicales*, art. Cancer.

the mamma; sometimes, without affording any distinct signs, it appears to proceed from hereditary constitution.

Course and symptoms. The diagnosis is very indistinct in the beginning of the disease, and the first degrees frequently pass away without the consciousness even of the patient. The earliest symptoms consist in derangements and irregular returns of the catamenia, the flow being temporarily increased in quantity; a leucorrhœal discharge of a white or yellowish appearance, either permanent or intermitting previously to, or immediately after, the catamenial period, assuming suddenly a red colour, in case of any local excitation; a sense of weight at the hypogastrium, and of pressure upon the anus or neck of the bladder; a slight pain upon the discharge of the fæces, which, with that of the urine, is effected with difficulty; an uneasy tenderness, sometimes slight lancinating pains, especially at the period of the catamenia, and on the occasion of physical or moral efforts; lastly, draggings in the loins or groins, hysteria, hæmorrhoïds, alternate swelling and collapse of the abdomen, especially near the hypogastrium, and unattended with known causes: these are the symptoms of incipient scirrhus, presenting little distinctness, even when combined with examination. All that can be ascertained by the finger, indeed, is that there are distension, hardness, and tenderness, as in chronic metritis: we can hardly consider the following as distinct signs—viz. that, in scirrhus, the congestion generally attacks the cervix uteri and is more circumscribed; that it presents a less degree of tenderness, a consistence, as well as volume, more considerable, and less variable; lastly, that the cervix is of a less regular form than that which it presents when hardened by chronic inflammation*. (See the foll. sect. chap. iv.)

* Sir Charles Clarke speaks of two varieties of this disease: in the first there is a "firm tumor, of a rounded form, springing from the surface of the cervix uteri, or imbedded in it, whilst the other parts of the uterus are perfectly healthy, except, that its parietes are thickened as the disease advances, and its cavity seems larger than that of a healthy uterus." In the second, "instead of any distinct tumor, the whole of the cervix uteri becomes larger and harder; possessing the characters, when cut into, of a regular carcinomatous tumor." *Diseases of Females*, vol. i, p. 211.—Tr.

These uncertainties in the diagnosis are not presented in the second degree, when the cancer is confirmed. The symptoms then consist in an increase of pain, hæmorrhagy and softness; a more rapid increase, further extension of the disease, quicker progress of ulceration and cancerous diathesis will be observed in cases of encephalosis; the other symptoms will be common to this and to scirrhus. The cervix, and sometimes the body of the uterus, seldom the labia only of the os uteri, appear, on examination, swollen, hard, knotty, lobed, more or less of a red colour, yet smooth and without erosions, tender upon the slightest pressure, covered with sanguineous mucus, and nearly pure blood, if the examination be performed too roughly: and sometimes congestion of the ovaria is discovered, on examination, even at this early period, in thin persons. We have witnessed several cases in which the uterus itself was of sufficient volume to admit of being felt and circumscribed in the hypogastrium. Examination per rectum aids the practitioner in discovering the situation and extent of the tumors; I say tumors, for, although there is frequently only one distinctly circumscribed, there are usually several; or, if the whole organ be attacked, the rounded unevennesses of its surface give the idea of a cluster. The tenderness of these tumors would be almost the only character which might distinguish them from the fibrous, unless the physical signs, the symptoms, and the account of the patient were also taken into consideration. The pain then becomes permanent, sometimes dull, sometimes gnawing, though always attended with sharp, sudden lancinations, like the effect of a needle, lancet, knife, or red-hot iron, &c. according to the intensity of these darting pains, or the constitution of the patient. The hæmorrhagies then become more frequent, and sometimes habitual. This hæmorrhagy is a most important symptom, when observed in a person who has exceeded the period of the catamenia; and some cases, which we have seen, prove the necessity of rigorously examining into those pretended renewals of the catamenia spoken of by physiologists. This apparent return of youth is, in general, only a sign of some important disease in the uterus or its appendages; it has often been

observed to be followed by a rapid wasting and sudden death. There are also a great many persons who are continually subject to augmentations and diminutions—sometimes even periodical,—of abundant aqueous discharges, inodorous or of a faint smell; slightly charged with albumen, as is seen by the slight stiffness, the somewhat greyish colour, which it imparts to the linen on drying, and of a slight rose colour at the period of the catamenia. This serous and profuse discharge appears to us to announce, if not the existence, at least the commencement or approach of ulceration, of fungous growths constituting the third degree or period of this disease.

It is generally found that withering, marasmus, and the signs of cancerous diathesis co-exist with ulceration. There are, indeed, cases of persons affected, for many years, with enormous scirrhus, and preserving, nevertheless, a certain fulness of habit, and even colour, notwithstanding the violence of the pains. But it also happens, not unfrequently, that they become gradually exhausted and debilitated through want of rest, occasioned by terrible pains[1] in the hyogastrium and sacral regions, or in the loins, nates, iliac fossæ, and, more frequently, all along the femora, either in the direction of the sciatic nerve, or in the region of the crural nerve,—pains seldom continual, but returning in paroxysms, once, twice, or three times in a day, and lasting several hours at each time. The patient gradually sinks under deranged digestion, loss of appetite, flatulence, vomitings, and fever. Paleness and debility shew themselves before emaciation; and we have seen cases, in which persons of very full habit have acquired a yellowish, waxy complexion, and were unable to walk, without panting and fatigue, from one room to another. Sometimes the pains in the lower extremities issue in paralysis, or, at least, in insensibility and numbness, usually accompanied with considerable œdema; besides, the tumor, frequently of great volume, detains the urine in the ureters, and even in the kidneys, and prevents the passage of the fæces.

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[1] These are sometimes so acute, according to MM. Bayle and Cayol, that persons have been known to die of convulsions or delirium occasioned by cerebral fever.

Diagnosis. It is only from want of attentive examination, that cancer has been supposed to exist in cases of fetid leucorrhœa; these would, at any rate, rather belong to the ulcerated than to the tuberous form. Nor will this latter be confounded with polypus, except through similar inattention or ignorance; for either the polypus is still contained within the uterus, and the hæmorrhagies lead to a suspicion of its presence, and the case is unattended with any of the peculiar symptoms of cancer; or, the polypus will be accessible to the finger, and its existence ascertained by its distinctness from the os uteri, its pediculated form, its insensibility, &c. It is evident that this would not be applicable to polypi of doubtful nature, or those termed '*vivaces*,' &c.

Certain cases of fibrous disease might lead to the same uncertainty, as we have elsewhere observed; but as we have just hinted, in treating of the symptoms, there are generally means even of ascertaining the existence of fibrous bodies in the substance of the cervix uteri (the rounded unlobulated form, hardness, insensibility, and considerable volume). As for prolapsus, or elongation of the cervix uteri, their signs are very different from those of scirrhus; and there can be no doubt upon the subject, except when the uterus is inflamed, swelled, and perhaps diseased, coincidently with its prolapsus. It ought also to be remembered that the dimensions of the os uteri vary considerably in the natural state, in different persons; and that labour, especially when repeated several times, leaves rounded irregularities and fissures which ought not to be hastily concluded to be morbid.

As an instance of uncertainty in diagnosis, we subjoin the following case, from Madame Lachapelle. In communicating a case to M. Chaussier, she says, " The tumor, which reached the umbilicus, was easily felt per vaginam; it was very voluminous, and presented, at the lower part and towards its centre, a transverse depression, which might have been the os uteri, but was much narrower than is usual after repeated parturition. Besides, I felt, in front of the tumor, a semi-circular fold, covering it in part and merging into its sides. Was this fold merely owing to the vagina, or was it the anterior labium

of the orifice, distended throughout by an enormous polypus? and was this labium also distended by congestion of the posterior paries of the cervix uteri and of the posterior labium of its orifice? I could not decide upon either of these points; the leucorrhœa and abundant catamenia seemed to throw no light upon the subject."

Prognosis. The os uteri and the tubular orifices may be closed; this closure may be the result of adhesion, which, in some cases, has even entirely obliterated the cavity of the viscus; or, of tumefaction of the uterine parietes. It is not, however, necessarily complete, or permanent. Conception might, therefore, take place and the ovum be retained. Hence the co-existence of pregnancy with cancerous tumor of the cervix uteri has been frequently observed. This tumor, like the fibrous, sometimes considerable, may indeed impede the enlargement of the uterus, and occasion abortion or death: this may be seen in the case of Dr. Troussel, already quoted (p. 183), the tumor having been not only fibrous, but carcinomatous. Pregnancy has proceeded nearer to its full term, notwithstanding the existence of an enormous cancer at the cervix uteri, and of a confirmed cancerous cachexia: a somewhat premature labour took place, doubtless in consequence of the death of the fœtus; the dilatation of the os uteri was stopped, after having proceeded to a slight extent; lateral incisions were necessary; a putrid fœtus was extracted by turning[1]. We have quoted, elsewhere, from Madame Lachapelle[2], several cases of labour at the full period (only two cases premature), which occurred, notwithstanding scirrhus of the cervix uteri,—in four instances spontaneously and in consequence of fissures existing between the lobes of the scirrhus,—in three by the use of the forceps, preceded,

[1] Zeppenfeld, *Diss. System. casum carcinomatis uteri cum graviditate conjuncti*, Berol, 1828. In the dissertation of Siebold (*De Scirrho et Carcinomate uteri, &c.*), a case occurs of labour accomplished also by turning, in a patient in whom cancer had advanced to the body of the uterus before conception. The infant was prematurely born, and died shortly afterwards; the mother survived this painful labour.

[2] *Prat. des Accouchements*, t. iii, p. 368 and 371.

or not, by incisions. In four of these seven cases, the mother and the infant survived; in the fifth, both died, the infant during delivery, the mother afterwards: of the remaining two, one was immediately fatal to the fœtus; the other, to the mother. A case given by MM. Bayle and Cayol presents an instance of labour, spontaneous and at the full term, in which the infant was putrid, and had, no doubt, perished from the hæmorrhagies which took place in the last months of pregnancy.

Treatment. During such labours, we recommend the application of belladonna, where some portions of the cervix remain healthy; short and numerous incisions, when the whole is diseased; afterwards, the use of the forceps, and turning, if the natural efforts are insufficient. Lastly, in cases in which enormous scirrhi, fungous growths, or considerable encephaloses are found to fill the vagina or pelvis, the cæsarian section will be the only resource, to save the life of the child and prolong that of the mother. We will just observe that the possibility of such enormous increase in the cancer, and the obstacles to delivery, which result from it, cannot be denied, although this is contradicted by Bayle and Cayol; but we will add, in reference to the fungous growths, that their numbers, and apparent volume, together with the repletion of the vagina which they occasion, do not in general prevent the natural course of labour, though it may become more difficult, in consequence, more protracted and severe, as seen in the case of Zeppenfeld.

We shall now proceed to arrange the indications under several divisions; we shall first speak of the means of prevention and palliative treatment, and then go on to the curative.

Some maintain that they have cured real scirrhi by the use of antiphlogistics and derivatives; others deny the possibility of such a cure. Perhaps it would have been better to say that scirrhus had been prevented rather than cured. We do not doubt, indeed, that, in the greater number of cases, cancer is preceded by chronic inflammation, which, of course, admits of a complete cure. To cure inflammation would

therefore often be to prevent cancer; and it is thus that leeches and other local remedies have been found beneficial: upon this subject we refer our readers to the treatment of chronic metritis. The same remark may be made relative to syphilitic congestions or ulcerations; these may bring on cancer; if cured, however, by specific remedies, this disease would be prevented, though the same remedies would be unavailable, were it once confirmed. J. L. Petit and Cullerier have succeeded with the anti-syphilitic treatment in cases of threatening of cancer. Mercurial remedies, sarsaparilla and preparations of gold, especially where scrofula is suspected, may be prescribed for chronic congestion, even when wholly uncomplicated with syphilis;—an additional motive for having recourse to them in doubtful cases.

Whenever this disease is supposed to be hereditary, the greatest care should be taken effectually to remove the least appearance of metritis: even in this case, its occurrence may be prevented, or at least its returns, when once it has been removed. A mild regimen, milk diet, white meats, rest, the supine posture, may help to arrest the disease, by preventing returns of inflammation; an escharotic, by keeping up the system to a certain degree, regulating sympathetically the nervous energy, and suppressing the organic effects attendant on discharges of which the uterus was, as it were, the centre, or perhaps by being vicarious of them, may produce a similar effect*. In the returns of the disease, local or general bloodletting, emollient baths and hip baths, injections, ointments, liquid cataplasms, (*Guillon, Lisfranc*), introduced and retained in the vagina, are often found to restore the uterus to a state as nearly healthy as possible. Narcotic applications are frequently required by the severity of the pains. To relieve these, hemlock[1], henbane, belladonna, nightshade, opium

* I have here given the author's meaning as simply as possible.—Tr.

[1] M. Récamier supposes, however, that he has cured real cancers by the use of hemlock: he sometimes substituted the extract of aconitum, which we have known to be useful as a palliative by other practitioners. M. Récamier generally conjoins the *cura famis*, viz. abstinence, or reduction of the usual quantity of food to a third part. The extract of hemlock is obtained from the plant previously boiled over the steam of water mixed with acetic acid or alcohol, and then carefully eva-

and their preparations are used in the form of liniments, ointments, lotions, injections, baths, and cataplasms. These narcotics will often have to be taken internally, in successively increased doses; one of the most efficacious is the acetate of morphine, prescribed in doses containing a fourth, a third, or half of a grain each night; pills of conium are also proper. To these palliatives, cleanliness and the use of the chlorides should be further added. It is sometimes proper to use astringents under the same forms (diluted solution of acetate of lead, of sulphate of alum or zinc, decoction of bistorte and of oak bark, &c.), in order to check the serous and sanguineous discharges. The urine should be evacuated by the catheter, and the fæces by enemata. This last precaution facilitates the application of the narcotics to the part affected, without producing the irritation which is sometimes caused by injections per vaginam.

Curative treatment. It has been proposed to cure scirrhus by inducing a kind of atrophy by means of compression. However advantageous this remedy may be in cancer of exterior organs, as the mammæ, it has not been found applicable to an organ situated so deeply as the uterus, the anatomical position, not to mention the structure and vital properties, of which, preclude the idea of its practicability.

There remain three methods by which this ravaging disease may be destroyed or removed: cauterization; partial, and total, excision.

A. Cauterization of scirrhus or encephalosis, even when confined to the cervix uteri, will be indicated only when the tumors are of little volume, unless it be determined to remove it, first by excision, and to cauterize any remaining portion. Cauterization has been, accordingly, more particularly proposed in the first or second degrees of ulcerous cancer. It is true that scirrhi of little thickness may be thus destroyed, layer after layer; but besides the immediate dan-

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porated. He begins by prescribing a grain daily, and increases the dose gradually to twenty-four grains in two doses. Stork is known to have boasted of the wonderful effects of this medicine. Many other practitioners, and ourselves among them, have had no such occasion for boasting.

ger of this repeated process, the violent inflammation of the uterus and peritonæum, which might ensue, it is well known how rapidly carcinoma increases when injudiciously irritated by caustics; and that, not merely in the part itself, but throughout the whole uterus and neighbouring organs. Hence, cauterization is less to be recommended even than excision, when it is supposed that the disease has reached the body of the uterus, or that the ovaria are affected, or that the lymphatic glands of the pelvis and loins are congested and diseased. MM. Larrey and Lisfranc have been successful (doubtless by means of excision), notwithstanding this complication, which was probably only apparent*.

Every precaution must be taken to prevent these applications from extending their contact or influence beyond the part diseased[1]. This is particularly necessary in the employment of fluid substances applied with a pencil, such as the nitrate of mercury, or muriate of antimony; or of solid substances, which are very soluble, as caustic potassa. We have lately heard of a melancholy case, in which this latter substance destroyed the recto-vaginal septum. The nitrate of silver occasions less inconvenience, but is more superficial in its action, and its application requires to be more frequently repeated.

B. Partial removal, that is, extirpation of the cervix, or, more properly, of the part projecting into the vagina, when the disease has reached no further, may be effected in different ways. We will premise that it is by no means so available a method of treatment as might be supposed from the numerous cases published in the journals of medicine. The first objection which may be raised against it is its inefficacy,—the frequent return or increase of the disease; for we have observed, in numerous cases, that this affection is not often so limited in extent as may be imagined when we are told of scirrhus of the cervix uteri. The body of the uterus, and

* This is given literally!—Tr.

[1] We shall state a case, in the progress of this work, proving that, in spite of every precaution, this irritation may be carried so far as to involve results, leading to suspicion of poisoning by the absorption of the caustic (acid nitrate of mercury).

the ovaria, frequently contain the germ of carcinoma, either originally, or consecutively, though there be, at an early stage, no tumefaction to excite suspicion. Even when the cervix only is diseased, we can seldom be sure, in such an operation, that some portion has not been left, which will become the seat of future cancer. It is, moreover, evident that the diathesis is often the original cause, existing without external manifestations, inasmuch as it reproduces the disease in a totally different part from that first affected; or, perhaps, in the same part, even after the most careful extirpation of all the diseased tissue. To be more certain of operating in time, it will be necessary to do so in doubtful cases, and then we shall often remove mere indurations unconnected with real disease: it might indeed happen that one or more persons would be thus *preserved* from scirrhus; but in how many other cases would the operation be not only useless, but unsuitable, as in chronic inflammation? Besides, it is both painful, as we shall presently see, and dangerous, as the following facts will prove. M. Velpeau reckons that, of six or seven persons, one dies in consequence of this operation: two have died under his own hands, and in both cases some cancerous portions remained. M. Blandin lost one patient, either in consequence of phlebitis, or, as he believes, of absorption of the pus: some have died of peritonitis, and others "in consequence of a nervous state, the severity of which is not easy to be explained," to use the words of M. Velpeau. "Without entering into the question," he observes, "whether excision of the cervix uteri may not have been frequently performed, in cases in which there was no cancer, I will merely observe that M. Dupuytren, who has, as it were, naturalized the operation in France[1], seldom has recourse to it at the present moment; that M. Lisfranc, who has so often suc-

[1] Osiander performed this operation twenty-eight times; M. Dupuytren, from fifteen to twenty; M. Lisfranc, from forty to fifty (Velpeau, *Nouveaux Eléments de Médecine opératoire*, Paris, 1832). The danger, occasioned by this operation, affects the life of the patient, and not the functions of the organ; for several persons have afterwards become pregnant and been safely delivered at the full term: several cases have been quoted by M. Lisfranc. It is right, however, to add, that this event followed the removal of the vaginal portion *only* of the cervix uteri.

ceeded in it, appears also to adopt it less frequently than heretofore; and that, according to M. Heisse, Osiander discontinued it some time before his death."

The partial removal is effected, as we have seen, principally by the help of the scalpel. M. Mayor's proposal to separate the part by the ligature has met with no approval (*Académie des sciences*, séance du 19 février 1827). Hæmorrhagy has very seldom been known to follow after excision, and might be easily stopped by the use of the plug; whereas there is great reason to fear the occurrence of metritis and peritonitis, from the use of the ligature. If the ligature, in the case of polypus, has terminated fatally, what would be the consequence in that of the uterus itself? It would also be difficult to fix the ligature even by the aid of the '*porte-nœuds*,' unless the scirrhus were, in a manner, pediculated, and, in that case, excision would still be the most easy and least dangerous method. The ligature can only be applied, in cases in which the pedicle is very thick, as a preliminary means to aid in bringing down the uterus for the purpose of excision.

It is, in fact, almost indispensable that the uterus be brought down as near to the os externum as possible, in order to facilitate the removal of the diseased parts. Osiander, one of the first of those who performed this operation,—the first, at least, who repeated it and brought it into repute,—drew down the cervix uteri by the help of two ligatures passed across each other through its substance. M. Dupuytren continually used the hook-forceps of Museux, conveyed as high up as possible, and guided by the speculum, assisted afterwards by a second pair applied to the different points, in order to secure a firmer hold and diminish the risk of laceration.

It is with these two pairs of forceps that the traction is performed. M. Lisfranc adopts nearly the same method, using an instrument with longer, stronger, and less curved blades; he has also given some judicious rules about the mode of applying the instrument, in reference to the direction of the axes of the pelvis; rules applicable only to cases in which

the tumor is very voluminous[1]. M. Velpeau adds to these rules the discontinuance of the speculum, which, though useful in our first examination, can only encumber us in the operation, and may be replaced by the fingers directing the instrument. It is not always an easy thing to bring down the uterus; the very facility promises success, and we have no hesitation in saying that excision must be abandoned, if this cannot be done. In this case, the obstacle must be considered as arising from adhesions or tumors exterior to the organ,—foreign, at least, to its cervix, and indicating that the disease is not confined to the parts which the scalpel can reach.

In the opposite case, when scirrhous parts are to be removed, it will be proper to use, as occasion may require, the curved scissors, or a spoon-shaped, or a circular instrument with a cutting edge, both of which instruments are used by Professor Dupuytren: but the bistoury alone, guarded with lint, will often answer the purpose. These instruments should sometimes be carried transversely through the healthy tissue which covers the carcinomatous tumor; sometimes they ought to be applied obliquely, and pass, on one side, or all round into the substance of the cervix, avoiding with the greatest care its point of union with the vagina, and the posterior surface of the parietes of the cervix itself, which, especially behind, are of little thickness, and covered with the peritonæum.

These remarks upon the necessary obliquity of the incisions suggest the nature of the instruments; upon which subject we shall add a few words, referring, for the details, to several 'mémoires,' and especially to that of M. Avenel already quoted, who, however, in common with many other French writers, has omitted the name of Dr. Canella, their earliest inventor.

This writer has published the description and figure[2] of an instrument, consisting essentially of a cylindrical spe-

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[1] See Avenel, 'mémoire' on the treatment of cancerous affections of the cervix uteri in particular, and on its removal. *Revue méd.* 1828, t. iii, p. 6.

[2] *Cenni sull' Estirpazione della bocca del collo dell' utero*, Milano, 1821.

culum, within which a second cylinder is made to act, furnished, at its upper border, with a transverse blade, which is capable of being opened or closed at will, and which scoops the cervix uteri, when the cylinder supporting it is made to move in a circular direction. The hook-forceps is used to fix the cervix during the operation.

It is with a similar blade, fixed upon the extremity of a rod, and made to act almost in the same manner, that the excision of the cervix uteri is performed by the instrument of M. Colombat: the cervix is fixed by the double hook, and the instrument is perhaps, upon the whole, more ingenious, though less simple, than the preceding.

M. Hatin has invented a third, with which the incision is also made by turning, with the addition of crotchets attached to the extremity of the forceps.

In all these methods there is undoubtedly an advantage in being enabled to operate upon the diseased organ without drawing it beyond the os externum; this, however, is of little moment, inasmuch as the difficulty of drawing down the organ clearly contra-indicates the operation, and is more than balanced by the inconvenience of making a horizontal incision, without reference to the height to which the disease extends. These methods undoubtedly remove the risk of wounding the vagina or other neighbouring parts,—a danger incurred in the use of the bistoury, even in the hands of M. Velpeau, according to his own frank confession;—but, at the same time, some remains of the disease are almost inevitably left behind: and, since cauterization must consequently follow, it may be questioned whether so incomplete a result would repay so complicated and painful an operation. To avoid lacerations from the hooks, M. Guillon proposed an instrument similar to a '*tire-tête*,' which, after being introduced into the uterus, would be so expanded as to preclude the possibility of its slipping out, and afford a secure hold for drawing the whole organ downwards. But the objections to this instrument are—1, the difficulty of introducing it; 2, the difficulty of opening it when introduced; 3, the inevitable bruises and lacerations which it would inflict. We are urgent upon this point, because the same method of draw-

ing down the uterus has been suggested for the removal of the entire organ.

C. The last operation is of more modern date than the preceding; that is, as reduced to rules, and formally proposed as applicable to numerous cases of disease.

We have already remarked that the results of this operation are far from being in every case fatal, when the uterus has been previously displaced and elongated, and its ligaments and vessels atrophied. Before we proceed to speak of extirpations of the uterus in its natural state, we will give a summary view of the cases to which we have just alluded.

1. The inverted uterus is sometimes strangulated, sphacelated, and separated in its entire length, and its separation has been followed by recovery, as in the case detailed by Rousset *(Partus cæsareus*, p. 354*)*, and in that of Ruleau, in which the surgeon only made incisions in the organ already putrid. The inverted uterus has been several times removed by excision, and more frequently by the ligature, without fatal results; we have already quoted some well-authenticated cases of this kind (p. 128). We might add the other cases, less detailed, and perhaps less to the purpose, given by M. Tarral, in the first part of his learned 'mémoire' upon the excision of the uterus[1],—the extirpation, for instance, of the inverted uterus by a midwife, followed by recovery *(Bernhard)*; the tearing away of the same organ, followed by cicatrization, after some serious symptoms (*Figuet*, *Siebold*): cases also, in which the removal had been preceded by the ligature, and was successfully performed by Vieussens, Anselin, Hunter, Clarke, Rheineck, Windsor, and Johnson;—cases, encouraging indeed, and more numerous than those in which the operation, whether performed carefully or unskilfully, has proved immediately or speedily fatal; among these latter, we omitted (p. 129) that of Laud Wolf, and some others less authenticated.

2. The uterus, in simple prolapsus, has also been entirely destroyed by gangrene (*Rousset*, *Zwinger*, *Elmer*), as we have formerly shewn (p. 48), and the patient nevertheless

[1] *Journ. hebdomadaire de Médecine*, t. v, Paris, 1829.

recovered. This gangrene has been designedly produced by the ligature (*ibid.* p. 56), and cancers, which would otherwise have been fatal, have been, at least temporarily, cured in a similar manner (*Récamier* and *Marjolin*, *Delpech*). To these cases may be added that of Langenbeck, who succeeded in removing, with the bistoury, a carcinomatous uterus, which nearly protruded beyond the os externum; he was enabled easily to tie the vessels, and doubtless to preserve a small portion, together with the whole peritonæal coat, in order to close the orifice left by the operation[1]. The ligature proved fatal in a case given by Ruysch. It may, however, be generally observed, that, in cases of prolapsus or inversio uteri, the organ may be removed, by one of these methods, without incurring any considerable risk; and the operation may thus be generally recommended in cases in which cancer is complicated with the descent of the uterus.

We are far from being able to speak so favourably of the excision of the whole uterus, when it retains its natural position. For detailed cases of this operation, when the uterus has been cancerous, but not displaced, we refer our readers to the memoir of Sauter, published in the 'Mélanges de chirurgie étrangère,' and particularly to the second part of the memoir of Dr. Tarral, already quoted. They will there find seventeen cases, to which we shall add one for the sake of the subjoined remarks, and another of more recent date. Palletta was one of the first, if not the first, who performed this operation without being aware that he had extirpated more than the cervix uteri. Since that time it has been performed, with a perfect understanding of the case, once by Sauter, twice by Siebold, once by Holscher, four times by Blundell, once by Barnes, once by Lizars, three times by Récamier, either unassisted or with the help of M. Roux, thrice also by Langenbeck[2], once by M. Dubled, once by M. Del-

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[1] It is difficult to imagine, as Sauter has also judiciously observed, how Langenbeck could remove nearly the whole of the uterus, *together with the Fallopian tubes and the ovaria*, and yet preserve the peritonæum.

[2] M. Avenel is, no doubt, under a mistake in speaking of seven operations of this kind performed by this surgeon; he has also ascribed to Bland some cases which probably belong to Blundell.

pech. Of the nineteen patients, sixteen died in consequence of the operation, one as late as the fourteenth day (Langenbeck), another on the fourth (Barnes), most of them on the following, or the third at the latest, some in a few hours, or even a few moments, after the operation. Of the three, which might be considered for a time as cured, not one survived longer than a year. In the case of Dr. Sauter, death took place some months afterwards, in consequence, as it appeared, of some disease unconnected with the operation and previous affection. In one of Dr. Blundell's cases, death ensued from a return of the cancer; and an operation of M. Récamier, which appeared completely successful, was followed by death, at the end of a year; diarrhœa was the only cause assigned for this fatal result, but the post-mortem examination was not published.

Hence it is that this dreadful operation, more fatal from immediate exhaustion, than from subsequent hæmorrhagy or inflammation, and sometimes involving injury of the bladder, even in the ablest hands, only encourages a hope of success in one case out of six, and even this hope has been known to vanish after a very short period,—shorter, perhaps, than that in which the disease itself would have proved fatal. This operation, therefore, when the uterus retains its natural position, should be adopted only in cases in which the cancer is insupportably painful, even though there exist no cancerous diathesis, or disease in the neighbouring parts.

In the hope of affording occasional relief, we proceed to add a few words upon the other modes of operation, which have been practised or suggested up to the present day.

1. *Super-pubic Extirpation.* This operation, originally suggested by Dr. Gutberlat, has been performed in one instance by Langenbeck: the patient died immediately, it is said, or in twenty-four hours afterwards. M. Delpech has also performed it in a case, which we proceed to relate in detail.

"A woman, thirty-six years of age, and mother of three children, was affected, after her last confinement, with subacute inflammation of the uterus. Eighteen months after-

wards, the patient being admitted into the hospital Saint-Eloi, we observed the following symptoms: considerable emaciation, fever, the tongue clean, the appetite and digestion good, periodical tenesmus, without sanguineous discharge, but with habitual hæmorrhoïds, the abdomen tender over the uterus, which was of its usual volume, ten days after delivery, hard, knotty, and weighty; at its cervix, a large ulcer, with fungous surface, readily made to bleed.

"The patient having consented to the operation of extirpating the uterus, we made a semicircular incision across the lower fourth of the linea alba, forming a flap of the skin and cellular tissue; on dissecting this back, we exposed the linea alba, in the axis of the base of the semi-circle. We then divided the linea alba, as far as it had been exposed, and also the corresponding peritonæum.

"The forefinger of the right hand being then introduced into the vagina, and that of the left into the wound of the hypogastrium, they were directed,—the former to the anterior and right point of the bottom of the vagina, the latter into the right side of the inter-utero-vesical peritonæal fossa: the two fingers came into contact, the vagina and peritonæum only being interposed; the sheath of the pharyngotome, shaped for this purpose, was then slided along the forefinger of the right hand, up to the point where the extremity of the finger rested. A cylinder of horn, curved throughout, and terminating at one extremity like the wide end of a trumpet, was passed, by this same extremity, through the wound of the hypogastrium, along the forefinger of the left hand, so that the wide end of the cylinder might fit the prominence which the sheath of the pharyngotome formed at the bottom of the vagina. The blade of the pharyngotome was then passed forward by pressing on the spring; it perforated the double membranous partition and rested in the hollow of the recurved cylinder; then pressing upon the whole of the pharyngotome, its sheath passed through the incision, while the blade was again withdrawn.

"A bougie of elastic gum, slid along a groove made on one of the surfaces of the sheath of the pharyngotome, was passed along the cavity of the curved cylinder into the hypo-

gastrium; the pharyngotome and the curved cylinder were then withdrawn. The bougie conveyed with it the circular part of two ligatures, composed of silver wire, the ends of which were suspended from the os externum.

"Two fingers were sufficient to draw the fundus uteri behind the wound in the hypogastrium, so as to give it a rotatory movement in every direction. It was easy, in one of these movements, to seize the left broad ligament and draw it through the wound, so as fully to expose the ovarium and the Fallopian tube, these organs being in a healthy condition; proceeding then close by the uterus, we were enabled to sever the Fallopian tube and the broad ligament at the point near its upper half, by means of the scissors, and without any risk to the adjacent parts, the section being made outside the abdomen. After having executed a similar procedure on the other side, the right broad ligament was divided in the same manner and to the same extent: the two sections occasioned no hæmorrhagy, though we were prepared to obviate it by ligatures.

"We then passed, above and behind the fundus and the body of the uterus, the circular part of the two metallic ligatures; and, drawing their ends by the os externum, we directed, with our fingers, the two threads into the lowest part of the sections of the broad ligaments, and backward as far as beneath the portion of the cervix uteri, around the vagina. None of the unattached viscera had been in danger of being involved in the ligatures; the ends of these passed through a canula, adapted for pulling and tightening them. This apparatus enabled the two ligatures to strangulate, and so to sever, as quickly as possible, the parts to which they were applied.

"Lastly, raising the uterus through the wound of the hypogastrium, we immediately divided it above the knot; after which the flap of skin was adjusted, and the wound of the hypogastrium closed.

"Immediately after the operation, the countenance was much altered, the limbs were cold, and the debility extreme; yet there had been no hæmorrhagy: the viscera, which had not impeded the operation, had not been wounded. The

pains were allayed by opium; but we could not succeed, during the whole of the day, in restoring warmth to the limbs and face, or in increasing the fulness of the pulse, which was hurried and indistinct.

" On the following day the warmth had returned; there was a kind of reaction, which would have given us some hope, if the pain occasioned by the ligatures had not continued as intense as ever. On the third night delirium came on, and the patient died.

" On examination, we ascertained that the pharyngotome had deviated a little, and slightly wounded the bladder; but not so as to allow the urine to escape, this fluid having flowed by the urethra. There was not the slightest trace of peritonitis; and there could be no doubt that the extreme pain occasioned by the ligature, though it had been drawn very tight from the first moment, was the real cause of death[1]."

2. *Sub-pubic Extirpation.* This operation,—performed without any fixed plan by Sauter and others,—somewhat systematized by Blundell, who began by opening the upper and posterior part of the vagina, and reverted the uterus in this direction,—preceded by the vertical section of the perinæum and of the recto-vaginal septum, in the case published by Lizars,—has been rendered more methodical and less dangerous by M. Récamier. This able practitioner begins by bringing down the uterus as low as possible, as for excision of the cervix; he then divides the vagina all around the cervix, detaches with the fingers the bladder, which is united to it in front, divides the peritonæum, reverts forward the fundus of the uterus by a transverse wound, purposely made, divides the two upper thirds of the broad ligaments, encloses in a ligature, applied with a bent needle, the inferior third, together with its vessels, and then concludes by dividing,

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[1] It should be observed, that the ligature applied to the same parts previously to the excision, in cases of prolapsus, has not been generally followed by such fatal results. Persons, who assisted at the examination, have told us that the metallic ligature was applied to the cervix uteri, and not to the vagina, as the operator supposed. *Mémorial des hôp. du midi*, t. ii, p. 610.

beyond the ligature and behind the elevated portion of the vagina, the last attachments of the uterus.

As the reversion of the uterus is the most difficult and painful part of the operation, although it is effected more easily in the forward than in the backward direction, the uterus naturally assuming the former, several young practitioners have proposed to omit this part of the procedure: but it is right to add, that, with the exception of M. Dubled[1], they have only practised upon the dead subject, and in cases in which the uterus was in its natural position.

M. Gendrin proposes to begin by tying the uterine artery, which is always found, as he says, upon the exterior and anterior surface of the vagina. M. Tarral judiciously observes that this ligature would be by no means so easily applied, besides affording no security against hæmorrhagy. The two lateral incisions, made horizontally with this first object, ought to be joined by two others, made transversely, the one anteriorly, the other posteriorly, in order completely to insulate the uterus and effect its removal.

M. Tarral begins, like M. Récamier, by making an anterior transverse incision; but it is with the scalpel, guided nearer to the uterus than to the bladder, in which latter organ the catheter has been introduced, that he separates these two organs: he does the same in the direction of the rectum, by dividing across the upper part of the vagina; then, with a long needle, he passes a ligature above the broad ligament on one side, tightens it, divides it beyond the knot, and proceeds to do the same on the other side.

M. Dubled adopted a method in every respect similar, with the exception that he includes, in the noose of the ligature, only the inferior third of the broad ligaments. He proposes also to leave untouched every part of the uterus which is undiseased; to preserve, for instance, its fundus alone, together with the Fallopian tubes and ovaria, by saving the peritonæum as much as possible. Almost the same me-

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[1] *Journal complém.* xxxvii, p. 327. The operation was performed in the presence of M. Récamier. There was no hæmorrhagy; the patient died twenty hours afterwards.

thod was adopted by Langenbeck in a case of cancer, complicated with *prolapsus*.

These modifications greatly facilitate the operation upon the dead subject: the case is very different in the living subject; the blood flowing, the sufferings extreme,—the uterus itself diseased, and perhaps adhering to the neighbouring parts*.

CASES.

1. *Scirrhus of the entire uterus, with obliteration of its cavity.*

1. Madame Feret, fifty years of age, without children, entered the Maison de Santé, May 12, 1824, in consequence of phthisis, of which she died June 2d. The catamenia had ceased eight years before, and at that period she had undergone an operation for cancer of the right eye. On post-mortem examination, we found the uterus three inches in length, its cervix of a size and consistence almost natural; its body, shaped like a pear, was two inches in diameter in every direction; it, as well as the cervix, presented merely a close, hard, white mass, without the slightest appearance of cavity.

Reflections. This case, with the following, is remarkable for the previous existence of a cancerous affection of the face, and for the occurrence of phthisis after the cure. The uterus was in both cases scirrhous, and without any visible cavity; this obliteration was evidently connected with the cessation of the catamenia. Every trace of the original texture of the uterus had gradually disappeared during this period.

2. Madame Dumont, married, but without children, had been affected with venereal disease, treated by Van Swieten's liquor, and afterwards with ulcer of the nose, which was cured with the "pâte arsenicale". The catamenia ceased at the age

* These difficulties,—together with a real blot upon surgery,—would be best removed by entirely confining these barbarous operations, in future, to the dead subject!—Tr.

of forty-five, at which period symptoms of consumption appeared, and the patient died of that disease a month after entering the Maison de Santé.

On examination, the lungs were found tuberculated, one of them in a state of suppuration, the other containing a concrete, hard, whitish matter. The abdominal viscera were healthy, except the uterus which was small and pale; the Fallopian tubes only two inches and a half in length; the ovaria small and hard, of a rounded form; the os uteri very smooth, closed, and of its natural size; on the exterior and anterior surface of the organ were two small pediculated, fleshy tumors, of the size of a cherry; they were covered with the peritonæum, and injected at their surface by very minute vessels; a third tumor, of the same kind and of nearly the same volume, was observed at the fundus uteri; they all three consisted of a white, chalky, and exceedingly hard substance. There was no trace whatever of cavity in the uterus; its tissue was of the same kind throughout, resembling white soap in colour and consistence: neither vessels nor fibrous tissue were to be found. (Pl. XIII, fig. 1, 2.)

3 and 4*

2. *Scirrhus of the uterus.—Considerable tumefaction of the cervix mistaken for polypus.—Fatal hæmorrhagy.*

1. Madame N——, thirty-four years of age, had been in a healthy state until her thirtieth year, when she gave birth to her second child. The catamenia became more frequent and abundant than usual. She was brought to the Maison de Santé in consequence of syncope occasioned by violent hæmorrhagy.

We found that the vagina was distended by an enormous, smooth, round, solid tumor, which filled the pelvis. This

* These cases are adduced to illustrate the same circumstance as the preceding, viz. obliteration of the uterine cavity. They are conjoined with some conjectures relative to the source of the sanguineous discharges in such cases, of no practical value; viz. whether this be the surface of the vagina, or the cavity of the uterus before its complete closure. These cases refer to pl. XIII. fig. 1, 2, 3.—Tr.

tumor, which was immoveable, scarcely admitted of having its circumference traversed by the finger: it was found to be isolated as far as it could be thus circumscribed; but it was impossible to carry the finger further forward, to ascertain whether the tumor were pediculated or not. In attempting to push it upward, the fundus of the uterus was felt, though indistinctly, to rise above the pubes aud constitute a tumor in that part as large as the fist. The patient complained only of acute pains in the parts affected, and had no recollection of having experienced them before. The tumor near the vagina was perfectly insensible, and without any appearance of an orifice. The parts were very relaxed and rendered almost insensible. I succeeded, without much difficulty, in introducing, successively, the four fingers of the right hand, which I applied to the posterior surface of the tumor. I thus discovered, at the depth of about three inches, a thin adhesion of very little extent, and, a little higher up, a deep depression, forming as it were the neck of the tumor; but I found no unevenness, or any loss of substance denoting ulceration. There had been no other discharge by the vagina than that of some blood, or sanguineous fluid in greater or less quantities, and inodorous. Though several physicians considered it to be polypus, I was of a different opinion; because, if the polypus had passed through the os uteri, that organ could not have presented the volume which now appeared above the pubes. The patient had never remarked that part of the abdomen to be larger, which would have been the case, had the tumor previously occupied the interior of the uterus. The patient died eight days afterwards.

On *examination*, we found all the organs healthy, the heart and principal vessels empty, all the viscera and muscles pale. The fundus uteri was situated above the pubes; the Fallopian tubes and ovaria were healthy, the latter voluminous. There was no adhesion of the uterus to any of the neighbouring organs. The anterior labium of the os uteri constituted the tumor, the diameter of which was three inches and a half in thickness, and its breadth nearly four inches. The whole of the uterus was five inches and six lines in length, its cervix and the tumor three inches. Posteriorly,

this labium of the os uteri was only eight lines in breadth, and its orifice six; divided across near its base, the tumor presented, from side to side, three inches and a half, and the parietes of the body of the organ were ten lines in thickness.

The tissue of the uterus was throughout hard, and compact like bacon, greasing the scalpel. Upon dividing the tumor, we observed in every part of the mass, white, hard granules, which were more perceptible after maceration. Its tissue resembled that of the face of a new-born infant which had died from hardening of the cellular tissue. Drops of blood oozed from the tissue of the body of the uterus; its cavity was perforated with small reddish-brown orifices, yielding a sanguineous fluid. The arteries and veins of the ovaria were very large and full of blood. (See pl. XXI & XXII.)

Reflections. It was impossible to distinguish the nature of this tumor during life. It was at one time taken for polypus.

2*.

3. *Scirrhous tumor of the cervix uteri; conception; natural labour.*

1. Madame D——z, thirty-six years of age, had been subject, till her fifteenth year, to considerable enlargement of the parotid glands. She had had four children, and natural labours, the last of which took place in her thirtieth year, from which period the catamenia had been less in quantity and frequency for five years.

On examination, Jan. 17, 1823, we found the anterior labium of the os uteri as large as an orange, about two inches in diameter. The posterior labium was carried so far backward, that we found some difficulty in reaching it. The tumor was smooth, and free from pain, but its pressure upon the urethra induced a constant desire to pass the urine. The

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* This case was supposed at first by Madame Boivin to be polypus, but she was afterwards convinced that the tumor was formed by the anterior labium of the os uteri. The termination of the case was not known, the patient having left the hospital.—Tr.

patient became pregnant the same year, and from that period she became subject to pains in the pelvis, and particularly in the region of the sacrum. The first symptoms of labour came on Feb. 7, 1824. The accoucheur found a large tumor in the vagina, which he took for the head of the fœtus; several nights however passed, and no progress was made in the labour; the os uteri was found, upon a consultation, to be situated very far backward and undilated. The pains increasing, the patient was brought to the Maison de Santé. She was exceedingly pale; the pains were violent and frequent; the membranes had been ruptured two days before; an enormous tumor was found in the vagina, hollow in the centre so as to admit the two first joints of the forefinger; the surface of the other part of the tumor was knotty, hard and uneven, especially during the contraction. In seven hours and a half from this time, the tumor of the cervix advanced to the os externum, and presented a large torn surface with granulated edges; it was tightly compressed between the right ischium and the head of the fœtus, which was protruded at once through the os uteri and os externum. The child was born alive.

Reflections. It is probable, that the tumor, taken at first for the head of the fœtus, was afterwards confounded with the amniotic envelope, and with the placenta placed over the os uteri, and that by the application of some sharp instrument to this supposed envelope the tumor was opened. The disease made a rapid progress during one year after this labour. It was probably of the kind termed *pancreatic* by English authors, being granular scirrhus.

2*.

4. *Scirrhus of the cervix uteri; numerous cauterizations; almost complete cure.*

Madame Ch——, thirty-four years of age, was brought to the Maison de Santé, May 25th, 1820, for cancer of the

* This case is omitted, as it contains no particular information.—Tr.

uterus. Her father had been affected, for a long time, with an indolent tumor, of the size of an orange, at the base of the lower jaw. The patient had been regular since her eleventh year, and had had two children, one in her twenty-first, the other in her twenty-sixth year. Since this latter period the catamenia had become irregular in their periods, continuance, and quantity; and, during the last year, the hæmorrhagy had increased to such a degree that she was reduced to the greatest exhaustion; this was followed by pains in the right hip, and in the thigh of the same side.

M. Dupuytren discovered a tumor of the uterus, and proposed cauterization; but the patient was now placed under our care, when we discovered that the os uteri was pushed down to the right, and the whole length of its orifice had assumed a longitudinal, instead of the transverse, direction; the anterior labium, turned toward the left side of the vagina, formed the seat of a tumor, of the volume of a large nut, solid at its base, soft and uneven at its surface; by the help of the speculum, this tumor was found to be granulated, red in some points, and white in others. Cauterization was commenced June 17th, by M. Dumeril, who contrived a cylinder of caustic potassa, from five to six inches in diameter, and several inches in length, fixed in a 'porte-crayon,' and conveyed to the part through the speculum. The first application was made over the whole surface of the tumor; after which a piece of lint was applied, to which a thread was attached, with its end hanging loose from the os externum; a sensation of burning was felt for some minutes. The caustic was applied twenty-eight times at irregular periods, for eight months. On August 30th, a spoon, having its convex surface covered with caustic potassa, was introduced into the uterus, and applied to the whole interior of that organ; the patient only experienced a sensation of heat: this was done several times. The nitrate of silver was passed once or twice over the interior surface in the same manner. On Septr. 29th, it was ascertained, by passing the forefinger into the rectum, and a probe into the uterus, that the posterior paries of this latter organ was only a line or two in thickness.—February 3d. Since the last cauterization, which was made January 27th, a

burning heat has been felt in the uterine organs; the passage of the urine was painful, the meatus was of a deep red colour. The vagina and circumference of the uterine cavity were of a deep vermilion; its anterior border was smooth and pale, of greater firmness than the posterior, which was elastic, and of a very red appearance. The patient, at this period, left the hospital; and we have only to remark that the cervix uteri had been removed by the cauterizations, and the internal substance of the organ reduced to the sub-peritonæal muscular layer, without the dangers attendant upon excision.

The first applications of the caustic produced a salutary change in the secretion of the parts, and checked the hæmorrhagies*.

5. *Cauterization in cancer of the cervix uteri; cure*†.

Madame B——, thirty-six years of age, had been regular from her thirteenth year; after three natural labours, she became irregular, and subject to hæmorrhagy; as she found herself becoming gradually weaker, she entered the Maison de Santé, August 1st, 1820.

We found the cervix uteri very voluminous, hard, and smooth at its surface; the anterior labium of the os uteri presented nearly fifteen lines in thickness, and about eighteen in length. There was no appearance of ulceration; but the posterior labium was short, of a deep red colour, and rugged. Cauterization with caustic potassa was adopted at five different periods; in consequence of profuse hæmorrhagy, the plug was continually applied, and the patient complained of gnawing pains in the uterus. On the fifth application of the caustic, a portion of the tumor had disappeared (the anterior

* This case occupies thirteen pages and a half in the original. It shews that the caustic potassa may be applied to uterine scirrhus without inducing extreme suffering, and with the effect of removing layer after layer of the diseased structure. However inconclusive, it is not uninstructive.—Tr.

† This appears to be too strong an expression.—Tr.

labium of the os uteri), but the anterior paries of the cervix continued thick and very hard. On October 6th, the anterior paries of the cervix was almost entirely destroyed by the caustic: the internal orifice presented from eight to ten lines in diameter, and the surface of the uterine cavity was observed to be granulated and greyish. On the 17th, the posterior and superior paries of the vagina presented a large eschar, probably occasioned by the caustic. The patient left the hospital twice; but the symptoms re-appeared, in consequence of intemperance, and she returned a third time, December 9th, and was restored to health by the 24th. We have heard that she died a month afterwards of peritonitis.

6. *Cauterization of the congested cervix uteri.—Incomplete treatment.*

Madame Ch——, forty-one years of age, had a natural labour in her twentieth year, from which period she had been subject to profuse leucorrhœa. In her thirtieth year she had been cured of an obstinate psora, and a short time afterwards she had several false conceptions, at short intervals. The catamenia were always regular, and in great abundance. Having been subject to menorrhagia for eighteen months, she entered the Maison de Santé, February 5th, 1822.

We found the anterior labium of the os uteri swollen, soft, sanguineous, and of a reddish colour. We applied caustic potassa several times. On May 11th, a coagulum, of the size of an egg, of fibriform texture, was expelled by the vagina, followed by profuse hæmorrhagy. On the 14th, severe pains were felt in the uterus, attended with fever; the ulcer presented a favourable appearance, but the intemperate habits of the patient led to her removal from the hospital: we have heard that she died some months afterwards, of menorrhagia.

Reflections. We had entertained great hopes of cure in this case; the general state of the health was much improved.

7. *Cauterization with the nitrate of mercury, and afterwards with the actual cautery; rapid progress of ulceration.*

A Spanish woman was affected, in the month of June 1832, with uterine hæmorrhagy and pains. The catamenia had appeared in her twelfth year, she was married in her fifteenth, confined in her sixteenth, and afterwards a second time. Six weeks after her last confinement she became exceedingly debilitated by abundant hæmorrhagy, attended with a disposition to syncope; the cervix uteri was tumefied.

M. Marjolin proposed cauterization with the acid nitrate of mercury; and, after six applications of this preparation, the cavity of the cervix uteri was found to be ulcerated. After this, the actual cautery was applied several times at intervals, by the advice of Barron Larrey. The ulceration spread to the interior of the body of the uterus, and, towards the end of November, the parts presented a kind of burrowed appearance, threatening to open into the rectum. The patient came to the Maison de Santé November 28th, 1832; she was then twenty-eight years of age, extremely pale and thin, and suffering pains in the anus, vagina, loins, hips, and inguinal regions; the hæmorrhagy had been succeeded by sanious discharges. We were enabled to administer some relief; but we have no expectation that the patient will live beyond a few months. February 10th, 1833*.

8. *Cauterization with the nitrate of silver, then with the acid nitrate of mercury; inflammation; hopes of recovery fallacious.*

Madame Beauf——, twenty-five years of age, had been the subject of three labours in the space of four years; and, from the period of her last confinement, had experienced

* These cases prove that caustics *may* be applied to the cervix uteri; but they do not encourage any hope of advantage from the remedy.—Tr.

lassitude in the limbs, pains in the femora, loins, and groins, and sense of weight in the anus,—the catamenia continuing to be regular.

Six weeks after these symptoms had appeared, the uterus was found, on examination, to have descended, and its cervix to be swollen and ulcerated. Cauterization with the nitrate of silver* was adopted twice; after which the patient was brought to the Maison de Santé, October 1st, 1832. By the help of the speculum, the cervix was found swollen, with a loss of a portion of its substance, of a triangular form, about eight lines in diameter, at the left side of the anterior labium of the os uteri. October 5th, M. Cloquet applied the acid nitrate of mercury; fever succeeded, with diarrhœa and acute pains in the abdomen. On the 18th, the principal part of the os uteri, which was much dilated, seemed to have disappeared; a small portion was observed resembling the uvula in form and position; the borders of the wound were red, pliable, and of favourable aspect. The cauterization was repeated, and the patient improved. At the end of five or six weeks, however, the symptoms had returned, and the patient left the hospital on the 27th Nov. 1832.

Fever, nausea, vomiting, pain, and diarrhœa, followed each application of the caustic. Were these occasioned by the local irritation and sympathetic action, or by a real poisoning from absorption?

Whatever may be the cause, and however violent the remedy, it would not lead to the serious results which have followed the use of it within our own knowledge, were it applied with the precautions adopted by M. J. Cloquet. In a recent case, it is said that a large plug of lint, steeped in

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* It is quite obvious that the distinct and proper action of the nitrate of silver, pointed out by Mr. Higginbottom, is not understood in France. That author observes, in his very useful work,—"The nitrate of silver has been termed a *caustic*. This is altogether erroneous. It is the very reverse of a caustic. It is impossible to destroy any but the most superficial parts by the nitrate of silver. In this it differs widely from some other substances to which the same term has been applied. I speak of it in its *solid form*. Instead of destroying, it frequently preserves parts which would inevitably slough except for the extraordinary *preservative powers* of this remedy." *Introd.* p. ix, 2d edit.—Tr.

the acid nitrate of mercury, was applied to the cervix of the ulcerated uterus, and left for twenty-four hours. On examining the parts, the cervix was found to be covered with a large eschar, as well as the posterior paries of the vagina. It was discovered, almost immediately, that this canal, deeply perforated, opened into the rectum. The patient only survived, for some days, the symptoms of peritonitis, which soon followed this misapplication of the caustic.

Emollient injections, used a few minutes after this kind of cauterization, according to our own practice, and that of M. Dumeril, and, more recently, that of M. Cloquet, in another case of cauterization of the cervix of the ulcerated uterus, have been followed by a complete cure.

CHAPTER V.

OF ULCEROUS CANCER*.

Of the four forms of cancer which we have distinguished, it no doubt frequently happens that three are successively exhibited in the same person: tuberous cancer issues in ulceration, which, in its turn, often presents fungous excrescences, and these are sometimes charged with blood, as in the hæmatode form. This division, however inadmissible in a didactic treatise, is perfectly adapted to practice, as it offers a more ready means of determining the diagnosis and prognosis; and it is particularly suited to the arrangement of the cases in this work.

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* The disease described by the authors, in this chapter, is probably the same as that denominated the Corroding Ulcer by Sir C. M. Clarke, and the Malignant Ulcer by Dr. Baillie; and described by M. Andral, in the second volume of the "Anatomie Pathologique," p. 683.—Tr.

We ought not, however, to suppose that ulcerous cancer is invariably the result of deeply seated disease of the uterus. If there be numerous cases, in which scirrhus and encephalosis prove fatal before they are completely softened, or have undergone any breach of surface, there are ulcers which may be termed primary, and in which the cancerous disease, wholly superficial, destroys the tissues as soon as it invades them: this would constitute, according to Bayle and Cayol, the most common case. "Cancer of the uterus," they observe, "is most commonly a primary cancerous ulcer, similar to the *noli me tangere* of the skin. The ulcerated surface is formed immediately by the tissue of the uterus, sometimes beset with fleshy uneven elevations, of a reddish, violet, or white colour, sometimes covered with fungous growths, or a kind of slough, varying from black to ash-colour. We have always been disposed to consider this slough as the result of gangrene, induced upon the surface of the ulcer, in its last periods *(Dict. des Sc. méd.)*." This last idea is the more probable, as we consider ulceration, generally, to consist in a molecular gangrene, in which the molecules, detached from each other, and mortified, are too few, or too quickly removed, either by suppuration or absorption, to admit of their becoming putrid at the surface: a result which can only take place when mortification is sufficiently rapid to hold an intermediate place between ulceration and common gangrene.

There is another kind of cancerous ulceration, which may be called both primary and secondary,—*primary*, as ulceration existing within the uterus, but *secondary* to the cancerous disease of some neighbouring organ, as the rectum. But it is of ulceration, originally seated in the uterus, and originally ulcerous, that we now speak; we merely premise that the local characters, as well as the general effects, are absolutely the same in ulceration carried to its highest degree, whatever may have been its cause, whether it have or have not been preceded by tumors or deep-seated disease. In the latter case, certain symptoms, peculiar to cancerous tumor, may indeed still exist; but we must add that the tumefaction and change of texture may also (though less frequently) be se-

condary to the progress of cancer essentially and originally ulcerous.

Cancerous ulcer of the cervix and of the body of the uterus may, like the *noli me tangere*, be induced without local cause; it may be the result of malignant change in ulcers of a totally different origin. Syphilis may, undoubtedly, occasion a disease which, though curable at first, would cease to be so afterwards; the same may be said of scrofula, and perhaps of some cutaneous affections, repelled, or rather, as we think, constitutional. It is easy, also, to suppose that every local, and especially superficial, inflammation, as that which is termed uterine catarrh and leucorrhœa, may induce similar results. Hence it is that leucorrhœa is very commonly accompanied with these ulcers at its first appearance, or frequently precedes them. In order, however, to give a more complete account of the symptoms of these ulcers, we must treat of them as existing separately in the body, and in the cervix, of the uterus.

Ulcers of the body of the uterus are perhaps not so rare as might be supposed, though of less frequent occurrence than the others*. Even tuberous cancer may very often appear to have originated in interior ulcerations. The earliest symptom is leucorrhœa, accompanied with a sense of severe pain near the hypogastrium, sometimes with pruritus and excitement of the uterine organs, or with internal erosions, and transient lancinating pains; then the body of the uterus is found, on examination, to be tender and tumefied. The disease frequently extends to the cervix, presenting, among other symptoms, which we shall soon mention, hæmorrhagies, pains in the loins and femora,—in short, most of the signs observed in tuberous cancer, already detailed. It is worthy of remark, however, that the discharges of pure blood are not more frequent, perhaps even less so, in this disease than in cases of tumor. They also occur later in the disease, and it might be inferred from this circumstance that they issue by an entirely different pro-

* "It is rare for cancer to begin in the sides or fundus uteri, but it sometimes happens." Travers, *Med. Chir. Trans.* vol. xvii, p. 350.—Tr.

cess. The flow, in tuberous cancer, consists in exudations of blood, arising from irritation or distension of the uterus, as in the cases in which a fibrous tumor is situated on its parietes; that of ulcerous cancer must frequently depend upon erosion of the vessels, and occur, consequently, at a period when the disease has reached a certain depth. But, before that period, the ulcerated surface, often covered with fungous growths, yields no pure blood, but rather a fluid, seldom puriform, generally consisting of sanious, fetid, acrid matter, sometimes aqueous and slightly sanguineous; or, lastly, entirely albuminous. This discharge may be observed, particularly at that period, to flow in extraordinary quantities, sometimes in regular drops, at other times in streams. There is a circumstance sometimes connected with this secretion, little known, and deserving to be noticed in consequence of the confusion it might cause in forming the diagnosis, as we have ourselves experienced: if the cervix partake of the interior ulceration of the body of the uterus, if its cavity be partly obstructed by large fungous growths, and it become tumefied by any accident, the fluid effused may remain in the organ, and occasion a degree of painful distension, until it overcome the obstacle which detained it. We shall give an instance of this kind among our cases[1]; but even in this place we may support our assertion by the following fact.

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[1] We have elsewhere observed that some cases of hydrometra might possibly be referred to this kind of cause, inasmuch as the uterus containing the fluid has been sometimes ulcerated, beset with fungous scirrhi, &c. Among the cases published in the *Archives de médecine*, octobre 1829, by Dr. Dance, there is one of this kind, accompanied with the post-mortem examination; it is as follows:— "1, General peritonitis, characterised by the *dotted* redness of the peritonæum, by false membranes, and about a pint of puriform fluid in its cavity; 2, the vagina was shortened and corrugated; on the upper part of its posterior paries was an ulceration, with fungous, reddish edges, which had entirely eroded the membranes of this canal, presenting a perforation, which communicated with the large cavity of the peritonæum: this opening easily admitted the forefinger; 3, the lower extremity of the cervix uteri was indistinguishable; the posterior labium no longer existed; the anterior was transformed into a thick, softened, nipple-like tumor: higher up, the cavity of the cervix was so contracted by the swelling of its parietes, that we found it impossible to introduce a probe of mode-

One of the authors of this work (D) was consulted, three years ago, in the case of a person forty-five years of age, in whom the catamenia had ceased; she had felt inconvenience, for a long time, from slight pains in the uterus, compression of the bladder, with frequent desire to pass the urine, and especially from continued and profuse uterine discharges. These last were not sanguineous, but consisted of a sero-mucous fluid, of a slight rose-colour and of insufferable fetor; it appeared to be very acrid, having inflamed and excoriated the os externum and parts of the femora. The patient was extremely weak, and could hardly walk across the room without panting and total exhaustion. Her complexion was pale and yellowish, but there was no loss of flesh. These symptoms were sufficient to denote a cancerous state, of long continuance, in some part of the uterus, and we discovered, on examination, that the cervix was hard, voluminous, and uneven; its orifice, widely open, presented unevennesses, and hard, irregular growths on the internal parietes of the organ. The disease most probably commenced at the interior of the cervix, perhaps even of the body, of the uterus; the quantity and quality of the discharges seemed to denote vast ulceration; besides, the pressure of the uterus upon the bladder in the erect position,—the extent to which the hardness and swelling might be felt with the finger to reach upward, at least on the anterior side of the uterus, together with the considerable volume which this organ seemed to present throughout when felt between the hand applied to the hypogastrium and the finger introduced into the vagina,—these

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rate size; 4, the fundus uteri was situated about two inches above the upper border of the pubes; its body was four inches and a half in height, and three and a half in breadth; its volume was much the same as that presented by pregnancy from the fourth to the fifth month; its cavity contained about a pint of thick, brownish, fetid fluid, in which was floating a membraniform, flattened body, one of the surfaces of which was of the same colour as the fluid; the other, tolerably red, seemed to have adhered to some points of the parietes of the uterus, and to have been only lately detached: this body bore some resemblance, in form, to the placenta; but it presented no trace of vessels, and appeared to us a mere product of inflammation. The cavity of the uterus, when the fluid was removed, was found to be reticulated and beset with bands, similar to those sometimes seen in the bladder; its parietes were only from one to two lines in thickness."

were signs of a general enlargement of the uterus, in which its body participated as well as its cervix. Notwithstanding the mobility of the diseased viscus, we were fearful of recommending an operation: the patient suffered little, and complained only of weakness; she might live for a long time, whereas extirpation of the entire organ,—the only treatment indicated,—might speedily terminate her life with dreadful sufferings. The extract of hemlock, to which were afterwards added frictions of iodine, then mercurial and other discutient remedies (calomel, soap, &c.), tonics and astringents (tannin, oxyde of iron, &c.), sudorifics, and, with all these, narcotics, used sometimes externally, at other times internally,—were all tried, given up, and tried again, sometimes with real, though transient benefit; at other times with slight inconveniences, such as vertigo and delirium even, from the hemlock.

At the end of two years, the debility became suddenly so alarming, as to excite apprehension of approaching death, and the patient began to be afflicted with pains, which were, however, of a peculiar kind, and different from those occasioned by cancer. She was at this time much changed; there were emaciation, and waxy and semi-transparent paleness. The cervix uteri was found, in consultation with M. Lallemand, to be much more enlarged than on the former examination; it was, in a manner, everted by growths within the cavity; the discharge was changed in quality, having become inodorous since the use of the chloride injections: the matter itself was very seldom sanguineous, almost always colourless, like water; and, instead of flowing constantly, was discharged only four or five times in the day, and that in floods, as the patient described it. If this flow were suppressed, there were pain and tumor of the abdomen, until relieved by a profuse evacuation. During one of these retentions, which lasted several days, and occasioned great anguish, we discovered, through the abdominal parietes,—become thin from emaciation,—several tumors, one of which appeared to be formed by the fundus uteri, and two others by the distended Fallopian tubes. Baths, injections, &c. facilitated the discharge, by removing the temporary and inflam-

matory congestion which had occasioned the retention. From that period, the appetite improved, and the patient gained some strength ; new symptoms, however, occurred, especially considerable œdema of the lower extremities, swelling of the face and hands, and gradual debility, terminating in death.

In this case were found the characters of ulceration, attended with growths, commencing at the *interior of the cervix*, and perhaps of the body, of the uterus ; it was there that the partial eversion was observed. The speculum might have led to some further notions, which we considered superfluous, though they might be of some importance in cases in which the *exterior* of the cervix,—that is, *the surface of the os uteri*, is ulcerated.

In point of fact, although the finger of the experienced practitioner distinguishes accurately between cancerous ulcer and unevennesses arising from cicatrices, and can only fail in detecting superficial erosions,—yet for persons less practised, the eye will be the best judge of the greyish colour, the uneven surface at the centre, and the livid redness of the everted, thick, and rugged borders of carcinomatous ulcerations. Manual examination may lead to a mistake, in a novice, when the disease has made great progress, and destroyed the os uteri, reduced the cervix to the shape of a funnel, &c. The practitioner, little used to such a state of things, will be at a loss to come to a decision, unless the use of the speculum, or the observation of the accessory symptoms and physical signs shall remove his perplexity. These accessory symptoms are often tolerably characteristic : gnawing, lancinating, and sometimes intense pains accompany even superficial ulceration, though, at other times, they are absent even in cases of deeply-seated disease—there are hæmorrhagies ; puriform, sanious, acrid, corrosive, and fetid discharges, &c. When phagedenic ulceration has advanced in depth and extent, destroyed the cervix uteri, invaded the upper part of the vagina, attacked even its whole length, and its whole substance in several places,—the neighbouring organs are then soon perforated ; the bladder and rectum permit the urine and fæces to escape by fistulous openings at their lower

extremities; occasionally, the peritonæum has been perforated, and the patient has died of acute peritonitis. M. Dance has known this to occur in four instances*, and he has observed a fungus to penetrate into the bladder, and, by obstructing the urethra, cause retention of the urine; he has also seen, during the progress of a considerable ulceration, surrounded and preceded by inflammation, the ureters entirely obliterated, loaded with urine, and presenting the volume of a small intestine (*Arch. de méd.* oct. 1829). We have ourselves frequently observed, in post-mortem examinations, disorders, the existence of which might have been supposed incompatible with life: the viscera of the pelvis have been entirely destroyed or blended together in shapeless, ulcerated, softened, almost pultaceous masses,—a real detritus of these organs, of a greyish or brownish colour, mixed with shreds in which their tissue is, to a certain point, still distinguishable, and with scirrhous, fibrous, or encephaloid fragments.

Such changes cannot fail to bring on constitutional derangements, gradually proceeding to the last degree of exhaustion, marasmus, and even to death; the marasmus, however, is not a simple effect of debility; it is not a common hectic; if it sometimes shew itself simply in universal withering,—the bones appearing ready to come through the skin,—it is more frequently combined with certain characteristics, which have procured for this state of things the name of *cancerous diathesis*. This condition ought to be accurately distinguished from the disposition to cancer, which is also general, but often unattended with outward signs, and which is sometimes only detected by the recurrence of cancer in a

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* A case of this kind is related in the Medical and Physical Journal:—Mrs. B——, aged thirty-six, after suffering with symptoms of diseased uterus for about three years, was seized with excruciating pain, and died in fourteen hours after this attack. *Dissection.*—Peritonitis. The uterus was enlarged but not very considerably; and, at its fundus, an ulcer, about the size of a shilling, had opened into the abdomen. The coats of the uterus were much thickened, but there was no scirrhosity. The internal surface of the ulcer was about the size of a crown piece. There was no ulceration at the cervix, as described by Dr. Adams as the usual seat of malignant ulcer; of which this was a decided case. By Dr. Heywood, vol. xxiii, page 300.—Tr.

part where it had been previously destroyed, or in a different part altogether.

The principal remaining characters of cancerous diathesis are as follow:—the complexion pale, wan, yellowish, waxy, sometimes of a violet colour, or beset with livid spots, more especially around the eyes and nose; the flesh soft and flabby; the feet anasarcous; extreme turgescence, excessive debility; sleeplessness; the pulse generally feeble and slow, except during the fits of hectic fever; sometimes congestion of the lymphatic glands of the groin and loins; frequently transient or permanent pains in the kidneys, limbs, and even fingers; pains occasionally excruciating, calling forth tears and groans, and producing an habitual contraction of the face from suffering; fracture of some of the long bones* by mere muscular action or slight external violence; the appearance of tumor or cancerous ulceration in other parts than those originally attacked†,—in the face, the mammæ, the liver, the mesentery (*Bayle* and *Cayol*), not to mention the Fallopian tubes and ovaria, which partake more commonly in the disease, though by extension rather than by diathesis; and still more so, when the emaciation and debility have advanced to a great degree, and numerous aphthæ are found in the mouth and throat, attended sometimes with confluent inflammation of the mucous membrane which lines these cavities. This kind of inflammation, producing a false membrane, thick and easily detached, is frequently observed in the vagina and os externum.

The general symptoms, like the local derangement, vary considerably in the rapidity and regularity of their progress, in different persons: sometimes, and especially in the very young, the disease makes frightful havoc in a very few months, destroying the sufferer in less than a year; in other cases, many years pass away in wearisome pain,—relieved, it may be, by a cheering interval of improvement for some

* This observation of the authors confirms the statement made in the Medico-Chirurgical Transactions, that fracture of the long bones is a frequent combination with cancer. Vol. xvii, p. 51.—Tr.

† The combination of scirrhous pylorus with cancer uteri is by no means unfrequent. Travers. *Med. Chirurg. Transact.* vol. xvii.—Tr.

weeks or months. Even the attendant entertains a hope in observing the progress of the ulceration checked, the swelling subside, and the extent of the diseased surface becoming limited,—an improvement which he attributes to the remedies employed, though unhappily the patient is not found to amend proportionably with their continuation; and even the good effects, which are realized under the care of one practitioner, have been so transitory, as soon to lead the patient to have recourse to another.

The treatment, in fact, of this disease is rarely the same for any length of time: encouraged and cheered by palliatives, the patient is dispirited when their influence ceases, and frequently betakes herself in succession to the nostrums of old women and empirics; because, in fact, this disease is seldom cured, the best treatment being only palliative.

The palliative treatment consists in emollients and narcotics, in the form of baths, hip-baths, injections, enemata, ointments, cataplasms, (introduced even into the vagina according to the plan of Chaussier, and that of M. Guillou), pills, diet-drinks, &c. To these should be added astringent injections to check the hæmorrhagies: chloride injections for cleansing and antiseptic purposes; scarifications of the skin in cases of considerable anasarca; emulsions and milk, when the mouth, throat, &c. are affected by aphthæ.

With respect to curative treatment, no confidence can be placed in hemlock, in mercury (if the disease be confirmed cancer), or in the iodine of late repute, which, like most other remedies, checks the disease only for a time. Cauterization, with total or partial excision, are the only real means of cure; it is obvious that total excision alone would apply to a vast number of cases, viz. those of interior ulceration: partial excision, and that of the cervix, would be proper only when the os uteri had begun to ulcerate; but it is in such a case that cauterization would be particularly indicated. Performed, as we have shewn, with the nitrate of silver, or better with potassa, occasionally with the nitrate of mercury,—this operation may lead to a complete cure of ulcers which are very small, well circumscribed, recent, and apparently owing rather to local irritation than to cancerous cachexia,—the result, for

instance, of syphilitic chancre, though resisting the anti-venereal treatment and proceeding in an irritable manner, with the physical appearances of the *noli me tangere*.

CASES.

1. *Incipient ulceration ; hereditary cancer.*

It is seldom that we meet with incipient ulceration of the uterus ; its characters are little marked and very equivocal, and the following cases might be appended, with great propriety, to the chapters on chronic metritis. For the present, we would remark, that, however indecisive and obscure the facts, the two affections, classed together in this place, exhibit, in a striking manner, the influence of hereditary disposition.

1. Madame la Marquise de F——, twenty-five years of age, whose mother had been affected with ulcerous cancer of the uterus, was married in her twentieth year, became pregnant, and was delivered by the help of the forceps, after which she was attacked with peritonitis, and from that period became subject to pains in the lower part of the abdomen ; obstinate constipation ensued, and several successive miscarriages at the second or third month. In 1828, draggings were felt in the left iliac fossa, and a sense of weight about the lower parts of the abdomen ; the catamenia became irregular in their periods and continuance, and discharges of blood sometimes followed excitement of the uterine organs.

On examination with the speculum, the uterus was discovered to be low down ; its orifice, directed backward, rested upon the coccyx (I was obliged to introduce the lever in order to bring the orifice to the centre of the opening in the speculum) ; the parts were exceedingly tender ; the internal surface of the vagina was of a deep red colour ; its cuticle was detached in several points from the mucous surface ; the os uteri,

of twice its usual size, and of a deep brown colour, was considerably excoriated; its borders were ulcerated and presented clefts of a deep red appearance; discharges of a yellowish white hue flowed from the interior of the cervix.

In the month of Sept. 1829, the cervix uteri was found to be diminished in volume, and almost restored to its natural condition; the os uteri was slightly rose-coloured and beset with several small red spots resembling flea-bites; its border was smoother and turned inwards; the surface of the vagina was smooth, its tissue lax, but healthy throughout; the discharge was of a creamy appearance and very moderate in quantity. (See Pl. XXVII. fig. 2.)

It is especially to be remarked that one of the patient's sisters, who had been married for ten years, had several fibrous tumors in the uterus; and that a third sister, a nun, was also affected with a serious disease of the same organ.

Reflections. This case seems to present two predispositions, sometimes confounded together, sometimes distinct from each other,—viz. 1, to diseases of the uterus, in general; and 2, to cancer. Both may be hereditary.

2. We have met with a case in which the patient, after a very severe inflammatory affection of one of the uterine appendages, observed an abscess to open by the rectum. This disease left a scirrhous tumefaction of the uterus, of considerable extent, accompanied for a time by acute pains, which were removed by antiphlogistics. At the present time, the patient having lived to be a great grandmother, the uterus is greatly enlarged, very hard, its orifice presenting a whitish cartilaginous appearance. This person had five daughters, all affected with disease of the uterus.

Madame C——, the eldest, fifty-eight years of age, was affected with slight hæmorrhagy, mistaken for a return of the catamenia, which had ceased for some years: she was in other respects in good health. On examination, a small polypus, scarcely as large as a pea, was discovered at the os uteri. I twisted it round between the thumb and forefinger, and brought it away at its filiform pedicle.

The daughter of this person had, some time afterwards,

on the right labium of the os externum, a polypus as large as a full-grown cherry, with a small pedicle, which I removed with the scissors, by the advice of the Baron Dubois.

Madame L——, the second sister of Madame C——, was delivered of her first infant by the use of the forceps, and the perinæum was lacerated as far as the anus; from this period, a kind of artificial perinæum, made of silver, was employed, and supported by a T bandage; the patient was, notwithstanding, subject to prolapsus uteri, and, afterwards, to a softish and considerable congestion of the body and cervix of that organ, accompanied with pains; the os uteri was ulcerated at its surface.

Madame R——, the youngest of the sisters, forty-seven years of age, consulted me in consequence of pains which she felt in the left iliac fossa, accompanied with menorrhagia. The cervix uteri was of the size of a large chesnut, with a knotty surface, of a deep red colour, and excoriated in many points, the body of the organ adhering to the left side. On the 20th March, 1830, it appeared that, during the last seven months, the patient had wasted considerably; the tumefaction of the cervix uteri was much increased, its surface was more uneven; the adhesion of the body of the organ was further extended on the left side; the os uteri was drawn towards this point of the pelvis, so that it was impossible to bring it to the centre and examine it with the speculum.

In the case of a fourth sister of the same family, fifty years of age, we discovered anteversio uteri, accompanied with a tumor in the anterior paries of the organ.

Reflections. We have met with many cases of uterine diseases in persons whose mothers had died of affections of that organ; others have been unable to state the precise nature of the affection which proved fatal, though we learned that it occurred at the period of the cessation of the catamenia*.

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* The proofs, adduced to establish the point contended for in these cases, appear to me very insufficient.—Tr.

2. *Ulcerous cancer.—Temporary advantages from sarsaparilla.*

Madame R——, forty-one years of age, had four pregnancies; the two first proceeded to the full period, the third to the eighth month, and the last ended in miscarriage in the second month. She had been affected several times with syphilis. In 1821, there was abundant leucorrhœa, with pains in the region of the sacrum, draggings of the stomach at the approach of the catamenia, and transient lancinating pains in the lower part of the pelvis. On the 20th of April, 1822, these symptoms were followed by menorrhagia, more or less abundant and repeated at irregular intervals, and afterwards by a mucous discharge sometimes containing membranous flakes. Since the month of September, a sense of weight was felt in the anus, pains in the loins, dragging in the hips, and tenderness in the epigastrium; sleeplessness ensued, with numbness, cramps in the limbs, loss of appetite; at night time, shiverings, debility, and headache.

Among other remedies, powdered sarsaparilla was administered, and with apparent temporary advantage; but the patient died Aug. 8, 1823. The appearance of the os uteri on the 6th of March is given in Pl. XXVIII. fig. 4.

On *examination* post mortem, all the abdominal viscera were healthy, the uterus was of a reddish brown colour; the left ovarium was in its natural state; the left Fallopian tube was curved backward and adhered to the posterior paries of the vagina in the recto-vaginal fold. The right ovarium was of its usual form and size; but, between this organ and the Fallopian tube of the same side, there was a softish encysted tumor, strongly injected, containing a hard body which slipped from between the two fingers on compression. This tumor, which was round, and floating in muco-sanguineous fluid; was nearly eighteen lines in diameter. It cut easily with the scalpel, and it is remarkable that it consisted of a red and entirely fibrous tissue. The whole of the cellular tissue which commonly surrounds the vagina, the rectum, and the bladder,

was entirely scirrhous. The fundus of the superior half of the body of the uterus was all that remained of this organ; its inferior part, the whole of its body, and the cervix uteri, were all consumed by the ulcer, though the disease could not be perceived by the eye until the last month. The peritonæum was the only means of communication between the vagina and the remaining portion of the uterus. There was even a perforation of the anterior paries of the uterus, communicating with the cavity of the pelvis and with the bladder.

Reflections. This case furnishes a new proof that the state of the os uteri does not always denote the precise condition of the remaining part of the uterus. The nature of the discharge would be, in many cases, a much better guide than the appearance of the os uteri.

It happens, more frequently perhaps than is supposed, that it is at the interior of the cervix uteri, near the cervico-uterine orifice, that ulceration commences: from this point it spreads through the whole extent of the cervix, and appears at the os uteri only after it has consumed the substance of the cervix, and sometimes that of the parts in contact with it.

This circumstance explains how it is that ulcerous cancer, till then undiscovered, appears to make such rapid progress, and produce such dreadful havoc, in a few days only after its existence has been ascertained on examination. It also confirms our observations upon the caution requisite in extirpating the cervix of the uterus, or rather the part of it which projects into the vagina, which alone can be removed by the scalpel. What serious disease may be left in these cases, while the patient is supposed to have been completely cured!

We will further remark, that diseases of the cervix uteri are almost always accompanied with some affection of the appendages of that organ, or, with tumors of different natures, situated interiorly in the proper tissue of the uterus, or at its abdominal surface in the surrounding tissue,—circumstances which it is generally impossible to ascertain by examination. Of what use is the excision of the os uteri with these complications?

3. *Ulcerous cancer, supposed to be syphilitic, and treated as such.*

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2. Antoinette Leg——, twenty-six years of age and unmarried, had an abortion in her twenty-second year, at the fourth month ; since that period she had been subject to abundant leucorrhœa, the catamenia were suppressed, and pains were afterwards felt in the loins, and a sense of weight in the anus. There were also violent hæmorrhagy, and pains in the pelvis. The cervix uteri was ulcerated, but the discharges thus occasioned were checked by rest. Ten months afterwards, there was great exhaustion ; the patient had undergone an anti-syphilitic treatment in consequence of a discharge supposed to be gonorrhœal ; excessive hæmorrhagy followed, and she died in four days.

On *examination* post mortem, the lungs were entirely destroyed ; the thorax contained only a shapeless putrid mass, with fluid of a yellowish white appearance ; a portion of this fluid had passed through a fistulous opening of the diaphragm into the abdomen. This last cavity was filled with similar fluid to that contained in the thorax. No ulceration was found in any of the viscera ; the colon and the rectum contained some solid fæces.

On the right psoas muscle there was a white, lardaceous tumor, of the volume of a large egg, communicating with the tubular angle of the uterus on the same side ; in the midst of this tumor was some thick, puriform matter. The fundus of the uterus corresponded with the middle part of the sacrum. The ligaments of the uterus were entirely destroyed ; the hand could be passed through the ulceration into the pelvic cavity.

Behind, between the rectum and the posterior part of the vagina, and in front, between the anterior paries of the

* In this case there is nothing of particular importance, though it may be right to observe, that a mercurial treatment, at first adopted, materially aggravated the complaint.—Tr.

vagina and the bladder, the ovaria, and Fallopian tubes, were agglutinated to the body of the uterus. These appendages were involved in the same disease as that of the uterus. The remains of this latter organ presented a compact lardaceous mass, twenty lines in thickness, and without any trace of its original character. The ulcerated surface was slate-coloured, as also the unattached extremities of the Fallopian tubes and ovariä. The interior of the vagina was also of a dark grey colour, beset with small yellow tumors, imbued with ichorous matter of insufferable fetor. (See Plate XXX. fig. 2.)

3. Mademoiselle Clotilde T——, twenty-eight years of age, entered the Maison de Santé March 5, 1830. She had consulted several persons for supposed syphilis, and a mercurial treatment had been adopted by M. Cullerier, M. Lisfranc, and others, though doubtful as to the real nature of the disease.

The pudenda, from the os externum to the anus, were beset with cristiform, softish growths, of a light rose colour, from one to three lines in length, exuding an abundant greenish discharge, rather serous than purulent. By the help of the speculum, the vagina was observed to be pale, slightly violet-coloured, and beset, all along, with small, soft, whitish tubercles. The cervix uteri, close to the orifice of the vagina, was about eighteen or twenty lines in diameter: the os uteri, broad and open, presented, at its circumference, elevations and deep furrows, of a livid colour blended with red and dusky white. We were not able, on the present occasion, to discover with the speculum the whole extent of the part diseased; but we distinctly ascertained, with the finger, the hardness and unevenness of the borders of the orifice, its volume, and insensibility; and the complete immobility of the whole organ, and the scirrhous character of the ulcer: the tissue surrounding the vagina, in front and behind, already partook of the disease of the cervix uteri. (See Pl. XXVIII. fig. 3.)

In the month of April, 1830, I discovered an enormous scirrhus, which was passing into an ulcerous state; the cervix uteri had acquired this increase in volume by the separation of its labia. The catamenia, which appeared in the

thirteenth year, began to be profuse in the twenty-fourth, amounting at last to abundant hæmorrhagies. The patient had been exposed to syphilitic infection; a few weeks afterwards, she discovered the excrescences. The hæmorrhagies increased, the tumor at the cervix uteri became larger, and the patient died at the end of June, 1830.

4. *Ulcerous cancer of the rectum extended to the uterus.*

A woman, twenty-eight years of age, who had been affected with obstinate constipation for fifteen days, and retention of the catamenia for five months, was found to have a voluminous tumor seated in the perinæum; the uterus was wedged in the pelvis, its fundus was felt above the pubes, of the volume of the fist. The vagina was filled with fæces. The patient died three weeks after entering the hospital.

On *examination* post mortem, the rectum was found to be the seat of a cancerous affection: its anterior paries, confounded with the posterior paries of the uterus and the vagina, was more than an inch in thickness. The rectum was opened at the level of the sacro-vertebral projection; it closely adhered in that part to the fundus of the uterus, which was found raised to this height. This adhesion having retained the fæces, their weight conduced, with the progress of the ulcer, to hollow out, little by little, in the substance of the posterior paries of the uterus, a canal of three inches in length. The natural cavity of this viscus was entirely effaced, as well as that of the cervix, in which there was a fistulous aperture, through which the fæces escaped. The orifice of the vagina being almost obliterated by the presence of the tumor, serious inconvenience resulted from the detention of the fæces in this canal (see plate XXXI). It is remarkable that the patient suffered little, notwithstanding this disease.

5. *Dropsy of the uterus followed by cancerous ulceration of its cervix.*

Madame Ad——, forty-two years of age, had been confined several times at the full period. Between her thirty-

eighth and fortieth year, she had twice miscarried, once at the third month, and again at the sixth. Since the last period, the catamenia had become very abundant; shortly afterwards, there was continual hæmorrhagy; the abdomen was enlarged so as to induce suspicion of pregnancy; the lower limbs were anasarcous. The patient complained only of pain in the hypogastrium.

This state of things had continued for a year, when there was an abundant discharge of serous fluid per vaginam, which was continued, by gushes, for six months. During this period, some sanguineous coagula were discharged; the swelling of the limbs subsided, while the pains in the uterine regions became more acute and even insupportable; the discharge continued, fever ensued, with sleeplessness, loss of appetite and strength, and complete emaciation.

On *examination*, we discovered an enormous cancer of the cervix uteri and vagina. The pudenda being destroyed, and the patient in a state of general exhaustion, no hopes were entertained of her recovery.

This dropsy seemed attributable to a hydatid mole, in which each vesicle of a certain volume became successively opened.

6. *Ulceration of the interior of the cervix.—Disorganisation of the body of the uterus.—Tubercles of different organs.*

Madame Prot—— had heen delivered four times at the full term, and miscarried once, in the fifth month; till her fortieth year, the catamenia had been regular in their return; five years afterwards, there was considerable hæmorrhagy, accompanied with pains and draggings in the loins. These were succeeded by a greenish discharge, with a sense of weight in the anus, draggings in the groins, and obstinate constipation.

On examination per vaginam, February 11, 1820, the os uteri was found to be hard and tumefied, its volume from eighteen to twenty lines in diameter; its orifice, widely open, was funnel-shaped, with circular, thin, hard, and cartilaginous

borders (see Pl. XXIII, fig. 2). The symptoms continued till the 15th of June, when the patent died.

On *examination* post mortem, the summit of the right lung was found studded with tubercles; about a quart of serous effusion was found in the abdomen; the omentum, peritonæum, and intestines presented the natural appearance. The stomach was small, and its parietes very thick; the liver brown and knotty at its surface from the presence of large tubercles. A conical tumor, about two inches in length, occupied the three left lateral regions of the abdomen, and contained a quantity of serous fluid. This tumor adhered, by its broadest extremity, to the centre of the left iliac fossa, by means of a fibro-cellular tissue; backward, it was attached by a similar tissue to the psoas muscle on that side, and to the lumbar, and last dorsal, vertebræ; its summit was fixed in front of the interior surface of the three lower false ribs; above, to the anterior part of the abdominal surface of the diaphragm, and the suspensory ligament of the liver, while its posterior surface covered the large vessels of the abdomen.

In attempting to destroy the strong adhesions of the tumor, its membranous parietes burst, and about a quart of sero-sanguineous fluid escaped. The kidney and ureter on the left side were enclosed within the substance of its anterior paries; the kidney was of a slight rose-colour, softened and rather more voluminous than the right, which was in its natural state. The tumor appeared to us to have been formed by an effusion produced behind the portion of the peritonæum which covers the left lateral region: an imperfect cyst was formed in that part, with thick and uneven parietes. A portion of the fluid had passed into the meshes of the cellular tissue of the pelvis, of the external parts, and of the lower limbs.

The fundus of the uterus was found as high as the sacro-vertebral projection. A portion of small intestine, in contact with the right upper angle of this organ, was adhering to it, inflamed and ulcerated. The posterior surface of the uterus was covered with small ulcerations of little depth, some of which extended to the rectum, to which the uterus adhered. The Fallopian tubes and ovaria were very small and healthy.

Divided upon the median line, the uterus presented no other cavity than a slight furrow from two to three lines in diameter, in the middle of which there was a small, fleshy, red, flattened body, of some lines in thickness, and with all the characters of polypus.

The parietes of the uterus were fourteen lines in thickness, its tissue lardaceous, its posterior paries of a deep red colour, its anterior almost white. The bladder, with its thick red parietes, presented an ulceration of an inch in breadth, surrounded with hard horny growths, and communicating with the vagina; each of the ureters was seven lines in diameter.

No change had taken place in the form of the os uteri since February; that is, there was no appearance of ulceration upon that part of the cervix which projected into the vagina, or the part adjoining that canal, while the whole interior of the cervix was ulcerated. (See Pl. XXX, fig. 1.)

Reflections. This case is remarkable in several respects:—1, ulceration took place within the cervix; the indurated os uteri preserved the same form as on the first examination: there was no ulceration about the vagina. 2, There were adhesions to the bladder, to a portion of intestine, and to the rectum. One of the lungs, together with the liver, was studded with tubercles, and the left kidney was softened. In this state of things, what would have been the consequence of attempting the excision of the uterus? And yet, the condition of the patient, and of the uterine organs, when she entered the hospital, appeared very favourable to such an operation.

7. *Cancerous ulceration of the cervix uteri coincident with calculi of the bladder, and numerous wens in different parts of the body.* (*Atlas*, pl. XXVIII, fig. 6.)

Madame B—— aged forty-four years, had been subject, in her infancy, to swellings of the neck. The catamenia

made their first appearance in her seventeenth year, when a swelling of the knee was observed, without apparent inflammation. She was married, and had two children; her daughter died of consumption in her thirteenth year; about this time, several tumors appeared in the axilla, near the left breast, upon the abdomen, near the pubes, and extending to the femora, unattended with pain; others, on the top of the head, were however very tender. In her forty-third year, there was obstinate and habitual constipation, with difficulty in the passage of the fæces and urine, a sense of weight in the anus, when walking and in the erect position, and frequent and abundant discharges of blood.

The patient entered the hospital October 1829. She was then excessively pale and thin, and suffered much pain in the uterine organs. The cervix uteri, of the size of a small orange, presented a knotty surface, of a dusky yellow appearance; the borders of its orifice were hard, as it were cut off obliquely, and insensible to the touch. The tender part was in the canal of the urethra; the finger detected some unevennesses on its surface near the vagina, and the patient complained of acute pain on pressure. The meatus was also tender, and of a deep red colour.

During the third month of the patient's stay in the hospital, one of the wens on the head became inflamed and very painful; there were also feverish and nervous attacks, and we were obliged to make a crucial incision, by which a hard, white, concrete mass was removed. Shortly afterwards, there was a serous discharge per vaginam, at first, without colour or smell, but, some weeks afterwards, sanious, greyish, and very fetid; the pains in the neck of the bladder were excruciating, the patient occasionally voiding small gravel-stones, of an angular form, which produced frightful lacerations.

The patient died three months after leaving the hospital. She was reduced to a state of complete marasmus. The entire destruction of the cervix uteri was effected during the last two months of the disease.

8. *Cancerous ulceration, and exterior ulceration of the uterus and its appendages.—Ossification of the uterine vessels.*

Madame Sal—— entered the Maison de Santé October 16th, 1829. She was thirty-eight years of age; the catamenia appeared in the thirteenth year; she was married in the sixteenth, and had five children in ten years; the catamenia appeared for some months in several pregnancies.

Since the last of these periods, the catamenia had been more abundant and frequent than formerly; an enormous coagulum of blood escaped one day, per vaginam, followed by hæmorrhagy, with fainting. Some months afterwards, a fresh discharge of blood took place, followed by a flow of sero-sanguineous fluid. From that period there were loss of appetite, sleeplessness, pains in the loins and back, but none in the lower part of the abdomen or groins; fever came on every night, and continued till the morning. From the period of her arrival at the hospital, the sanguineous discharge was much abated, and was generally purulent and of a putrid fetor. We discovered that an ulcer had destroyed a great portion of the cervix uteri, that the borders of its orifice were hard and deeply ulcerated on one side, and that the remaining part was occupied by a mass, which proved to be a hard coagulum, as large as a pear. The fever continued, accompanied with all the symptoms of peritonitis, and the patient died.

On *examination* post mortem, there was tympanitis, with redness and thickening of the peritonæum. The posterior paries of the bladder was red and strongly injected, its tissue thicker than in the other parts.

The uterus was not much larger than in its usual state; there was ulceration on its anterior and right lateral surface, and at the tubular angle of the same side, with several small tumors of white matter on the surface of the organ. The right ovarium was in a cancerous state, rather larger than its natural size; the other was folded backward, and adhered to the posterior and left lateral paries of the uterus. The external and posterior surface of this organ was beset with

cancerous growths, extending all along the uterine surface of the rectum. Divided laterally, the uterus presented, instead of a cavity, two compact hemispheres, of greasy appearance, and of a pale rose colour, with some remaining shreds of the cervix. The lateral vessels were very large, and ossified, grating between the scissors. The interior of the vagina, like the recto-vaginal fold, presented numerous elevations, of a dusky grey or livid red appearance.

This condition of the vessels is commonly observed in cancer of the uterus; in acquiring thickness, they lose their elasticity, and partake of the induration of the diseased organ; and, when hardened and laid open by ulceration, they occasion hæmorrhagies, which may be checked by a mere coagulum, but not by means which, acting only upon the vitality of the tissues, exercise no chemical or physical effect upon the blood. (*Atlas*, pl. XXIX, fig. 1, 2, 3.)

9. *Induration and thickening of the uterus; granulations in its tissue.—Destruction of the whole cervix.—Adhesion of the ovaria.*

Madame Chaud——, forty-seven years of age, had complained, for three months, of pains in the loins, attended with suppression of the catamenia; she had also been affected with violent menorrhagia. M. Dubois discovered that the whole of the cervix uteri was destroyed.

The catamenia had appeared in the fifteenth year; the patient was married in her twenty-third, and had three deliveries, at the full term, in fourteen years. For twenty years, the catamenia, though regular in period, were diminished in quantity. Towards the end of that period, they continued only for a few hours, and, after it, entirely ceased; the patient only experienced a sense of weight and uneasiness in the pelvis. For some weeks past, the hæmorrhagies were renewed, accompanied with violent pains in the loins and left iliac region; there were also nausea and vomiting a few days afterwards, with tympanitis of the abdomen, and anasarca of the lower limbs; the respiration became gradually very diffi-

cult; there was an incessant discharge, per vaginam, of a sanious, greyish, fetid fluid, which excoriated the pudenda: these parts became gangrenous, and the patient expired, with dreadful sufferings, a month after entering the hospital.

On *examination* post mortem, we found about three pints of a yellowish, serous effusion in the abdomen; the broad ligaments were red and thickened; the uterus was twice its usual size from before to behind; the right Fallopian tube and ovarium were healthy; the left Fallopian tube was folded backward, its pavilion adhering to the posterior surface of the uterus; the left ovarium was embedded in the broad ligament;—a condition probably owing to inflammation of these folds of the peritonæum, and to the adhesions which it had produced. The cervix of the uterus was entirely destroyed; there were only remaining some blackish portions, and small shreds of a red-brown colour. The interior of the vagina presented the same appearance.

Divided upon the median line, the body of the uterus presented a mass traversed by a slight longitudinal furrow. Its parietes were thick, of a whitish tissue, containing filaments, which proceeded from the orifice towards the fundus, a direction which we considered as occasioned by the natural disposition of the layers of the uterine tissue, rendered more perceptible during the existence of disease than in the healthy state. We have never met with this circumstance in any subsequent case.

After maceration for some days, we observed some small granulations, of a bluish-white colour, spread in abundance through the tissue of the body of the uterus. In the shreds, presented by the ulcerated part, we distinguished also some globular concretions, of which some were easily crushed, while others resisted considerable compression between the fingers.

In many other cases we have observed these concretions of the cervix in the state of simple induration, or of scirrhus. (*Atlas*, pl. XXVIII, fig. 7 and 8.)

10. *Ulcer of the cervix uteri.—Pain and hæmorrhagy absent, or occurring late in the disease.*

1, 2, 3*.

11. *Destruction of the cervix uteri, of part of the vagina, and neighbouring organs.—Pain and hæmorrhagy absent, or occurring late in the disease.*

1, 2†.

12. *Ulceration of the cervix uteri and of the neighbouring organs, attributable to a local cause.*

1‡.
2§.

13. *Ulcers of the cervix uteri penetrating into the neighbouring organs, with various complications.*

1, 2, 3||.

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*† The details of these cases are omitted, as they only illustrate the respective titles.—Tr.

‡ In this case the cervix uteri was destroyed by ulceration; the fundus of the bladder opened into the vagina; in the latter were four calculi, with a considerable quantity of gravel. There was no pain, but incontinence of urine. It was doubted whether the opening of the bladder was caused by a fall, which happened a short time before, or proceeded from the pessary, said to have been left in the vagina, but which was not found there.—Tr.

§ In this case the placenta was torn away after a difficult labour, in small portions; and to this circumstance is attributed the origin of the diseased state of the uterus.—Tr.

|| The three cases given under this head contain no fact of sufficient importance to render it necessary to insert them in detail. Madame Boivin remarks, at the conclusion, that she has seen a certain number of midwives affected with cancer of the uterus, rectum, and stomach, and attributes it to the fatigue to which their occupation subjects them.—Tr.

CHAPTER VI.

OF FUNGOUS CANCER.

UNDER this head may be classed all cancerous excrescences, of whatever form, origin, or extent: as we have, however, already spoken of polypus, and of tuberous cancer, and as the description of cancerous polypus would be unnecessary; and, lastly, as we have already mentioned, under the head of ulcerous cancer, those fungous growths which are a little elevated, and assume the form of the nipple or the cock's comb, arising from an ulcerous or malignant surface, we shall confine our attention at present to those prominent, elongated, and sometimes pediculated, fungous growths, which spring from an ulcerated surface, not yet attended by deep erosion.

There are two forms of this disease, neither of which have been sufficiently described by the writers of our country, dependent upon the same kind of disease, leading to the same results, and presenting the same symptoms, especially that of profuse discharges of serous fluid, limpid, or sanguineous, sometimes alternately with a flow of red appearance*.

1. The clustered fungus, or that presented in the form of white currants, is not generally pediculated, but consists of a collection of smooth, even, softish globules, vesicular in appearance, accumulated around the os uteri, and capable of becoming ulcerated at their surface, as we are led to imagine by the figure given by M. Récamier in a case probably of this kind[1]. These globular granules may be entirely

[1] *Revue Médicale*, 1825, t. iv.

* Given literally.—TR.

destroyed, and replaced by destructive and rapidly fatal ulceration.

2. Tumors with a narrow base, with one or more pedicles, may also spring from the os uteri, still free from ulceration, but affected with carcinoma, and may undoubtedly co-exist with ulceration of the interior of the uterus, and even of its cervix. We shall see, in fact, that frequently, after excision or spontaneous destruction of these fungi shooting into the vagina, the cervix uteri opens, and is destroyed, both inside and outside. In the general remarks of this section, we have alluded to the term *vivaces*, denoting growths generally cancerous, springing sometimes from the interior surface of the uterus, and even from the os uteri; there is perhaps little difference of form or dimension between these and the *cauliflower excrescences (choufleur)*[1], which we are about to describe*. Several English writers, particularly Clarke, use this term in speaking of some large growths, which, to a certain degree, resemble in appearance those syphilitic excrescences which have received a similar name (*choufleur*); these latter, however, are generally multiplex, of a moderate size, ramifying, hard, of a bluish colour, and not easily made to bleed; the former, on the contrary, is generally single, voluminous, soft, and its granulated, uneven surface consists of numerous globules, projecting, though not isolated, but

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[1] This is the mural cancer, or mushroom-like cancer of M. Duparcque. It is probably the same disease of the uterus as Baillie had described under the term polypus hæmatodes, consisting "of an irregular bloody substance, with a number of tattered processes hanging from it. This, when cut into, exhibits two different appearances of structure; the one appearance is that of a spongy mass, consisting of laminæ, with small interstitial cavities between them; the other is that of a very loose texture, consisting of large irregular cavities." (*Anat. pathol.*) Baillie, however, seems to understand that these excrescences originate within the uterus. The same may be said of the *medullary* or *cephalomatous* polypus of Hooper, of which the soft, lobulated tissue, and the small, granulated, whitish shreds, suspended by delicate fibres, agree much better with the result of our own observations respecting the structure of fungus of the os uteri.

* There are none of the affections of the uterus, about the real nature of which the opinion of practitioners is so unsettled, as those bearing the name of cauliflower excrescence of that organ. Dr. Gooch supposed the disease to be fungus hæmatodes,

rather joined together by a filamentous tissue, and surrounded by a very delicate vascular net-work, affording an issue for the blood on the slightest injury. In short, these tumors resemble, in consistence and, partly, in texture and colour, a torn portion of the placenta. Their pedicle alone presents some degree of firmness, and even it, like the rest, is reduced to membranous shreds, when tied by the ligature. This sudden withering and shrinking of the granules, which are speedily detached in shreds, upon the application of the ligature, shew the insufficiency of the descriptions hitherto given, and even of that by Clarke himself, who never exa-

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differing from the excrescences described by Herbiniaux and Levret, under the term *vivaces*, only as regards situation; and he states (p. 304),—"In Mr. Brodie's Museum there is a preparation of the uterus of a young woman, who died in St. James's Infirmary, of cancer of the breast: during the progress of the disease, she had a constant discharge from the vagina. The uterus was not examined during life, but after death it was found enlarged, and containing a vascular excrescence, which grew from the fundus and projected into its cavity; which Mr. Brodie tells me has precisely the appearance of cauliflower excrescence of the neck of the uterus."

The opinion that cauliflower excrescence, as described by Dr. J. Clarke, and afterwards by Sir C. Clarke, is fungoid or encephaloid disease of the cervix uteri, obtains some support from a case which occurred to me about six months ago; but that there are other malignant excrescences of the uterus, will be readily admitted upon reading the two papers published by Dr. J. Clarke; and it is singular, that in the same volume (iii), of the Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge, these and Dr. Denman's case are all given: this last is very interesting in another point of view.

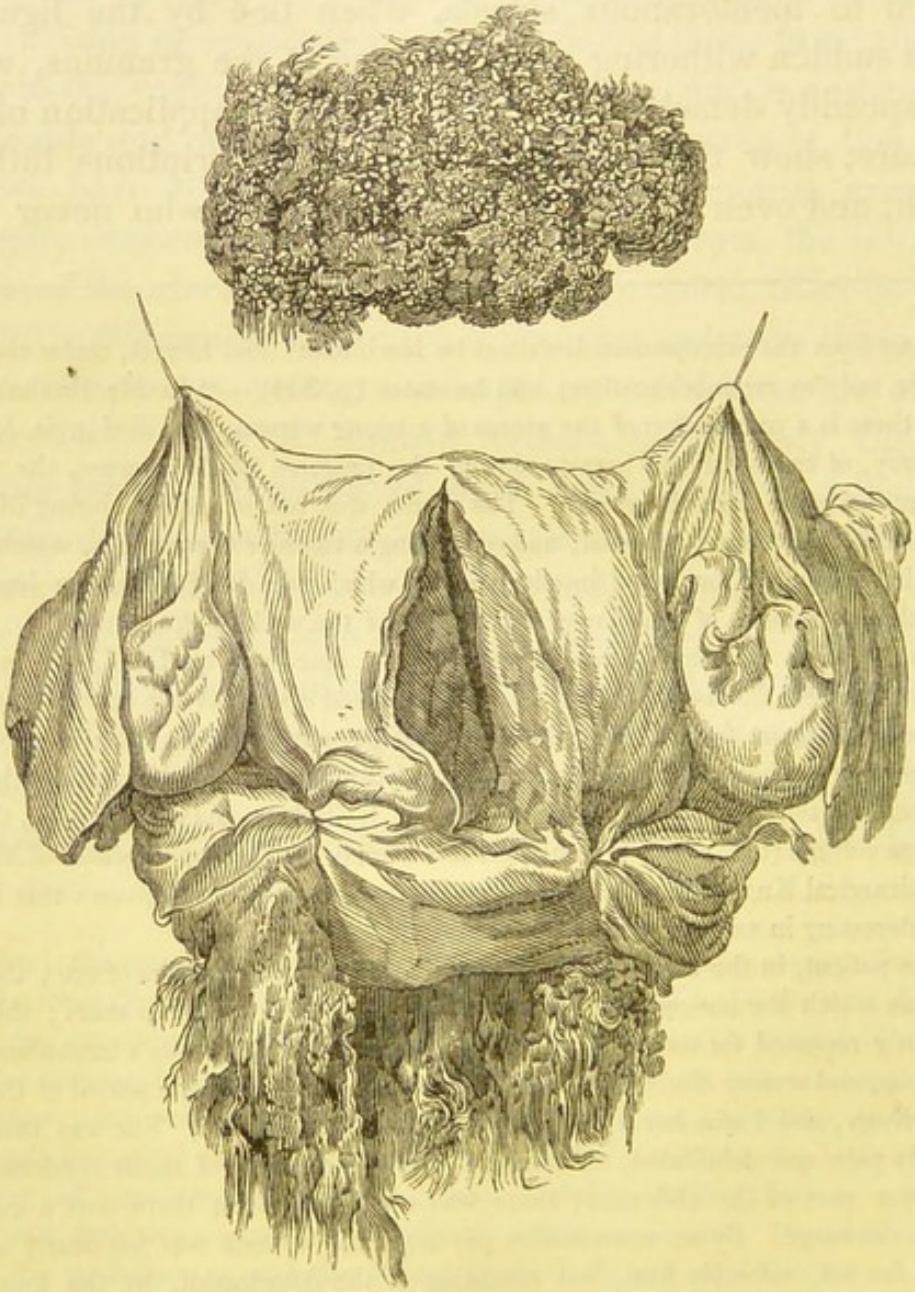
The patient, in the case which I observed, was about fifty years of age; the first symptom which she noticed was a profuse discharge upon going up stairs; this was frequently repeated for six months, and in the intervals there was a most abundant, inodorous, and watery discharge. She died eight months after the period of the first hæmorrhagy, and I saw her two months previous to her death. She was then excessively pale and debilitated, complained of no pain, but of slight tenderness of the lower part of the abdomen; there was no tumefaction; there was a copious watery discharge. By an examination per vaginam, a tumor was felt nearly of the size of the fist, tolerably firm, but admitting of the detachment, by the finger, of small white portions, streaked with florid blood, which was followed by hæmorrhagy. The tumor sprang from the whole circumference of the os uteri, except a small portion of its posterior part; it was rough and unequal on its surface, and was insensible; but there was some tenderness of the cervix itself, high up. On a post-mortem examination, some loose shreds were the only remnants of the tumor; a considerable portion of the cervix was converted into a brain-like substance, and small portions of the same substance were found in several parts of the tissue of the body of the uterus.

mined them with the speculum* before the operation. He is also mistaken in considering them as simply vascular, and

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This case resembled, in every point, those described by Dr. J. and Sir C. Clarke. It was one of encephalosis.

The subjoined wood-cut is copied from Sir C. Clarke's plate:—



It is particularly valuable and interesting, as being the first representation of this disease. The smaller figure conveys an exceedingly good idea of the disease as met with in the living body. The other shews the uterus of a patient who died with cauliflower excrescence.—Tr.

* Sir Charles Clarke observes—"As the tumor occupies the upper part of the vagina, it is of course, in the greater number of instances, concealed from view; but,

comparing them to *nævus*,—that is, what is called, in France, ‘ fongus hématode.’

We refer our readers, for details, to the subjoined cases, and shall conclude with a short account of the most important remarks supplied by this writer.

He very properly attributes the origin of fungus to local irritation, occasioned by delivery or other excitement of the uterine organs,—a circumstance common to all the cancerous affections of the cervix uteri ; but he is, perhaps, wrong in rejecting the possibility of a syphilitic origin. The disease is, undoubtedly, not syphilitic ; but may not syphilis, like miscarriage, &c. bring on chronic inflammation, and, afterwards, cancerous disease of the os uteri ? He has observed this disease in the young and in the aged ; he has seen it in the case of a pregnant person, and we have quoted above, under the head of tuberous cancer, a case of a similar co-existence, assignable perhaps to the fungous form, of which we are treating.

In the case which he describes, considerable hæmorrhagies had induced exhaustion, which proved fatal three days after parturition ; labour began with an aqueous discharge, brought on by violent exercise : those who were first consulted supposed that they felt a portion of the placenta detached, which had been situated over the os uteri ; a condition sufficiently explanatory of the preceding hæmorrhagies. On examination post mortem, some irregular, softish shreds, attached to the os uteri, were all that was found ; the mass of the tumor had disappeared,—dragged away, doubtless, in part, by the head of the fœtus, or destroyed in consequence of the crushing which it necessarily underwent at the period of delivery.

This destruction is, in fact, readily and speedily effected, as we have already remarked, and as the same author proves in another case.

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in three or four cases, in which the size of the tumor was so large as to fill the whole canal, and to protrude between the labia, the author was enabled to see the disease, and the colour of the tumor was found to be that which may be called a bright flesh-colour.” vol. ii, p. 59.—Tr.

A person, sixty years of age, became exhausted by profuse serous and sanguineous discharges; the ligature applied to the pedicle of a cauliflower excrescence, as near as possible to its insertion, came away on the seventh day, bringing with it only a portion of some pulpy substance. It should be observed that, a long time before the operation, some fragments and shreds of fungus had been expelled. The return of the disease, after three years, led to the application of a second ligature; but the patient died, notwithstanding, three months afterwards. On examination, an enormous tumor was found situated at the left posterior side of the uterus.

The ligature may therefore effect a temporary, though not a permanent, cure of this form of cancer; the same may be said of excision. The cure would generally, perhaps, be more certain, if the os uteri, or that part of it where the fungus was seated, were removed, together with the excrescence, or after its separation by the ligature; a case will presently be given in support of this operation. It may also be proper, as Clarke recommends, to cauterize this part after the removal of the excrescence by the ligature; but it must be previously ascertained that there is no ulceration within the uterus or its cervix, or that the scirrhus has not extended too high into the substance of the viscus. The astringent injections which he prescribes for the immediate reduction of the fungus, or for contraction of the vagina and compression of the tumor, or, lastly, for the diminution of the serosanguineous discharges, are of little value; and the same may be said of all the interior or exterior, discutient, purifying, derivative, or soothing remedies which he recommends,—means which are, at the most, palliative. In regard to astringents, in particular, Clarke's confidence in them appears founded on a very questionable theory: he observes that the vagina, in such cases, is very relaxed, so that it allows the fungus to increase considerably: it is with a view to brace and strengthen this canal, that he uses tonic remedies and applications. If astringents present any real advantages, it is, however, by their action upon the growth itself, and upon the vessels with which it is traversed.

CASES.

1. *Excrescences resembling white currants, accompanied with abundant serous discharge.*

1. We were consulted, June 13th, 1822, in the case of a person excessively pale and weak, thirty-eight years of age; she had been confined with her first child in her fifteenth year, and, eight years afterwards, with twins; there was derangement in the returns of the catamenia, and sometimes menorrhagia; in 1819 there was hæmorrhagy with syncope, and, from this period, the discharges became much more frequent: there was no pain in the region of the uterus. During the year 1820, there was also a serous, inodorous, and colourless discharge, progressively increasing in quantity; the introduction of a catheter into the bladder proved that it did not proceed from that organ.

On examination, per vaginam, I discovered in this canal a softish tumor, with an uneven surface, and of the volume of an egg, and there was a most abundant discharge of limpid serum. On introducing the speculum, the tumor was found to be of a pale rose colour, and to consist of a score and a half of globules, resembling white currants, and surrounding the os uteri.

2. Mademoiselle Adele V——, forty years of age, had a natural labour at the age of thirty; the intervals between the catamenia became very long; towards the end of 1822, there were several hæmorrhagies, followed by copious, serous discharges; but there was no pain. On the 26th of Octr. 1823, we discovered in the vagina a softish, reddish tumor, rather smaller than an egg; it exuded a great quantity of limpid, inodorous serum (Pl. XXVII, fig. 6). From the period of January 1st, 1824, the hæmorrhagies came on suddenly, in abundance, and at intervals; when absent, the patient experienced only slight uneasiness; we found that, in the *course of the last year*, the cervix uteri had acquired the size of a

large plum (from fifteen to eighteen lines in diameter), and presented a smooth surface (Pl. XXVII, fig. 7); there was not the least trace of the previous tumor. There were pains in the regions of the loins, sacrum, and groins. The os uteri, *unulcerated*, was entirely insensible to the touch; there was a puriform discharge, per vaginam, daily increasing in quantity, and successively changing its nature, becoming yellowish, then greyish, and of a pungent odour.

Towards the termination of the disease there were fever, deafness, and vomitings of greenish matter; *the urine evidently flowed per vaginam.* It is to be observed that the perforation of the neck of the bladder had taken place before the ulceration of the os uteri had appeared. This latter part was of its natural form, being only rather larger, and affording a passage to the urine. It was only in the last month of the disease that the ulceration of the interior of the cervix attacked the anterior labium of its orifice, of which it destroyed the whole substance in a few days. Up to that time the seat of the ulcer could only be conjectured by the discharge of pus and of the urine. The patient died May 19th, 1824.

On post-mortem examination, the liver was found to be yellowish, and of a dense tissue; the small intestines were very contracted in their diameter. There was atrophy of the left kidney, and hypertrophy of the right; the ureters were very much dilated; the uterus was one-third larger than in its natural state; the posterior paries of its cervix was entirely destroyed, as well as the corresponding portion of the bladder. There was no *perforation of the vagina;* this canal, and the ovaria, were in a healthy state. At the interior surface, and at the fundus of the uterus, near the left angle, there was a small pediculated tumor, as large as an almond, with a red surface, solid to the touch, but containing only an albuminous fluid of an amber colour, and ropy between the fingers. This tumor was formed by a cyst, the tissue of which, a quarter of a line in thickness, presented two distinct layers.

Reflections. Of what date was this polypous tumor? was

it the source of the hæmorrhagies? or were they not rather owing to ulceration of the interior of the cervix uteri? Was the tumor produced by hypertrophy of the vesicular follicles of this organ? or did it consist of fleshy and cancerous growths?

2. *Fungous cancer, or cauliflower excrescence of the cervix uteri.*

1. Madame Dis——, a widow, thirty-four years of age, had two natural labours before her thirtieth year, when she became subject to hæmorrhagy, from the effort of defæcation, and from excitement of the uterine organs; the catamenia were generally in small quantities, and of short continuance; in the intervals, there was an excretion of a whitish fluid, which increased to a great extent. Three years afterwards, the patient was attacked with peritonitis, which produced pain in the left side, and was followed by habitual constipation. For fifteen days there was incessant menorrhagia.

On the 30th of May, 1825, we discovered, at the entrance of the vagina, a small pediculated polypus, as large as the extremity of the little finger; on the posterior labium of the os uteri, there was an irregular tumor, with a granulated surface, of a volume sufficiently large entirely to conceal the os uteri. This tumor, examined by the speculum, was lobulated, and of a deep red colour, exuding, on pressure, an abundant sanguineous fluid. I recommended excision, as the only treatment clearly indicated; the body of the uterus appearing to be in its natural state and free from adhesions.

2*.

3. *Cancerous cauliflower excrescence treated with the ligature.*

The subject of this case was forty-two years of age, the

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* This second case is omitted, as containing no additional fact.—Tr.

mother of eight children; it was five months since she had miscarried between the fourth and fifth month, without any assignable cause; from this period she was subject to abundant serous discharges, to pains in the loins and groins, to a sense of weight in the anus, and to habitual constipation, inducing a sanguineous discharge per vaginam during the effort of defæcation. The catamenia were regular in period, but more abundant than usual; the most distressing symptom was the *serous discharge*.

In the month of April, 1825, we discovered an uneven, lobulated, softish, granulated tumor, as large as an orange, and resembling, to the touch, a portion of the placenta, or the parenchyma of a vesicular mole; its surface, viewed by the speculum, of a deep red colour, was injected with very minute capillaries, exuding blood on the least pressure. Towards its insertion at the anterior labium of the os uteri, the tumor admitted of being depressed, and presented a neck with two pedicles, separated from each other, like the stems of a cauliflower; its pedicles were short and swelled out again abruptly in the form of broad rings.

The ligature was applied on the 28th of April; all went on well for twelve days, when the canula came away, bringing with it some blackish membranous fragments, but no other portion of the tumor; injections were applied per vaginam, which brought away some small white concretions, of the size of a grain of hempseed. The cervix uteri, seen by the speculum, now presented, on its left side, a recent wound, of the diameter of the little finger: its soft and rose-coloured surface was, doubtless, the point of the insertion of the excrescence: the border of the orifice was oblique, whitish, hard to the touch, but not tender. The os uteri had acquired twice its usual size, and was lower down than in its natural state. The patient left the hospital May 15, 1825.

On the 2d of August, she had recovered her appetite and sleep: she had no discharge of any kind, and her strength returned; but, shortly afterwards, the symptoms returned, and she died in October.

4. *Cancerous cauliflower excrescences removed by excision.*

1. The subject of this case was a person, thirty years of age, who complained of all the symptoms described in the preceding case: in her eighteenth year she had a natural labour; and it was only during the last four months that there had been irregularity in the catamenial periods, which were now too frequent; there was also an abundant serous discharge, and the patient became daily weaker.

On examination, the same state of things was discovered as in the preceding case; a tumor, twice the size of an egg, with a granulated surface, and bleeding on the slightest pressure, occupied the anterior labium of the os uteri. The ligature was applied, and the tumor brought down to the os externum, without causing any pain, and removed by one cut of the scissors, with little loss of blood; the uterus then returned to its natural position.

This is perhaps the only tumor which has hitherto been obtained entire. Its form and colour change so rapidly, that Clarke, who met with several instances of this kind, never succeeded in doing so; the *specimen*, given in his work, had not been viewed previously to the application of the ligature, and he does not mention having used the speculum (see p. 292, note—Tr.); the nature of the tumor was not ascertained, accordingly, until the third day after it was tied, when it was detached from the cervix uteri. It then consisted of a reddish brown mass, and was supposed to be made up of vessels. The present tumor, after remaining in water, changed from red to white; its volume increased considerably; the meshes of its tissue were filled with water like a sponge, its constituent granules being separated from each other. Every grain of the tumor might be crushed between the fingers like suet. It had been put into a pint of water, which had acquired a deep red colour. A drawing of this tumor will be found in the Atlas (Pl. XXIV, fig. 1 and 2).

On the 1st of May, 1825, the patient experienced only a white discharge, which, though slight, at first, had con-

siderably increased and become fetid. On the 28th of April, there had been violent menorrhagia, succeeded by a fetid discharge of a brownish appearance. On applying the speculum, we discovered, by its bluish surface, the point of the os uteri, which had been the seat of the tumor, removed by excision a year before. The orifice, sufficiently open to admit of the insertion of three fingers, presented thick, rugged borders, and all the marks of frightful cancer, exuding an ichorous, brownish, fetid odour.

We have observed similar instances of cauliflower excrescence, in the cases of young women under thirty years of age.

2. The subject of this case, twenty-eight years of age, without children, was affected with a profuse serous discharge. M. Marjolin removed by excision a tumor which appeared to be the cause, July 23, 1823. New excrescences however appeared at the cervix uteri, and the patient died in the month of September, 1825.

Reflections. Did these operations of excision hasten or postpone the death of the patients? We are of the latter opinion, inasmuch as the discharges were suspended in the two last cases, and the patients survived for two years.

3. Madame B——, thirty-four years of age, without children, was regular in the periods of the catamenia, but subject to discharges of blood in the intervals, particularly during the efforts of defæcation and passing the urine. The menorrhagia increased and was succeeded by a sero-sanguineous discharge. On the 24th of Novr. 1828, we discovered in the vagina a large tumor with a granulated surface, adhering by a short thick neck to the anterior labium of the os uteri, two inches in diameter, and bleeding on the slightest pressure. (Pl. XXIV, fig. 3.)

On examination with the speculum, the surface of the tumor was mammelated like that of a cauliflower, and covered by a vascular net-work, which was easily torn. The tumor being found to slip from the hook, and blood following profusely, the ligature was applied, and the tumor was brought to the os externum, with much pain to the patient; and then,

not only the whole of the os uteri, but more than six lines of the cervix, were removed with the concave bistoury; this portion was soft, and had been elongated by the previous tractions in bringing it down, and presented, in its whole length, nearly twenty lines. The tumor, which was more than two inches in diameter, was reduced to half its original volume; its creviced surface was of a reddish-brown colour, and surrounded with shreds of vascular membrane. Descriptions of the tumor, in its first state and after its excision, are given in the Atlas (Pl. XXIV, fig. 3, 4, and 5). On its surface there were some hard globular concretions, termed vesicles of Naboth. The patient remained only twenty days in the hospital. In the other cases, the tumor, which projected from the cervix, was alone removed; and, as the cervix is always more or less affected, the disease consequently returned. In October, 1832, the patient complained of pain in the loins, only at the approach of the catamenia. The flow was first fluid, and then discharged in clots by painful contractions of the uterus.

CHAPTER VII.

OF HÆMATODE CANCER.

THIS form of cancer is doubtless of frequent occurrence, though it has seldom been distinguished from the preceding; we are of opinion that there is no difference between them, excepting in some peculiarities of structure, more interesting perhaps in the department of pathological anatomy than in practice. The English writers were among the first to distinguish it, in consequence of the near resemblance, we might rather say identity, subsisting between this disease of the cervix uteri, and the fungous, vascular, and sanguineous

cancer,—the *fungus hæmatodes*, as Hey has termed it, which occurs in every other organ of the body. We have already stated that the word '*fongus hematode*' bears, in France, a very different signification, denoting the *nævus* or aneurysm by anastomosis of the English writers. It is doubtless to avoid these equivocal expressions that Hooper[1] designates the disease, of which we are treating, *hæmatoma* or blood-like tumor. "This disease, he observes, "occurs in the uterus as an organised, soft, vascular substance, resembling solidified blood, with an appearance, here and there, of spongy and more flesh-like portions. It is mostly fungous and lobulated.

"In most instances it is found to have originated by a broad base within the cervix uteri, and to have extended into the vagina, and destroyed the vaginal portion. In the vagina it presents a broad, ragged tumor, occupying the whole of the upper part, and having very irregular lobes or portions, which to the finger, introduced into the vagina, feel like as many polypes. In some instances it extends more towards the rectum, and makes its way into that bowel; in others it takes a direction towards the urinary bladder, the sides of which are absorbed, and the disease is found projecting within its cavity. In some cases, both urinary bladder and rectum contain fungiform portions, which are readily traced to the uterus.

"When divided, the cut surface of the disease is smooth, like firm, coagulated blood, or like the albuminous part of the blood when solidified. Patches of vascularity, here and there, are distinctly seen, and in many parts the structure is fibrous and spongy. The knife is soiled that cuts this disease, and, in most instances, a humid, paste-like, and somewhat reddish matter oozes from the cut surface when pressed. The lobulated portions within the vagina, bladder, and rectum, have externally a sanguineous and somewhat ulcerated appearance, and the surface is here and there covered with a thin, ragged, membrane-like production.

"The body of the uterus, with this disease, is always con-

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[1] *The morbid anatomy of the human uterus.* London, 1832, 4to. fig. col.

siderably enlarged, and it is much softer than in a healthy state. Its cavity is expanded, and its internal membrane highly vascular."

Among the French writers, Dr. Duparcque alone appears to have accurately distinguished this form of uterine cancer from the others. The sanguineous cancer, as he terms it, constitutes, in his arrangement, only the third degree of sanguineous congestion near the uterus; and we have for a long time entertained a similar opinion, though with some restrictions. It is undoubtedly the case that sanguineous congestions easily induce chronic inflammation, and that this latter may lead to cancer. But who can say whether hæmorrhagic congestion may not be much more frequently the effect of inflammation and of pre-existing disease? In support of this latter view, it will be observed that hæmatode cancer generally attacks only the cervix uteri, although the body of the organ may sometimes (not always) be coincidently tumefied; and we know that it is not this portion of the uterus that usually gives rise to sanguineous exudations. When the facts relating to this subject shall have been cautiously observed and put together, we shall perhaps be enabled to distinguish between primary and secondary cancers. If the hæmorrhagies have preceded the induration and enlargement of the cervix—if the os uteri, of little sensibility to the touch, soft and livid, have become enlarged without changing its form, the congestion has probably been the primary affection; but if there were pains at first, and acute sensibility—if there existed tubercles, cristæ, numerous unevennesses, hardnesses, &c. from the period at which the hæmorrhagies first occurred, the latter were doubtless only secondary. Our actual knowledge, however, upon this subject permits us generally only to remark upon the simultaneous existence of diseased structure and congestion. This explains the facts, that this tumor bleeds more readily than fungous cancer, properly so called; that there are profuse and almost unintermitting hæmorrhagies, and that the substance of the excrescence seems to be no other than fungus traversed with vessels, more voluminous, numerous, unequal, and soft than that of simple fungus, and replete with coagulated blood.

This character of the disease leads to an easy and rapid destruction when ulceration occurs; chemical dissolution, as well perhaps as vital erosion, takes place. This destruction, the work of very few days, may resemble gangrene, as well as ulceration. The excavation, which is then observed in place of the tumor, generally presents soft edges, in the form of shreds, occasionally hard and rugged.

Instead of entering upon the symptoms and progress of this disease, which will appear in the subjoined cases, we proceed to give the following summary from M. Duparcque[1].

"At the further extremity of the vagina, and projecting into this canal, there is a tumor, formed by the cervix uteri, congested and of a reddish-brown colour; its surface, smooth to the eye and covered at all times with layers of coagulated blood, appears rather uneven to the touch. On pressing the tumor, there is a distinct sense of crepitation, probably in consequence of the displacement of the semi-coagulated blood which penetrated the diseased tissue. This black fluid is clearly perceived, at the same time, escaping from the surface of these tumors, as if squeezed from a sponge.

"On some examinations, post mortem, the diseased part is found to be puffy, of a blackish colour, soft, friable, and pulpy. The uterine parenchyma is reduced to a mass of fibro-cellular and vascular filaments, readily tearing and lost in the midst of dark, coagulated blood, with which they are infiltrated. This disease, in short, presents an exact resemblance to the tissue of the spleen, congested and half putrid. It appears to proceed from the interior to the exterior surface of the uterus, in which latter there is generally found a layer of uterine tissue of greater or less thickness, and free from disease.

"This kind of disease is often observed in the midst of parts presenting traces of inflammation, and surrounded with purulent deposits. The diseased mass itself is beset with small abscesses, infiltrated with pus and with black blood."

This last circumstance affords no proof against the can-

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[1] *Traité des altér. org. de la matrice*, p. 115 and 394.

cerous nature of this affection, for we have often seen purulent deposits in the midst of a tumor undoubtedly scirrhous or cerebriform.

Besides, M. Duparcque speaks of the same affection in the following terms: "Cancer is distinguished by swelling, unattended with irregularity of form[1], of the uterus, and particularly of its cervix, where it is most commonly situated; by the remarkable softness of its tissue; by the distinct sense of crepitation which is perceived on pressing it; by the constant discharge of black, grumous blood, mingled with clots of different size; and by the flow of a similar fluid, which is found over the whole vaginal surface of the tumor. At an advanced period of the disease, it presents a mixture of blood, of putrid shreds, and of fetid matters, produced by the detritus and decomposition of the diseased tissue—a decomposition generally proceeding, like softening, from the centre to the circumference; that is, beginning near the os uteri, it extends to the cervix and to the body of the organ. A kind of ulcerous excavation follows, and the disease from that time assumes the form of ulcerous cancer."

The prognosis of this affection will be suggested by the study of its nature and progress. With respect to the opinion that the hæmorrhagies are lessened by local bleedings and issues, and by the use of astringent injections, or internal remedies, of ratanhia and the ergot of rye, and that cancer may probably be prevented, or its rupture or ulceration retarded, we cannot but consider it as a mere conjecture, notwithstanding the successful cases quoted by M. Duparcque, which are rather to be referred to menorrhagia than to a real disposition to hæmatode cancer. In cases of confirmed cancer, it seems evident that excision of the cervix, and even cauterization, preferred by M. Duparcque, would seldom be attended even with transient advantage,

[1] It will be seen, in the progress of the work, that hæmorrhagic congestions unattended with cancerous disease may, as we have already shewn, occasion the enlargement and livid appearance of the cervix. We shall advert more fully to this point, in treating of uterine hæmorrhagy.

and would very often lead to serious and even fatal results. We need not repeat what we have already said about the entire extirpation of the uterus.

CASES.

1. *Hæmatode cancer, terminating in ulceration.*

The subject of this case, twenty-six years of age, was apparently healthy, though the gums were observed to be *continually bleeding;* she had never been married, was subject to irregularity in the catamenia, and was in the third month of pregnancy, without suspecting it; the labour was protracted, the forceps applied with difficulty, and the external parts lacerated.

About four years and a half after this delivery, and three since she had ceased to nurse, she complained of violent pain in the region of the uterus, accompanied by a more copious flow of the catamenia; the os uteri was, at this period, studded with small, hard, red, projecting polypoïd bodies, of excessive tenderness, which was increased by the slightest shock or concussion of the cervix uteri.

After the application of remedies, and rest, for eight months, the patient was better; but the menorrhagia soon returned to such a degree as to induce syncope; the os uteri was then found to be about two inches in diameter, and of the form of a cup, with its borders rugged and very hard, the left side being deeply eroded. The body of the organ, immoveably situated, appeared to have contracted strong adhesions to the neighbouring parts: we were accordingly unable to attempt excision, and were obliged to adopt merely palliative treatment.

Reflections. The origin of the disease, in this case, was undoubtedly of remote date. The patient was probably predisposed to it before the pregnancy took place, as we may perhaps infer from the irregularities of the catamenia; and

the delivery with the forceps probably caused its immediate appearance, which might have been postponed, by the nursing, for eighteen months. As soon, however, as she ceased to nurse, the blood, which was conveyed to the mammæ, was determined to the uterus* by long-continued irritation of that organ.

We observe, in this case, a first form of hæmatode cancer, different from that of M. Duparcque, of which he has perhaps made too general an application: the following case will resemble it more closely.

2. *Sanguineous congestion of the uterus, followed by hæmatode cancer, ulceration, and death.*

1. Marie-Anne Ch——, thirty-eight years of age, became subject to abundant catamenia, with pains in the loins, and draggings in the groins. I observed that the uterus was lower down than in its natural state, but not more voluminous. On the anterior labium of the os uteri there was a softish excrescence, with an uneven surface, not at all tender to the touch; the catamenia continually increased, and the patient grew weaker. About eight months afterwards, I found, in the vagina, a tumor of the size of a small orange, circumscribed on the left side, but strongly adhering on the right. As it approached to the os externum, a portion of it might be seen, presenting a livid brown surface, smooth to the touch, except at a red point, where there was the small elevation discovered eight months before, and which resembled

* For the following interesting example of the influence of the mamma over the uterus, I am indebted to Dr. Marshall Hall's Principles of Diagnosis: "Dr. Gregory was consulted, in the town of Ayr, in the case of a lady who had repeatedly miscarried, with dreadful hæmorrhagy, in spite of every remedial means which could be devised by the first medical authorities in Scotland. Dr. Gregory saw the patient on one of these occasions; he prescribed for the hæmorrhagy, and, when this had been arrested, and the patient had sufficiently recovered, he examined the state of the mammæ, found them distended with milk, and directed a lusty infant to be applied, and nursed for nine months. The course of the uterine blood was directed into another channel. The lady became pregnant, the mother of a living child, and ultimately of a numerous family, her labours being unattended by hæmorrhagy!" 2d edit. p. 299.—Tr.

polypus. Profuse hæmorrhagy ensued, a few days afterwards, when the tumor presented merely a broad concave surface, with rugged borders; it was, in fact, a kind of detritus of the anterior labium of the os uteri; the posterior labium was thin, broad, and healthy. (See pl. xxviii, fig. 1 and 2.) The hæmorrhagies continued, the patient became weaker, and died about two months afterwards.

Reflections. Were the hæmorrhagies, which preceded the tumefaction of the anterior labium of the os uteri, primary, or the result of disease of the cervix uteri? On our first examination, we discovered a fungous growth, which, though of little projection, sufficiently proved the diseased and already cancerous state of the uterus, even though the existence of swelling was not ascertained.

2. Louise B—— had been affected in her infancy with scrofula; in her thirteenth year, when the catamenia first appeared, there were swellings in the glands of the neck. At the age of eighteen, she became pregnant; the labour was protracted, but the delivery was accomplished without mechanical aid. In her twenty-second year, the catamenia became very abundant; the os uteri was, in form, like the mouth-piece of a flute; its anterior labium was soft, elongated, and of the colour of dregs of wine. Though the catamenial period might be distant, hæmorrhagy frequently followed upon excitement of the uterine organs.

By the application of remedies, with local and general bleeding, the symptoms disappeared: the patient was married about three years afterwards, had three pregnancies in four years, and nursed all her children. There was abundant hæmorrhagy some months afterwards, which frequently returned, with pain and a sense of weight in the uterine region. On the 1st of July, 1829, I found the cervix uteri much enlarged, the anterior labium of the os uteri of a livid red colour, bleeding, and from fifteen to eighteen lines in diameter. On the 25th of July, there was profuse hæmorrhagy, with profound and continued syncope: the tumor was, at this period, entirely destroyed; there were only some membranous, livid shreds, which were brought away by the

fingers without occasioning any pain. The hæmorrhagies continued for twenty days, though with less violence. The surface of the body was extremely pale; there was no appearance of blood in the vessels. The patient died in a few days with spasmodic vomitings.

There was no post-mortem examination.

Reflections. In this case, the state of congestion, and the soft swelling which we often observe accompanying primary and repeated hæmorrhagies, evidently appear to have preceded this diseased and cancerous state of the uterus; this is proved by the fact, that a mode of treatment, which is unquestionably useless in cases of cancer, occasioned a degree of relief in this case, which might be called a temporary cure. The subsequent occurrence of labours seems to confirm this opinion. There is no doubt, then, that the tumefaction, disease, and destruction of the cervix uteri, were, in the present case, the consequence of hæmorrhagies,—or, rather, of the congestions of which these latter were only the manifestation and result.

SECTION SIXTH.

ACUTE, AND CHRONIC, INFLAMMATION OF THE UTERUS.

CHAPTER I.

GENERAL OBSERVATIONS.

When we consider the eminently vascular structure of the uterus, its catamenial discharges, and the activity of its functions, we are induced to think that metritis, especially in its acute form, would be one of the most common of all diseases. We find, however, that the treatises on this subject contain rather the conjectures of the writers than the results of observation, and that practitioners acknowledge the cases of this kind to be too rare to admit of their giving a complete account of the disease, and especially in its acute form[1]. Several causes have led to this unexpected result:—1, metritis, in its acute and in its simple form, is really of rare occurrence, for the pains accompanying dysmenorrhœa rarely assume a decidedly inflammatory character,—and it is customary to view them merely as symptoms of spasm and congestion; 2, in real metritis, the spasmodic symptoms, arising from the sympathies which the uterus so powerfully exhibits, frequently deceive the observer, who attributes them to hysteria, or to some other nervous or cerebral affection, while the real disease is inflammation of the uterus; 3, lastly, in

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[1] Gardien, *Mal. des femmes;* Chomel, *art.* Metrite *du Dict. de Méd.;* Murat, *Dict. des Sc. médicales.*

the puerperal state, metritis being generally disguised by peritonitis, which almost always attends it, this latter has, for a long time, exclusively engrossed the attention of pathologists and accoucheurs; the humoral theories respecting the lacteous and lochial secretions also diverted the attention from the real nature of the affection, of which the retentions of the milk and of the lochia were only symptoms. The fact is, that peritonitis is much more common than metritis, though we should naturally conclude that the uterus is more exposed to injury than the peritonæum during pregnancy and labour. If the multiplicity of direct cases fail to prove that the peritonæum is more liable to inflammation than the uterus, a fact recorded by M. Dance affords a striking instance of this fact. A young woman, in the fourth month of pregnancy, attempted to induce abortion by acupuncture; the instrument, after having traversed the os uteri, and the whole interior of the uterus, pierced the fundus. The wound was followed by syncope; fatal peritonitis quickly ensued, characterised, on post-mortem examination, by an effusion in the form of flakes; whilst the uterus presented only a redness, a softness, and a thickness, which might naturally be attributed rather to the previous state of pregnancy than to disease.

We have observed that simple metritis is actually of rare occurrence, notwithstanding certain structural conditions, apparently favorable to this affection; other peculiarities of structure may serve to explain its infrequency. The uterus is indeed provided with an abundance of vessels; but most of these are veins, and, notwithstanding the experiments of Professor Cruveilhier, and the assertions of M. Dance, seem by no means so susceptible, as the superabundance of the arterial capillaries, of acute inflammation in the parenchyma of organs. M. Cruveilhier was able to produce phlebitis, but not phlegmon; and Dance has observed only one form, and only one effect of metritis, and not its essential character. It should also be observed that these numerous vessels are disposed in such a manner as readily to part with the superfluous blood with which they are apt to be distended; and

that the catamenia and the lochia are *crises*, or natural local discharges of blood, well adapted to prevent or divert approaching metritis. Besides, the fibrous and contractile tissue of the uterus, like the glandular, is not so liable to acute inflammation; and it is in this very organisation that we have found the reason why chronic inflammation of the uterus is so much more frequent than the acute.

Hence, chronic metritis is of very frequent occurrence, though often confounded with scirrhus and cancerous ulcer, and though often considered as a separate and distinct affection, under the title of uterine catarrh, or leucorrhœa.

The forms of metritis are, in fact, sufficiently varied to admit of these mistakes: in treating of these forms in separate chapters, we shall adopt the following arrangement:— 1, simple acute metritis; 2, puerperal metritis; 3, chronic metritis, with induration; 4, subacute metritis, with ulceration; 5, metritis with granulations of the os uteri; and, 6, metritis with mucous discharge.

It is obvious that each of these forms will present different characteristics in reference to the cause, symptoms, prognosis, and indications. We have not devoted separate chapters to partial, and general, metritis, although the extent of the inflammation is of great consequence in a practical point of view; because it would only lead us to treat of modifications which will be easily distinguished in each of the above forms: thus, for instance, simple metritis is usually general; the puerperal form presents, perhaps, less intensity in different parts of the organ, and may receive a distinctive character from local or general complications; the chronic will frequently be partial, sometimes general; the ulcerated and the granulated will generally be found in the former state, hardly ever in the latter; and, lastly, the uterine catarrh should be looked on as depending particularly upon some morbid change of the interior surfaces of the uterus and of its appendages. It is evident, then, that this last form will be found merely as a complication of the other forms, and that it ought to be considered only in a secondary point of view.

CHAPTER II.

OF SIMPLE ACUTE METRITIS.

It is quite obvious that any direct violence, such as a wound, compression, the ligature, or cauterization, applied at any period of life to the uterus, would occasion acute inflammation of that organ. Several of these injuries also imply the pre-existence of some other disease, as prolapsus or cancer. This latter affection may, in consequence of the pains and violent irritation which attend it, be complicated with real metritis, and traces of it are found on post-mortem examination. Independently, however, of these subordinate circumstances, in which metritis is of secondary occurrence, this affection is never to be expected in the case of young unmarried persons, or of the aged, who have passed the period of child-bearing and of the cessation of the catamenia. In the torpid, atrophied, and inactive state of the uterus, almost complete at that period, its catamenial congestion ceases, together with the direct excitements occasioned by the exercise of its generative functions. Instances are, however, occasionally found of acute metritis in cases of very young children; the following is one of this kind taken from Dance[1]; though it appears that the metritis was in this case the result of chronic peritonitis:—the child, eight years of age, was supposed to be affected with tuberculous disease of the mesentery; the abdomen was enlarged, and had been hard and painful for six months; M. Guersent immediately pronounced the case to be that of chronic peritonitis, and his diagnosis was confirmed, a few days afterwards, by post-mortem examination. The intestines were joined together and consolidated into a single mass by false membranes, thick, elastic, and

[1] *Archives*, octobre 1829.

of a dark-grey colour: a purulent fluid filled the cavity of the pelvis and the iliac fossæ; the mesenteric glands were in the natural state. The uterus presented a considerable tumefaction, being enlarged from above downwards, and constituting a regular oval, as large as an apple: a distinct fluctuation was perceived through its parietes; it was, in fact, distended by a purulent fluid, resembling in colour and consistence a thickish pap; this matter was with difficulty removed; and all around the uterine cavity, the surface of which was of a deep red colour, there was a false membrane of some thickness, in continuation with the cervico-uterine orifice; a fluid of the same kind was found in the cavity of the left Fallopian tube, the volume of which was as large as that of the little finger,—and in a small cyst adhering to the left ovarium.

It is only when the uterus is of a considerable volume, that concussions, occasioned by a fall upon the nates, may lead to inflammation; the turgescence attendant upon the catamenia, when present, approaching, or recently passed, predisposes to the same affection. Excitement of the uterine organs may produce the same effect. During the period of the catamenia, any sudden chill, received in the feet, the hands, or the pudenda, may, by checking the discharge, induce acute metritis. Astringents, used for injections under similar circumstances, and for the purpose of checking leucorrhœa, may lead to the same result, although, in certain cases, the inflammation would rather assume the chronic form. We knew a person, who, being unwilling to debar herself the pleasures of society, inserted into the vagina, during the catamenial period, a sponge saturated with vinegar and water; she sank, at an early age, under the rapid progress of ulcerous cancer.

This catamenial turgescence is, in some cases, the exclusive cause of acute metritis,—when, for instance, an unusual disposition prevents the free effusion or discharge of the blood; this will, however, be explained more fully in the following section, in reference to dysmenorrhœa.

There are other causes, of less influence, which may also determine the blood to the uterus, and dispose it to inflammation; the same effect may be produced by cutaneous erup-

tions at the os externum, which transmits every keen irritation it experiences to the uterus; and by the action of ascarides, whether they remain in the rectum, or extend their locality, and the pruritus they occasion, to the vagina. We have seen cases, in the earliest and in the most advanced age, of persons thus affected, who in their attempts to obtain relief, have caused violent inflammation in the organs of the pelvis (B). Lastly, constipation and the efforts it induces may be considered also as one of the causes of acute metritis.

We are inclined to think that acute metritis is often obscure or indetectible; when slight, but often repeated, it passes into a chronic state, and thence follow consequences of a more serious nature. When it is so severe as to shew itself by decisive symptoms, its diagnosis is tolerably easy; but this only occurs when the local symptoms are not disguised by those which are general and sympathetic. The following case, given from memory, is very remarkable for its equivocal character:—a young woman, who had not exceeded her sixteenth year, tall, robust, and of a sanguineous temperament, and without the catamenia, was attacked with a febrile affection, particularly characterised by cerebral and spasmodic affections, such as continued dulness, sometimes delirium without violence, various convulsions, subsultus of the tendons, wildness and rolling of the eyes. These symptoms, together with variations in the pulse, and other febrile appearances, had excited suspicion of malignant fever, and their gradual aggravation appeared to threaten the patient's life. MM. Jaumes and René, of Montpellier, had adopted an antispasmodic treatment, and applied leeches and emollient remedies for the pains in the abdomen. I observed that the abdomen was particularly sensible towards the hypogastrium, with a resistance deeply seated,—a kind of fugitive tumor; that the pain extended principally to the groins; and that the rest of the abdomen seemed tumid and tender only by the diffusion of an inflammatory affection, which might, perhaps, have been originally seated in the pelvis. Besides the spasmodic symptoms already mentioned, I discovered some others, as globus, transient oppression, &c. which appeared to me to be more distinctly hysterical, and led me to

conclude that all these alarming symptoms proceeded from metritis. Accordingly, without discontinuing the antispasmodic treatment, with opium and ether, and injections of assafœtida, we prescribed the hip-bath, cataplasms over the hypogastrium, plentiful application of leeches above the pubes and groins. The patient improved after this treatment: we then added mercury to the opium, to counteract its effects upon the intestinal canal, to remove constipation and tympanitis; castor oil was administered several times with equal success; but the pills of opium and calomel seemed to be of great service. The patient appeared convalescent; but I understood that, for fifteen days, she suffered much further uneasiness, though the regularity of the catamenia, at this period, had removed every trace of the disease (D)*.

To the sympathetic symptoms already given, we will add, with MM. Murat, Capuron, and others[1],—violent headache above the orbit, or in the forehead, dimness of sight, deafness, vomitings, partial perspirations in the face, and especially pains in the loins and considerable debility.

Under the head of local symptoms, we have already specified pain and tenderness at the hypogastrium and groins; to these may be added a sense of weight in the rectum, uneasiness, tenesmus, pains in passing the urine, dragging or painful compression at the loins and towards the posterior convexity of the sacrum; the pains frequently extend to one of the iliac fossæ, from inflammation of the Fallopian tubes and ovaria. Examination per vaginam, and that per hypogastrium, assist in ascertaining the uniform distension of the uterus, its increased weight, hardness, heat, and particularly its increased sensibility. The following case of simple metritis, almost unaccompanied with sympathetic symptoms, is recorded by Pinel from M. Landré Beauvais:—a young woman, twenty-eight years of age, of nervous temperament, was attacked, without any assignable cause, with pains in the

* This case of *metritis* is merely one of *hysteria*.—Tr.

[1] Probably with Hippocrates (*De mul. morb.* lib. ii, cap. 50). It should be observed that the greater part of what has been written on metritis applies to the puerperal form of the disease, and not to that of which we are speaking.

hypogastrium. On the following day, acute pain was felt in the region of the uterus, extending to the loins, groins, and femora; the pulse was hard and frequent; *(bleeding at the arm, enemata, emollient fomentations to the abdomen, cooling beverages)*. Relief followed for some hours. Early on the fourth day, there was the same state of things, with vomitings, the pulse less hard; *(application of six leeches to the pudenda, followed by abundant hæmorrhagy)*. At night the pain subsided, the vomitings ceased for some days, the pains were less intense, the fever abated. The patient was cured towards the end of the second week.

If metritis, in its extremely acute form, may, according to what we have already said, become immediately alarming; if, like the puerperal form, it may bring on fatal peritonitis, and, by extending to the appendages of the uterus, induce adhesions of serious consequence;—a slight degree may also be attended with most unfavourable results, merely from its being overlooked, neglected, passing into obstinate leucorrhœa, the chronic form with indurations, &c. It is a disease therefore to be treated more, perhaps, in reference to its future, than to its immediate, consequences. It will, in fact, seldom happen that abscesses will be found in the pelvis as a consequence of any other than the puerperal form of metritis; and the cases already adduced to illustrate the unnatural immobility of the uterus, with those contained in our 'Mémoire' upon a particular cause of abortion (B), prove that abscesses depend more frequently upon inflammation of the internal appendages and upon peritonitis, than upon metritis itself; or that this metritis has been the consequence of a first labour, or a first abortion. The diseases, which might be occasioned by simple, but acute and fatal, inflammation of the uterus and neighbouring parts, would probably be much the same as those presented by puerperal metritis, which has been recently studied with great care. In reference to the treatment, it is evident that antispasmodics and narcotics are often necessary, and that mild purgatives are also of great use in obviating constipation, and for their derivative effects. Besides emollient baths, fomentations, cataplasms, enemata, and injections, we recommend early blood-letting at the arm: if

we have omitted this remedy, it has been only on account of the advanced period of the disease. Local bleedings have appeared to us, in such cases, more adapted to produce a quick and ready relief. But the application of leeches (the number being in proportion to the strength of the patient and the severity of the disease) will not in all cases produce the same beneficial result, if applied to one and the same part: should the inflammation extend to the vagina, and acute pain be felt towards the neck of the bladder, we may conclude that the cervix uteri is the part principally affected*, and leeches should be applied to the labia pudendi, to the interior and superior parts of the femora, and around the anus; should the hypogastrium, on the contrary, be tumefied and very painful—the pain extending to the groins, to the Fallopian tubes and ovaria—the fundus is then principally affected, and leeches or cupping should be applied over the inguinal rings and the pubes. With regard to applications made immediately to the cervix uteri, we can only recommend them in the chronic state or incipient form.

CHAPTER III.

OF PUERPERAL METRITIS.

THE uncertainty which exists at the present day upon this subject arises from the disagreement of pathologists

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* Sir Charles Clarke states that inflammation of the *cervix uteri* is attended with "a discharge of a perfectly white colour, and it resembles in consistence a mixture of starch and water, made without heat,—or thin cream." He observes,—"the discharge, of which the above definition is given, belongs to one morbid state of the uterus only; but it characterises that state with marked constancy. A morbid state of the glands of the cervix of the uterus probably gives rise to this discharge; at least, the cases in which it comes away, are those in which the symptoms are referred to this part; and when pressure is made upon it, the woman complains of considerable pain." *Diseases of Females*, part ii, p. 5.—TR.

respecting the importance and nature of certain results ascertained by post-mortem examination. The present chapter will commence with an inquiry into this important question.

A. *Morbid appearances in metritis*[1]. — 1. *View of the uterus, exteriorly.* It would naturally be supposed that the uterus, like every other organ, presents a greater volume when inflamed than in its healthy state; but, by referring to what has been said in a note in the introduction of this work (page 35), it will appear not very easy to decide whether its increase in volume is morbid or natural: however, the uterus may be considered as unnaturally tumefied, when it exceeds the size of the fœtal head in the two first days after delivery,—or that of the fist from the third to the eighth, when it ought to present only twice its usual diameter and dimensions. It is also generally understood that, in the healthy state, it is of a pale rose colour, of a flattened form, tolerably firm, and particularly tenacious, but without hardness on pressure by the finger. Hence, a greyish, yellowish, bluish, or bright red colour, a very soft consistence, or, on the contrary, a distinct hardness, coinciding with an increased volume and spheroïdal form—a common result in epidemic *puerperal fever*—are strong proofs of a previous morbid condition, and most frequently of an inflammatory state.

The uterus, however, frequently presents, exteriorly, in the puerperal state, another kind of alteration, arising solely from inflammation of the peritonæum, with which it is covered. The ancient pathologists considered this as inflammation of the uterus: the more modern have come to a different conclusion, observing—1, that the peritonæum is often inflamed over the uterus, without the proper tissue of the

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[1] A considerable part of what follows is taken from a 'Mémoire' upon the morbid appearances of puerperal peritonitis, published by M. Dugès in the *Journal hebdomadaire de Médecine*, Paris 1830, tom. vi, p. 145. We have, however, modified the opinions which are there given, from our more recent reading, cases, and reflections.

viscus being affected; 2, that inflammation of the peritonæum constitutes, in almost every case, only a small portion of the extensive phlegmasia, to which the whole, or nearly the whole, of this serous membrane is liable. Thus, Mauriceau, Delamotte, and the writers in the 'Ancienne Académie des Sciences', upon the subject of puerperal fever, have declared that this latter disease never had its cause and source in the uterus; and Delaroche asserted that metritis never occurred, in such cases, more than once out of ten times. Metritis, uncomplicated, is, in fact, very rare after delivery, in comparison with peritonitis: in the course of two years, we have met, at the 'Maternité,' with 26 cases of real metritis, and 686 of peritonitis, or metro-peritonitis.

In a great many of these cases of peritonitis, the uterine region of this membrane appears indeed to have been the first affected, and the most violently attacked; in other cases, morbid changes are found in the uterus, proving that this organ has partaken in the inflammation, and justifying the use of the term *metro-peritonitis*. Now, according to our calculations and observation of facts, these cases of metro-peritonitis would constitute very nearly three-fourths of the inflammations of the lower part of the abdomen observed in the puerperal state, if the existence of pus in the veins of the uterus may be considered as a proof of metritis: this proportion would be infinitely less ($\frac{1}{9}$), if this peculiarity were looked on as a distinct event—an opinion which we shall discuss hereafter: we shall now only describe the appearances of the uterus, exteriorly, presented by metro-peritonitis.

Sometimes a purulent, viscous, but fluid deposit is spread over the uterus, which is immersed in the sero-lactiform fluid diffused through the peritonæum; at other times, false membranes of some thickness, and large greenish flakes, composed of albumen or fibrin (*Lassaigne*), are accumulated between this organ and the bladder, on the one side, and the rectum, on the other. Sometimes these soft, cheese-like, yellow or whitish, concretions, entirely cover the uterus, gluing it to the intestines, and, if the affections be of some continuance, they change its form exteriorly, depressing it in some points, and raising it in others, corresponding with the

depressions and projections of the viscera with which it is in contact.

Among these appearances must be classed the yellowish or greyish colour of the uterus, already described. This appearance is occasioned by the infiltration of a purulent, semi-concrete or liquid matter, into the meshes of the cellular coat which unites the peritonæum to the tissue of the uterus. This infiltration, which is frequently extended between the laminæ of the broad ligaments to the cellular tissue of the pelvis, is sometimes observed beneath the peritonæum of the abdominal parietes; the pus occasionally forms real abscesses in that part, and it often happens that the serous membrane of the uterus itself is raised in the form of a phlyctæna[1]: we have observed these vesicles, generally of a flattened form, to vary in volume from that of a pea to that of a pigeon's egg. It should be remarked that the yellow spots arising from the infiltrated pus were sometimes limited to some points of the surface of the uterus, and it is equally remarkable that the usual results of peritonitis have not been always abundant or distinct, even in the peritonæal cavity, when the exterior surface of the membrane presented unequivocal traces of violent inflammation. Conclusions might be drawn from this remark in favour of the reality of distinct metritis in such cases, had not the results been the same when the purulent infiltration invaded the cellular tissue of the abdominal parietes.

2. *State of the interior surface.* If we would duly estimate the importance of the appearances presented, on examination post mortem, in the cavity of the uterus, we ought distinctly to understand the changes induced by the consequences of labour in the natural state. Pathologists (*Dubois*, *Cruveilhier*) compare the interior surface of the uterus, after the expulsion of the membranes and placenta, with a simple wound, which, bleeding at first, soon passes into inflammation, suppuration and cicatrisation: if this be true, how can it be distinguished, post mortem, whether this inflammation were natural or morbid? It seems to us, however, that the state-

[1] M. Tonnelé has made the same remark (*Arch. de méd.* mars 1830).

ment is too strong: it could not be right to compare the state of the uterus with a wound properly so called, for even if its fleshy fibres are laid bare after delivery, we are not therefore to conclude that it has lost some important coat, belonging to the uterus in its empty state, since the loss, at most, would be that of a sort of epidermis, thin, soft, and almost inorganic. Supposing real inflammation indispensable for its reproduction, it could only be compared with that of a portion of skin deprived of epidermis; now it happens that a blistered surface, if not purposely irritated, will indeed pour out some little puriform serous fluid without producing a thick and opaque false-membrane; the epidermis will be reproduced only by means of a thin layer of transparent and scarcely perceptible matter. So also the uterus will furnish at first a serum mingled with the blood, which escapes from the imperfectly closed sinuses; this matter will afterwards be charged with a little concrete albumen, imparting to the lochia a slightly puriform appearance, and the epidermis will be imperceptibly reproduced. But whenever real pus is spread over the surface of the uterus, when a false membrane, yellow, greenish, or putrid, adheres to the parietes of the uterus, we must conclude that there is inflammation to a slight or serious degree, primary or secondary, but always really morbid. We have, in fact, frequently observed, on examination post mortem, together with the other results of severe peritonitis, a thin, adherent, irregular membrane — albuminous, of little consistence, generally yellowish, sometimes with a black or red tinge, owing to a fluid layer—spread over the parietes of the uterine cavity, sometimes through their whole extent, though more commonly confined to the anterior, or posterior, surface, or especially to that to which the placenta had been attached. We have also observed, on one or the other of these surfaces, some real pus, which was fluid enough to be collected in some points on the blade of the scalpel. We have actually seen this state in connection with all the conditions peculiar to the lochia, their suppression, their serous or sanguineous quality; while in the cases in which the lochia were puriform we have only discovered in the uterus a mucous, whitish layer, without any false membranes.

As the sanguineous lochia impart merely a tinge to the false membranes in these cases of metro-peritonitis, they may also communicate to them a disagreeable odour without inducing suspicion of a more serious affection than that of inflammation; as we observe also at the surface of a blister. This odour moreover varies in different persons, and Madame Lachapelle had remarked, a long time ago, that the lochia were particularly fetid in those of the lymphatic temperament. But if this fetor be coincident with a black or blackish colour, arising from the matters which line the uterus; if these matters adhere firmly to the surface, or form a thick layer; if they penetrate the uterine tissue to the depth of several lines; if this tissue, blackened and softened, admits of being torn by the nail, and reduced to pulp by scraping;—we may safely conclude that there is a gangrenous state, and infer the previous existence of the disease called by Boër *putrescentia uteri*[1], which formed the subject of a 'thèse' presented by M. Luroth[2], in 1827, to the Faculté de Strasbourg, and which M. Danyau named gangrenous metritis, in the dissertation addressed by him, in 1829, to the Faculté de Paris. Désormeaux also, according to Dr. Danyau, considered this appearance as the result of metritis; but if one party (Joerg and others) have erred, with Boër, in viewing this appearance as *sui generis*, as differing both from inflammation and from gangrene[3], others have, perhaps erroneously, regarded the softening of the uterus as resulting exclusively from inflammation—satisfied with distinguishing the cases in which there was only a diminution of cohesion, and those in which there was reason for suspecting the existence of real gangrene. The coincidence of this softening with that of the spleen and other parenchymatous viscera has been observed by ourselves (B) and others, after the most decided symptoms of typhoïd affection (*Danyau*, *Tonnelé*, &c.). Was this softening the cause or the effect of the real disease? Was it not analogous

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[1] *Nat. med. obst.* lib. iii, p. 176. [2] *Répertoire d'anat. pathol.* tom. v, p. 1.

[3] Boër attributes this state of things to putrefaction of the epichorion; the same writer gives some cases in which this putrid matter was found in the interior of the Fallopian tube and within the substance of the ovarium.

to certain softenings of the stomach and other viscera, the inflammatory nature of which is far from proved? MM. Wenzel and Luroth also maintain that this softening is sometimes owing to metritis, and borders more or less upon gangrene; that it is, at other times, primary and occasioned by local or general asthenia, or by a kind of putridity of the blood. Our doubts are the more confirmed, as, in such cases, the uterus has been often found softened throughout its whole substance: one of us (B) has observed this softening carried to such a degree that the substance of the uterus could scarcely be touched, twelve hours after death, without yielding to the finger. M. Luroth speaks of a kind of liquefaction, and M. Moreau has reported to the 'Academie de médecine' a case of spontaneous perforation of the uterus, comparable, in every respect, with the perforations of the stomach. Dance also describes a perforation attended with fatal peritonitis brought on by abortion, in a case in which there was a double uterus[1]. In this last case there had been, indeed, some appearance of phlegmasia, and M. Duplay observes that, even in the cases in which the appearances of inflammation have been absent during life or after death—in those also, in which there was softening of almost all the viscera and particularly of the uterus, with a general dissolution of the blood—traces may nevertheless be always found of real metritis. In the subjects of post-mortem examination, under these circumstances, if there has been no purulent infiltration, &c. there was at least serous infiltration; and the analogy between the one and the other is proved by the existence of pus in the lymphatics and lumbar glands.

The existence of gangrene will be much more readily inferred when the softening is of little depth, circumscribed,—limited to the cervix, for instance, especially if that part has suffered much during labour; it would be wrong, however, to consider as gangrenous the blackish colour and flaccidity of this part of the uterus, when the subject has died shortly after delivery; it is then frequently only a deep-seated ec-

[1] *Archives de méd.* Août 1829.

chymosis: we have seen numerous instances of this kind, in which death ensued too rapidly to admit of inflammation being established, and passing into gangrene, and in which there had been no continued pressure to bring on immediate mortification. These facts have been observed, in some cases, after natural delivery, when the patient has sunk under ascites, or the last degree of pulmonary phthisis, and in others, when hæmorrhagy has been the cause at once of death and of an artificial delivery, sometimes easy, sometimes, on the contrary, very difficult, and effected by indiscreet methods. M. Danyau observes that these ecchymoses of the cervix uteri are by no means the result of a morbid action, but simply of the distension and contusion of the cervix uteri, at the moment of delivery; and that they ought not to be considered as the consequence of improper treatment, or of disease occurring in the puerperal state (*Thèse citée*, p. 9). We must, however, acknowledge that injudicious treatment may aggravate the ecchymoses. In other circumstances, when death has followed at a later period, the cervix uteri has presented the same blackish colour, with softening, so as to be easily scraped off by the scalpel, under the form of greyish fetid pap. We have seen a case (B) in which, three months after a difficult labour, the uterus was softish and pale, containing in its interior a fleshy portion, as broad as the finger-nail, and two lines in thickness,—a real eschar detached from an ulceration, with a whitish base, and very nearly of the same size.

M. Duplay[1] has given a good account of these circumscribed mortifications,—these eschars,—which he compares with those made by the caustic potassa; he has observed them frequently in the cervix uteri, and about the superior angles of the body of the uterus.

3. *State of the parenchyma.* It appears to us, from what we have already said, that metritis may often be reduced to inflammation of the internal surface of the uterus; if the softening, however, leave any doubt as to the possibility of

[1] *Journal complémentaire*, tom. xlii.

the whole substance of the organ being inflamed, there are other traces, less common indeed than those of which we have hitherto spoken, which exclude all doubt. Pus is sometimes found even in this substance, and, generally, nearer to the exterior surface than to the interior; this pus collects into distinct abscesses, from one to five inches in diameter, sometimes into a simple or multilocular deposit, with a greenish or viscous appearance; at other times it is infiltrated into the fleshy fibres, imparting to them a yellow reddish colour, perceptible through the peritonæum. In this latter case, tumors form, which are sometimes hard, and projecting upon the fundus uteri; at other times, flattened, soft, and broad; these latter come further down towards the lateral parts, and often form a continuation, together with purulent infiltrations between the laminæ of the broad ligaments, with the cellular tissue of the pelvis, and the substance of the ligament of the ovarian vessels, frequently giving rise to those large abscesses of which we have already spoken. Notwithstanding the doubts we have raised, we shall perhaps be obliged to acknowledge more distinctly hereafter, that partial softening is only the earliest stage of phlegmonous metritis, infiltration the second, and abscess the third: we are induced to think that this is the case from the circumstance of the softening being generally peculiar to recent and severe metro-peritonitis, and abscess to the same affection when approaching to, or having reached, the chronic form; we do not here allude to abscesses formed in the neighbourhood of the uterus, which are generally of slow and gradual development. We have observed seven or eight instances of purulent deposits formed in the substance of the uterus, in the cases of persons who appeared to have been cured of serious metro-peritonitis, but died, during convalescence, of pleuro-pneumonia, or of hydrothorax; the peritonæum, in these cases, presented scarcely any traces of preceding inflammation.

There is, according to several writers of the present day, another form of metritis, the most serious of all, situated neither at the surfaces, nor within the proper substance of the uterus, but consisting of inflammation, exclusively, or

more particularly, of the veins, and called *uterine phlebitis*. Sasse and Meckel had already spoken of uterine phlebitis, and the danger occasioned by the mixture of pus with the blood. This opinion has been particularly set forth by Dance, who rested upon numerous cases and plausible reasonings. The presence of pus in the uterine veins had been observed a long time before; and Professor Chaussier uniformly pointed out the fact whenever it occurred on post-mortem examination; but he did not regard it as distinct phlebitis. This pus is yellow or whitish, sometimes so white as to have been mistaken for milk[1], and this was doubtless the cause of the mistakes made by Astruc, Winslow, and Selle[2]. It is, however, easy to distinguish it from the milk, as it never mixes with water, like this fluid, but merely makes it turbid for a moment, and then quickly settles at the bottom of the vessel. It is in the lateral veins, at the point where they are collected together to leave the uterus and merge into the plexus of the ovarian veins, that this fluid is most commonly found; in some rare instances all the uterine sinuses are filled, and even distended with it; sometimes there are albuminous concretions mixed with the fluid; even the veins are occasionally obliterated by a yellow concrete matter. When the substance is entirely fluid, the interior of the vessels is of a slight rose-colour, whitish, and smooth, and often even pale and yellowish; we have observed, though only twelve or fifteen times, that this inner surface was uneven, and adherent to the albuminous flakes. In this last case, we ascertained the existence of phlebitis, and we especially admitted this, when there was a deep redness, a velvet-like appearance, adherent coagula, a communication of the phenomenon to the ovarian veins, which were thick, and encircled with an abscess or purulent infiltration to a variable height[3], sometimes as far as the renal

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[1] By an error of a very different kind, M. Tonnelé seems to have mistaken for pus, the yellow, viscous milk found in the lactiferous vessels at the puerperal period, in cases in which the child was not nursed.

[2] *Pyrétologie*, p. 238.

[3] See A. C. Baudelocque, *Traité de la Péritonite puerpérale*, p. 110.

veins, and, in one instance, as far as the inferior vena cava[1]. In the other case, however, when it has been ascertained that the tissue of the veins is healthy in the part where they contain the fluid pus, we cannot agree with Dance, that it is evidently the result of real phlebitis; he is mistaken, we think, in asserting[2], and M. Danyau in repeating after him, that these veins are always rugous and red: for this is, on the contrary, rare. M. Tonnelé records some cases in which the veins preserved their natural smoothness; and, because they had a yellowish tinge, he fancied he had discovered traces of inflammation, whilst, in some other cases, he describes numerous instances of real phlebitis[3]: it is in vain that he attempts to escape from the rigorous induction from one fact to another, by asserting that the organization of the uterine sinuses is totally different from that of the veins properly so called; for have they not at least the interior coat, and is it not this coat which secretes the morbid productions existing in the cavity of the vessels? This opinion has been, besides, completely confuted by M. Duplay *(loc. cit.)*, who thinks, with us, that there is very rarely phlebitis in these circumstances. Is it then so difficult to admit that this pus has passed into the veins without these latter being inflamed? If the veins absorb,—as so many physiologists suppose,—if they absorb the pus, after amputations and large wounds, as MM. Velpeau and Legallois[4], and others, have shewn to be the case, and as was discovered by M. Blandin[5] after an amputation of the cervix uteri, and by M. Andral, after a purulent infiltration into the pelvic cavity during the puerperal state, may not the same event take place in the inflamed uterus, whether the materials be taken up from its interior or exterior

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[1] *Revue Médicale*, tom. xv, p. 411.

[2] *Archives*, février 1829, &c.

[3] *Archives*, mars 1830. See also Duplay, *Journal complémentaire*, tome xliv, p. 92.

[4] *Des maladies occasionneés par la résorption du pus (Journal hebdomadaire de médecine*, 1829, t. iii, p. 166, 321).

[5] *Dictionnaire de médecine et de chirurgie pratiques*, art. AMPUTATION, t. ii, p. 170, &c.

surface, or proceed from its tissue by interstitial absorption? There was generally some purulent matter spread over the exterior or interior surface, when the veins contained pus; and M. Montault[1] has published a case, very interesting in this respect, of metro-peritonitis, on examination of which, the uterine veins were found filled with a putrid, sanious matter, like that which lines the interior of the uterus. It is only in the few cases which form the exceptions, that it could be supposed that incipient, and probably partial, phlegmonous metritis had occasioned the morbid production.

This opinion receives further confirmation, when it is observed that the lymphatics themselves are often filled with this white and lactiform pus. These knotty vessels, from half a line to a line and a half in diameter, may be seen in consequence of this injection with fluid pus, which distends them in the whole length of the ligaments which contain the ovarian veins; we have observed the lumbar glands, in some cases, whitened by the pus injected into their vessels, and it has been found even in the thoracic duct (*Tonnelé, loc. cit.*). It is in vain to attempt to explain this phenomenon, with MM. Tonnelé and Nonat[2], by attributing it to an effect of local inflammation of the vessels themselves; these vessels, thin and pellucid, present no perceptible change in colour, thickness, or consistence; there is nothing about them implying previous inflammation; but is is well known, on the other hand, that inflammation of the sub-cutaneous lymphatics is marked by distinct signs: even if the glands were inflamed (*Duplay, Montault, and ourselves*), this was evidently only the result of the absorption of the pus, since the vessels were free; besides, the presence of the pus in these vessels is attributed to absorption by the very persons who deny this function in the veins, as MM. Danyau (*loc. cit.*), Mantault (*loc. cit.*) and Dumas[3]. In a clinical 'mèmoire,' published

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[1] *Journal complémentaire*, t. xl, p. 21.

[2] Dissertation sur la métro-péritonite puerpérale compliquée de *lymphangite*, No. 98—1832.

[3] *Séance de l'Institut*, 18 janvier 1830.

in the fortieth volume of the 'Journal Complémentaire,' p. 97, it is observed that, of thirty-six post-mortem examinations, in which pus was found in the absorbent vessels, twenty-nine presented a sero-purulent effusion in the peritonæum; in the other cases, there was infiltration of the sub-peritonæal cellular tissue; in several of them there was also ovarian inflammation and suppuration. M. Tonnelé himself records a very remarkable case, which strongly favours this opinion, since most of the lymphatics of the abdomen were distended and of a milky colour, and the thoracic duct itself was considerably enlarged and filled with real pus; at the same time the cavity of the peritonæum contained a large quantity of puriform serum.

Besides, whether the pus be produced by the uterine veins, or merely introduced by absorption, the consequences appear to us in both cases the same, and we willingly confound together the real, and apparent, form of uterine phlebitis. In both cases there is metritis, or rather metro-peritonitis; the pus may be conveyed with the blood into the circulation in one case, as by the lymphatics in that of phlegmonous inflammation of the uterus, ovaria, and peritonæum. Many distinguished physicians of the present day are of opinion that this presence of pus, produced or absorbed by the veins, may lead to serious results, and, first, to all the symptoms of typhoïd affection, then to phlegmasiæ and abscesses in distant organs. These theories are not new, but they have never been substantiated, as in the present day, by direct observations in pathological anatomy; while, however, we admit these effects of the absorption of pus after important operations, we still think that the fact has been unwarrantably applied to metro-peritonitis[1]; and we can aver, from the numerous post-mortem examinations which we have wit-

[1] A woman in the puerperal state, apparently cured of acute metro-peritonitis, died after presenting all the symptoms of malignant, atactic, or typhoïd fever. On examination, post-mortem, there were found near the superior angles of the uterus, still enlarged, two rounded, projecting, sub-peritonæal abscesses, the larger of which might be compared with a full-sized cherry. Had there been in this case absorption of pus? There was none found, at all events, either in the veins, or in the lymphatics.

nessed at the 'Maternité' of Paris, and from numerous notes which we possess, taken by ourselves and others,—1, that it is only rarely, in the cases of persons dying of metro-peritonitis, that we meet with these small abscesses, these numerous and partial deposits of infiltrated pus,—as it were, combined with the tissue of the liver, spleen, and lungs, which are in a manner figured with it so as to resemble marble[1], and which we have observed, on the contrary, on many occasions, in cases of persons who have died after amputation of the limbs, &c.; 2, that, when peritonitis terminates most rapidly in death, it is by no means always attended with typhoïd symptoms; 3, that, in the cases in which the absorption of pus has appeared to us most clearly proved after metro-peritonitis of long continuance or in its chronic form, it is by violent attacks of remittent fever that it has shewn itself, generally accompanied with returns or augmentations of the peritonitis. This is an important observation; for if an almost exclusive importance be attached, as by Dance and others, to this absorption of pus, the practical department may suffer, to the detriment of the

[1] Would it be right to attribute certain cases of peripneumonia with complete hepatisation to this absorption? There is at all events no pus. The following fact is taken from among twelve others in confirmation of this opinion:—Madame Lall——, of robust stature, was delivered in December 1820, at the 'Maternité' of Paris, and attacked, very soon afterwards, by acute metro-peritonitis with obstinate constipation, symptoms of *angeïotenic* fever, &c. She was bled three times at the arm, and leeches were applied several times without any advantage. On the third day, there was tympanitis; purgatives were administered; the patient improved rapidly, and the cure soon appeared complete; but, shortly afterwards, there was a very slight irregular fever; towards the twentieth day, anasarca; continued fever, gradual increase of oppression, and death on the twenty-second. There was hepatisation of the whole of the left lung and of the inferior half of the right; abundance of serum in the pericardium, the pleuræ (especially the left), and the peritonæum, which, in other respects, presented no unusual appearance. Some semi-concrete pus was found in the veins and tissue of the superior angles of the uterus, which was small, and of its natural form, colour, and consistence. Must we, with M. Tonnelé, attribute to humoral metastasis the abscesses, inflammations and suppurations of the articulations, &c. which are found at some distance from the abdomen in puerperal diseases? It appears to us very doubtful; but it would not perhaps be wrong to attribute to the circulation of the pus with the blood, the phlogistic spots which are often seen, in such cases, on the skin of the fingers, hands, feet, knees, and elbows, and which are often covered with a purulent phlyctæna.

patient. Without admitting, then, with M. Montault[1], that there is truth in all the theories propounded upon puerperal fever, we think it right to grant something to each of those which are established upon positive and well authenticated facts. We will, accordingly, proceed to give a summary of the conclusions deducible from the foregoing observations.

1. Puerperal metritis is, generally, but metro-peritonitis.

2. In metro-peritonitis, certain parts of the uterus may be, exclusively, or more particularly, affected.

3. The exterior surface and the cellular coat, when acutely attacked, give rise to peritonitis with infiltration, phlyctænæ, and abscesses, extending to a greater or less distance.

4. The tissue of the uterus, when more particularly invaded, may become softened, beset with circumscribed abscesses, and traversed with veins actually inflamed (phlebitis).

5. The interior surface may present simple inflammation, occasioning the formation of an albuminous or purulent exudation.

6. This interior surface may be attacked with gangrenous inflammation, extending more or less deeply into the substance (putrescence).

7. Lastly, in these different forms of metro-peritonitis, the pus exuded at the interior, at the exterior, or in the tissue of the organ, may be absorbed by the veins or lymphatics, and conveyed to other parts in the circulation, not without imminent danger to the patient.

With these positive data, we proceed to give a sketch of this affection, confining ourselves especially to the uterus, and omitting all that relates exclusively to the peritonæum.

B. *Causes of metro-peritonitis.* Most of the causes of this serious disease are, to a certain point, yet undetermined; we refer our readers to the work published on this subject by

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[1] *Journal Complémentaire*, tom. xl and xli.

one of us[1], and shall proceed to give the conclusions which it contains, dwelling merely on some of the more important points, or those on which we have acquired new information.

Metritis and metro-peritonitis have been sometimes observed before delivery. We may here mention certain cases of violent contusion of the gravid uterus, or of separation of its fibres by efforts, bringing on local inflammation, and then complete perforation, by which means the fœtus and its envelopes are discharged from the uterus, and even from the abdomen[2]. Spontaneous inflammation, occurring during pregnancy, may lead to consequences almost equally serious, by softening the tissue of the organ; thus, M. Cruveilhier speaks of a person who died on the day of her delivery, after having experienced pains in one side of the abdomen for more than a month. A broad rupture was discovered, on the same side, with softened, fringed borders, containing pus,—a rupture evidently owing to the contractions of the uterus during labour, and previous metritis[3]. Dr. Danyau says he has seen a person who, after being delivered of a dead child at the eighth month, died, on the same evening, of putrid softening of the uterus. He thinks that this affection had, for a long time, preceded the labour, in this, and in his sixth case; and to these, we think, might be added his first: in all these there was painful pregnancy with contusions of the uterus; death followed also very soon after delivery.

These cases of metritis during labour are nevertheless of rare occurrence, in spite of the predisposition to inflammation likely to be induced at that period by a viscus hypertrophied and the seat of a most active circulation. From numerous facts which we have observed, we might affirm that peritonitis is much more common, in the pregnant state, than metritis. In most cases, in which there have been symptoms,

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[1] Dugès, *Journal hebdomadaire de médecine*, 1828, tom. 1er.; mémoire sur les causes de la péritonite puerpérale.

[2] See *Pratique des accouchements*, tom. iii, p. 107.

[3] *Journal hebdomadaire et universel*, tom. iv, p. 228. Two cases of the same kind are quoted by M. Luroth, from Henne and Jacquerez; a third is mentioned by M. Duplay, though this last is perhaps the same as that of M. Cruveilhier.

during pregnancy, of severe inflammation of the abdomen, we observe that pains are felt particularly in the epigastrium; a region quite remote from the uterus. If the labour, in this case, proceed slowly, it is not in consequence of an affection of the uterus itself, but merely of a sympathetic influence from the adjacent parts; and it is evident that that organ is not diseased, inasmuch as it appears, after delivery, to be neither voluminous, nor tender, whether the symptoms quickly disappear or proceed to a fatal conclusion. The cases given by ancient authors, which are, besides, very few, make no distinction between affections of the uterus and those of the peritonæum. The case of Morgagni[1], however, may be considered as an example of metritis, though the death was owing to a severe pulmonary disease.

Perhaps, however, metritis occurs more frequently than we suppose, during pregnancy, and gives rise to spontaneous abortion, followed by inflammatory symptoms, the cause being mistaken for an effect. We have had one or two unquestionable proofs of this fact before us, and shall give some examples of it hereafter. There are also some illustrations of this in a memoir published by one of us on one of the causes of abortion (B), (see p. 93, &c.). It might be remarked, that, when spontaneous abortion is owing to some other cause than antecedent inflammation, it rarely produces peritonitis or serious metritis, even when a portion of the placenta and membranes remains for a greater or less period in the uterus. Yet the cases of this kind are not absolutely rare; for, of 456 cases of peritonitis or metro-peritonitis, we have found 12 attributed to abortion. Besides, arguments may be adduced, to substantiate the frequent occurrence of serious and even fatal consequences resulting from *induced* abortion. We witnessed a case, in 1826, of an unmarried woman who came to the Maison de Santé, in consequence of chronic inflammation of the uterus, brought on by perforation of that organ, purposely effected to induce abortion. This

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[1] *Ventre illicò aperto, nonnihil inflammatus uterus; in hoc autem puella jam mortua inventa est, cujus aliòquin viscera, ut et cætera quæ in materno erant ventre, secundùm naturam se habebant.* Ep. xx, art. 9.

person was fourteen years of age, when this revolting act was performed; this is not the only case in which we have witnessed protracted and fatal sufferings from a similar cause (B). We attended a midwife, who had herself pierced the fœtal membranes, as she confessed to us in the midst of the acutest agonies: although the uterus had not been wounded in this attempt, violent metritis was nevertheless brought on, with peritonitis, and the patient was only saved after several weeks of imminent danger (D).

We may expect results similar to those which occur from abortion, in the case of the expulsion of a mole, and even in certain cases of dysmenorrhœa, and, a fortiori, from the *uterine efforts* to expel coagula, or remains of the placenta and membranes, the expulsion of which is effected by efforts of the uterus, which are the more active as the bodies to be expelled are soft and small: it is known that, in affections of the throat, the deglutition of fluids is more difficult and painful than that of solids. There are analogous cases, in which the uterine pains and efforts seem to be occasioned merely by a fulness of the vessels, if not rather by a spasmodic action, continually recurring during the first days after parturition. We have observed the uterus, at that period, suddenly to become sensible to the touch, swelled, and hardened, the pain extend toward the groins, and all the symptoms of metro-peritonitis to become gradually developed.

The presence and adhesion of a portion of the placenta may operate, either in this way, or by direct irritation, in producing metritis; we have, however, often observed this cause to exist without producing any effect; we have seen coagula escape in putrid portions, and cases have been recorded in which the placenta has been, in a manner, dissolved or absorbed (*Nægelé*), in consequence of a similar change, without inducing uterine inflammation; though, in some instances, this latter affection has been proved by post-mortem examination[1].

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[1] *Intereà fœtida materia è naturalibus exibat cum frustis secundarum nonnullis. Denique convulsivi motus et singultus ingruunt; venter valdè intumescit; et ægra, undecimo a partu die, moritur. Dissecto utero, magna placentæ portio*

It is obvious that physical injuries, occasioned by unskilful operations, that accidental lacerations, and spontaneous ruptures, bring on metritis; and M. Cruveilhier attaches great importance to this kind of injury in producing puerperal metro-peritonitis: we would observe, however, that these injuries are of rare occurrence, and, even when they have existed in a serious form, they have been cured without violent inflammation[1]. Protracted and painful labour, and difficult, but well-managed delivery, are not, according to our own observations, ordinary causes of metro-peritonitis; we have, however, reckoned, in reference to the length of labour, that of thirteen persons affected with this disease, five had quick labours,—that is, of less than five hours; and eight, more protracted. It is, doubtless, this circumstance which renders the disease more common after first labours.

Cold, and especially styptic injections, used in cases of hæmorrhagy, may, as Cruveilhier has proved in a case of gangrenous metritis, rapidly bring on this affection. Cold applications alone may be followed by this result, inasmuch as they produce the same effect when used exteriorly.

It follows, in fact, from our observations, and from those of Delaroche and others, that cold, and moisture, particularly dispose to puerperal diseases. But it is not so much, perhaps, mere temperature, as an atmospheric constitution, little understood, which is the principal cause of puerperal diseases. The precautions which have been taken, at the 'Maternité,' to secure the patients from cold, have not reduced the number of patients or deaths[2]; and it cannot be

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occurrit, cujus pars per os uteri propendebat, pars utero arctè adeò affigebatur, ut vix posset, cultri ope, separari. Eam autem, cui adhæserat, uteri partem altior inflammatio occupabat; per reliquam etiam illam faciem, sed leviter, extendebatur (Morgagni, Ep. xlviii, art. 28). See also Mauriceau, t. ii, obs. 129, 294, 504.

[1] *Pratique des accouchements,* t. iii, p. 179 and 184.

[1] This mortality, always more considerable in the hospitals than elsewhere, has often been frightful; and no other reason has hitherto been alleged than the accumulated numbers and insufficient ventilation. During the two years of my attendance at the 'Maternité' (1819 and 1820), of 686 persons attacked with simple or com-

denied that draughts of air, &c. like deviations from rule, and sudden affections of the mind, &c. operate more frequently as occasional, than as exciting causes. The premonitory shivering, often severe, induces the patient to attribute to an external chill, results wholly independent of it.

Under the influence of the humoral pathology, to which it is prudent to return with great caution, considerable importance was attached to cold, as checking perspiration, the lochia, the secretion of the milk itself, and producing serious metastases. These opinions are not so obsolete as to be passed over without a special, though brief, refutation.

1. The matter of the perspiration, being excreted as soon as formed, could not be transferred by metastasis. The serious effects, observed on its being checked by cold, depend, accordingly, only on change of temperature ; they are the result of a dynamic, and not of a material, action.

2. Franck very justly ridicules the pretended repulsions of the lochia, which were supposed to travel through the system, in order to attack this or that organ. That metritis should for a time check the lochia, is as natural an effect as the temporary suppression of the nasal mucus by coryza, or that of the expectoration by severe pulmonary catarrh ; but, in this case, the suppression is the effect, and not the cause, of inflammation. Besides, this suppression is far from being uniform ; it sometimes continues only during the shivering ; the discharge may afterwards be renewed, with merely a slight additional fetor. It was observed that the lochia flowed more profusely than ever during the epidemic of 1742, at which period it may be concluded that many cases of metritis were complicated with peritonitis ; and we are convinced, from post-mortem examinations, that the lochia may co-exist with inflammation of the uterus,—that they are sometimes temporarily increased, or suppressed subsequently,—that there is, in short, no constant connection between metritis and variations of the lochial discharge.

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plicated peritonitis, 312 died ;—that is, 5 out of 11, or nearly half. Of the 26 cases of simple metritis, which occurred during the same period, 13 terminated fatally. Out of 4924 persons delivered, 1177 were attacked with puerperal disease,—that is, nearly one fourth (D).

3. The same reasonings apply to the suppression of the milk. The shrinking of the mammæ is not invariable in puerperal metritis, and it is usually consequent on this affection, or to peritonitis. It is well known, moreover, that accidents really arising from the action of cold or damp upon the mammæ, are limited to diseases of these organs themselves; the milk of nurses ceases to be secreted upon the occurrence of febrile or inflammatory affections, and returns upon the removal of these causes.

C. *Symptoms.* We have just enumerated two of these symptoms, often considered essential, and which we have shewn are far from being so. With reference to the lochia, we shall consider their presence as furnishing a clue to the character of the inflammation. This character is not, in fact, always the same, as might be concluded indeed, from the results of anatomical examination; we shall distinguish two principal forms, to which several others may undoubtedly be referred. M. Tonnelé, for instance, enumerates three, in accordance, as I suppose, with Désormeaux:—the inflammatory, the adynamic (or asthenic—Tr.), and the ataxic (or irregular—Tr.). These two last we shall combine into one, under the term typhoïd, as we are not yet satisfied respecting the characteristics which distinguish metritis complicated with *nervous* adynamia,—that is, depending solely upon inflammation of the uterus, from that complicated with *putrid* adynamia,—that is, depending upon the gangrenous state of the uterus, or upon the passage of pus into the blood. It may be asked whether these forms do not belong to complications with a general, nervous, or adynamic state, and whether, especially in this last case, the gangrene is not rather the effect, than the cause, of the general state;—questions hard to be resolved, and suggesting, by their obscurity, the simplest classification and exposition of facts.

1. *The simple inflammatory form*, or metro-peritonitis with angeiotenia (or increased vascular action—Tr.). General symptoms of plethora and inflammatory fever; full, strong, hard pulse, of little frequency; flushed face; hot and damp

skin, after a shivering fit, though this is sometimes absent; oppressive headache, sometimes delirium, sleeplessness, constipation, moderate thirst, &c.: local symptoms, like those of simple metritis; pains, tenderness, swelling at the hypogastrium, in the groins and loins (? Tr.); sanguineous lochia, sometimes excessive, sometimes suppressed for a while, of a colour and odour nearly natural; variable, though uniform, progress,—sometimes frightfully rapid, accompanied by excruciating pains, owing to the extension of the peritonitis, and carrying off the patient in a very few days, in the midst of furious delirium, or perfect self-possession; vomitings, &c. and enormous swelling of the abdomen; these last symptoms, however, belong rather to peritonitis than to metritis.

When metro-peritonitis proceeds less rapidly to its fatal termination, the inflammatory period is succeeded by one which may be called adynamic, during which there is prostration of strength: the pulse becomes small, frequent, and contracted; the face pale; there are efforts at vomiting, with diarrhœa and slight sub-delirium, &c.; but no vomitings of dark-coloured matters (fuliginosités), or fetor of the evacuations, or real prostration, or complete loss of consciousness,—in a word, none of the real typhoïd symptoms, but only the exhaustion, which occurs in the second period of every serious and fatal inflammation. It very often happens that the disease, actively treated, diminishes by degrees, and a cure is effected in fifteen days, or at the end of the third week. Incipient metritis of this form may even be cured by prompt treatment, in a few hours.

2. *Typhoïd form.* To this form would invariably be referred, according to several modern writers, all the cases of softening of the uterus, of putrid matter at its interior surface, and of suppuration in the veins. We do not think it an invariable rule[1], that, in a certain number of cases, these

[1] M. Cruveilhier, who has given an admirable figure of the uterine lymphatics filled with pus (*Anatomie pathologique*, 13e livr, pl. I and II), thinks that the danger of this mixture only occurs in phlebitis. He does not, however, consider this

changes, particularly the first and the last, are merely traces of metritis entirely inflammatory, but very serious, and accompanied with secondary adynamia, rapid and terrific, and constituting a state of absolute sinking of only a few hours' duration: of 686 cases of puerperal metro-peritonitis, or peritonitis, we have observed only 30 to be complicated with a real typhoïd state,—that is, primarily adynamic or ataxic—and yet the presence of pus in the uterine veins had originally, as we have already remarked, been observed in three fourths of the post-mortem examinations,—that is, in very nearly 224 cases; for we have counted 312 cases which terminated fatally, and in every one of these there was a post-mortem examination.

In this second form, the shivering fit will often be more severe and protracted, the delirium less high, though earlier and more constant; there will be smallness of the pulse, intense heat, and dryness of the skin, acute head-ache, oppression, extreme thirst, vomitings, diarrhœa, prostration of strength, subsultus, alteration of the countenance; afterwards vomitings of dark-coloured matters, involuntary evacuations, cold perspirations, intermittent pulse, considerable dyspnœa, protracted sinking, with loss of consciousness.

To these symptoms may be added those of peritonitis, especially tympanitis, and the local symptoms of ordinary metritis; it should also be observed that there is sometimes hardly any pain; that the lochia may be very fetid[1], greyish, or brownish; and that the external uterine organs may present gangrenous inflammations. This form of metro-peritonitis, more fatal than the preceding, is generally less rapid in its progress, continuing sometimes three weeks before its fatal termination. It was from the most severe and decided cases of this form of the disease,—cases in which the progress was most rapidly fatal,—that we have taken the de-

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latter disease incurable,—an opinion actually proved by the last cases of M. Duplay, who has observed, in the uterus, veins obliterated, contracted, and of a greyish colour. (*Journal compl.* t. xliv, p. 206, 207).

[1] We have already observed that the lochia have been sometimes almost inodorous, even in severe metritis; this circumstance has been ascertained by M. Duplay.

scription of gangrenous metritis, putridity of the uterus, phlebitis, &c. In this case, M. Duplay observes, that the inflammatory period is so fugitive that its existence might almost be denied upon a merely superficial examination. It is thus, we think, that this state of things ought to be viewed: it is a kind of sudden failure of strength, in which the local and general state are confounded together, and present only a short sthenic period, immediately followed by complete collapse. We have witnessed more than one case of death during the torpor of the shivering fit, and, consequently, in a few hours after the appearance of the disease; so that the epidemic constitution, and the puerperal state, could alone lead us to presume that metro-peritonitis was the cause of death; for what discovery could be made, in such a case, by post-mortem examination?

There are various complications,—less intimately connected with metritis than peritonitis, adynamia and increased action, which are in a manner identified with it,—which furnish some further considerations with reference to the symptoms and termination of this disease. Thus, inflammation of the Fallopian tubes and ovaria increases the pain in the groins, and aggravates the prognosis, for reasons which we shall give hereafter. Pleuritis, pneumonia, pericarditis, various phlegmons about the articulations and symphyses[1], or in the limbs, are symptoms which may be connected with the same causes as metro-peritonitis; but they are not always so closely allied as certain modern theories represent them. With respect to abscesses formed at the groins, loins, hypogastrium, &c. and often considered as the consequences of suppuration in metritis[2]; they frequently depend upon *extension* of inflammation, such as we have pointed out above, according to the discoveries of pathological anatomy; but, although they had their source in the uterus, these abscesses were no less foreign to real metritis; we have quoted two cases of this kind, with the details[3]; they appear to have originated in

[1] A. C. Baudelocque, *Traité de la Péritonite puerpérale*, p. 18.

[2] Delamotte, obs. 410. Benevoli, apud Van Swieten, t. iv, p. 621.

[3] *Pratique des Accouchements de Madame Lachapelle*, troisième volume, p. 174, &c.

some incomplete lacerations, which afterwards formed a fistulous passage to convey the pus outwards, per vaginam.

A bilious or gastric state is often complicated with epidemic metro-peritonitis, perhaps giving rise to that affection in which emetics have induced surprising results, under the care of Doulcet.

D. *The Treatment* will obviously vary with the circumstances which we have mentioned. The primary cause is undoubtedly to be removed, if possible; if the bilious affection be primary and paramount, it should be treated with emetic and purgative remedies; but, although in cases of distinct inflammation, merely complicated with increased action, wonderful effects have been produced by purgatives[1] (castor oil), especially if the attack have been preceded by obstinate constipation,—it would be wrong to overlook the powerful, and sometimes instantaneous, effects of blood-letting at the arm or foot, or of applications of leeches to the groins, pudendum, and abdomen. We shall not speak of diet, mucilaginous drinks, cataplasms, vapour-baths, during the shivering fit *(Chaussier)*, tepid baths, emollient, soothing, and narcotic enemata.

These last means are applicable also to the typhoïd form. The purgative treatment is generally of little use; the application of leeches gives no relief, and general blood-letting should be adopted with great precaution. Some tonics, as small quantities of quinine and wine, have appeared to us sometimes to be of service; the same may be said of blisters; in this form of the disease, it may be advisable to try mercurial and opiate frictions upon the abdomen, perhaps a course of

[1] Bleeding and purgative remedies constitute the whole of the active treatment in puerperal peritonitis, according to M. Legouais (*thèse de Paris*, 1820); he advises also, almost invariably, the application of these two remedies conjointly. Many cases prove their utility, whether employed conjointly or separately.

We quote from the journals of medicine (*Journ. complém.* t. xxxvii, p. 209) a summary of the practice of Désormeaux, in 175 cases of metro-peritonitis: bleeding at the arm was found to succeed in three times out of four; emetics in four out of five; and mercurial friction once out of three times.

Cold applications have also been recommended to the abdomen; the spirit of turpentine, the sub-carbonate of potassa (*A. C. Baudelocque, l. c.* p. 391, &c.), and friction with antimonial ointment (*Duparcque*).

mercury, and all the other remedies, so much in repute in puerperal peritonitis (*Hamilton*, *Vandenzande*, *Chaussier*, *Velpeau*, *Désormeaux*), and in cases of the absorption of pus (*Legallois*, &c.). Injections are often necessary when the lochia are of a fetid odour, and signs of gangrene appear; but in these cases, all our attempts to relieve are too frequently unavailing, especially in hospitals. Private practice is far from being attended with such serious results, as we have frequently remarked during the course of an epidemic: the use of mercury, so unsuccessful in the practice of Chaussier, either in the form of friction, or of pills (calomel), has been of the utmost utility in more favourable situations.

CASES.

1. *Metritis, cured by delitescence, or by rapid resolution.*

1, 2, 3, 4, 5*.

2. *Fatal metro-peritonitis, after delivery.*

1, 2, 3, 4, 5, 6, 7, 8, 9†.

2. Jeanne L—— G——, thirty years of age, was in her eighth pregnancy, and had been affected with great general anasarca for a month. One fœtus was born spontaneously; a second presented the left shoulder, and was easily extracted by turning. The uterus seemed disposed to be torpid; hæmorrhagy ensued, as in all the preceding deliveries. Lotions were applied over the hypogastrium, and injections within the vagina. On the first day, the pulse was small and frequent; the lochia, sero-sanguineous. On the following day the pulse was small and irregular, with pains in the abdomen,

* These cases are of the most ordinary kind, and are therefore omitted.—Tr.

† We have selected one of these cases, as a specimen; it will be seen how unnecessary it was to give more.—Tr.

shiverings, and sanguineous lochia. On the third day the pulse was intermittent, with violent pains in the abdomen, accompanied with extreme tenderness and considerable tumefaction; there was profuse diarrhœa; no secretion in the mammæ; gradual sinking; and death on the following night.

Post-mortem examination.—Externally, the body was very pale; the pudenda and the legs were anasarcous. The abdomen contained from three to four pints of yellowish-green serum; purulent flakes were accumulated between the uterus and the bladder in the right iliac fossa and left hypochondrium. The omentum was gathered up and folded upon itself; the stomach and intestines, enormously distended by gases, and glued together by an albuminous, semi-concrete, and puriform exudation, were slightly red and injected at their peritonæal surface. The liver was small and healthy; the gall-bladder was filled with a brown viscid fluid; the spleen and pancreas were unaltered, with the exception of a slight layer of pus upon the right extremity of the latter organ; the kidneys were very pale; the lymphatic glands of the mesentery were much congested; the symphyses of the pelvis very moveable.

The peritonæum presented distinct traces of inflammation of the anterior, posterior, and right lateral parts. A vascular net-work, strongly injected, was seen in different parts, more observable upon the uterus, near the right hypogastrium, opposite the convex surface of the liver. The cellular tissue, which connected this membrane with the abdominal muscles, was much infiltrated; the muscles themselves were pale and saturated with serum. This infiltration was also accompanied with congestion (hardness) in the super-pubic ligaments of the uterus; the Fallopian tubes, broad ligaments, and sides of the uterus, were ecchymosed and tumefied; pus was adherent to the pavilion of the tubes, and to the ovaria, which were also congested.

The uterus was so voluminous as to occupy the whole of the hypogastrium, and even a part of the umbilical region.

In the thorax, the lungs were found partly adherent; the

cellular tissue of the pleuræ was infiltrated, and a little sanguineous serum was contained in their cavity. There was considerable sero-sanguineous effusion in the pericardium, with some adhesions of that sac to the heart. The foramen ovale admitted of the introduction of a catheter.

The rapid progress of the disease left more traces of peritonitis than of metritis; nevertheless, the large volume of the uterus, on the third day after delivery, denoted a morbid enlargement of that viscus; besides, the state of its appendages sufficiently proved it to be inflamed.

It is a question, whether the exterior infiltration of the peritonæum was owing to the inflammation of that membrane, or whether it was not the remains of œdema developed during pregnancy.

3. *Gangrenous metritis*[1].

Mademoiselle Fa——, seventeen years of age, was affected with a violent cough, two months before confinement; she was delivered, naturally, on the 4th of Novr. 1820, of her first child; the cough continued; on the following day there was fever, with pains in the sub-sternal region of the thorax, sanguineous expectoration, discharge of the lochia, during the three first days, and imperfect secretion of milk.

After general and local blood-letting, with other remedies, the lochia were suppressed, the pains in the thorax continued; the patient complained also of pains in the hypogastrium, which was very tender on being pressed; the fundus uteri might be felt above the pubes, a little to the right; the tongue was red at its borders, and of a slight brown colour at its upper surface. Twenty-five leeches were applied to the abdomen. All the symptoms of adynamia appeared, and the patient died on the twenty-first day after her delivery.

On *post-mortem examination*, the lungs were found to be

[1] The following cases were all collected by Madame Boivin.

hepatised; the uterus presented a dark livid appearance; it was six inches in length, its cervix alone being two inches and ten lines; the tissue of the organ was extremely soft, and very impressible by the extremity of the fingers. Near its fundus, to the right, and in front of its interior surface, there was a putrid mass, about six lines in thickness, and from eighteen to twenty in diameter, of a dark-brown colour, and considerable fetor. This mass, which was easily removed, covered a part which was grey, and penetrated deeply into the tissue of the uterus. The remaining part of the cavity of the uterus was overspread with a layer of slate-coloured matter, which, on being washed away, exposed the substance of the organ; this substance was of a pale livid colour, and was easily scraped off with the back of the scalpel. There was no trace of a cervico-uterine orifice; nor was any fibrous tissue perceptible; the interior surface of the cervix was of a blackish-brown colour throughout, and particularly its external orifice, which appeared to be gangrenous; the mucous membrane of the vagina was easily removed.

Such was the state of the uterus twenty-four hours after death.

4. *Gangrenous metritis with phlebitis; obstruction of the common iliac artery; gangrene in the foot.*

In August 1823, a person, eighteen years old, was brought to the Maison de Santé, five days after delivery, for chronic catarrh; the pregnancy had been accompanied by troublesome cough, and the labour was followed by violent hæmorrhagy; vinegar and water, and bladders filled with ice, were applied to the hypogastrium; the hæmorrhagy at last ceased; the lochial discharge was of a greyish colour; from the day after the delivery there was fever; the lower extremity, on the right side, from the sole of the foot to the hip, *had continued cold and insensible;* the pulse was small, frequent, and very intermittent; the expectoration was copious and puriform; there were also deep-seated pains in the right iliac fossa. The tumefaction of the limb rapidly increased, the foot be-

coming suddenly of a vivid red, and then of a red-brown, colour; there were considerable phlyctænæ on the toes.

On *post-mortem examination*, the lungs were found completely suppurated; the heart was extremely small, flabby, and without blood; the aorta, in its greatest diameter, was only eight lines, and was empty as far as the iliac branches. In the common right iliac, and at the beginning of the internal iliac, there was a coagulum of red blood, equal in volume to the vessel containing it, and eighteen lines in length, extremely hard, and as it were fibrous. The course of the artery was obstructed, at intervals, by similar coagula, which were also found of equal solidity in the crural artery.

The uterus, of a pale livid colour, was of the usual volume, immediately after delivery; its substance was soft, yielding to the pressure of the fingers; its internal surface presented softish unevennesses at the part where the placenta had been inserted; the internal surface of its cervix was nearly smooth, softish, and lax; its tissue was like jelly, blackish, and as it were gangrenous.

The veins and external sinuses were devoid of blood at the left side of the organ; on the right, the veins, especially the ovarian, were obstructed with a viscid, puriform matter. The Fallopian tubes and ovarian ligaments were of a violet-red colour.

This condition of the veins, and the pains experienced during life seem distinctly to denote the coincidence of real phlebitis with gangrenous metritis. Could the obstruction of the iliac artery be referred to the cold application?

5. *Phlebitis and softening of the uterus.*

1*.

2. A person, twenty-three years of age, was delivered, without difficulty, of a healthy child (Feb. 1831). All went on well until the ninth day, when the patient, while employed

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* Omitted.—Tr.

in washing linen, was seized with violent pains in all the articulations of the limbs: the lochia, which had continued till that period, being suppressed, leeches were applied to the pudendum, &c. There was no complaint of pain, however, in the uterus. To this state of things were added symptoms of adynamia: the lips became dry, the teeth covered with sordes, the tongue loaded with a brown, thick crust; and the patient died on the twelfth day of the disease and the twenty-third after delivery.

The *post-mortem examination* presented no change, as Dr. Collineau[1] informed us, in any of the principal organs, or in the articulations of the limbs. The uterus, larger than natural at that period after delivery, presented about five inches in length, from its fundus to the border of its external orifice. Its anterior paries was one inch in thickness; the posterior, as far as the fundus, only from four to five or six lines; the former was hard and elastic; the latter softened.

Divided upon the median line, the uterus presented deposits with thick parietes, filled with white pus; they were mistaken for tubercles in the purulent state. Professor Andral and I were of opinion that there was inflammation of several venous sinuses. The veins displayed, in their course, considerable thickening of their parietes; this was not seen in the veins of the fundus of the uterus, which contained only a reddish viscid matter, in small quantity.

6. *Metritis, with fatal phlebitis, owing to abortion.*

1. Mademoiselle Zoé Duc——, twenty-seven years of age, had been affected (May 22, 1830) with pains in the stomach, with vomitings, and suppression of the catamenia. For six weeks there were vomitings, and pains in the head, alternately; and, obviously, great anxiety of mind.

In the beginning of July, there were clots of pure blood

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[1] The anatomical preparation was sent to us with the foregoing details, by Dr. Collineau; the figure will be found in the Atlas (Pl. XXXII. fig. 1).

in the expectorated matter, sleeplessness, agitation, and constipation. On the 9th there was fever, preceded by shiverings, with pains in the hypogastrium: on the following day, flushing of the face, with small, hard, tense pulse; the blood, taken from the arm, was buffed, and floating in a large quantity of yellowish serum. In two days afterwards there was abortion, attempted to be concealed, at the fifth month; no hæmorrhagy; involuntary evacuation; continued fever; altered countenance; tongue and lips dry; and acute pains in the hypogastrium. The placenta was not expelled till the next day. Up to this period the lochia had not flowed; the symptoms became more severe; the pains extended to the right iliac region; all the lower part of the abdomen was exceedingly tender, though not enlarged; the patient uttered her words with difficulty; the movements of the hands were slow and uncertain, the pulse trembling; drinks of all kinds were declined; involuntary evacuations. On the 13th, muttering delirium ensued; there was no lochial discharge; the tongue and teeth were covered with a thick brown crust; the pulse was small and very frequent; the abdomen, rather swollen, was extremely tender; there was restlessness, with profuse, clammy perspirations. On the 14th, the extremities were cold and bluish; the pulse intermittent, and scarcely perceptible; no lochia; the patient died at 11 o'clock, A.M.

Post-mortem examination. Thorax. The right lung firmly adhered all along the corresponding paries of the thorax; the summit of the lung presented several calculous tubercles. The heart was soft and small, containing several fibrinous, solid coagula, apparently almost organized.

Abdomen. The omentum, peritonæum, and organs of digestion, were healthy; the parietes of the stomach presented a very white and remarkably thick tissue. The liver was very voluminous, though healthy; the gall-bladder entirely filled with bile. The spleen was very brown, soft, and readily torn by the finger.

The uterus, in its position, presented no particular appearance; when removed, however, and opened at its side, there was, at its interior, a broad muco-sanguineous layer.

The placenta had been attached on the right side of the fundus, where it covered the internal orifice of the Fallopian tube; there were several deep-brown spots in that part. A blackish ring, seven or eight lines in breadth, of gangrenous appearance, encircled the cervico-uterine orifice. The ovarian veins, much dilated, were filled with thin yellow pus. The right Fallopian tube was also filled with pus; the left, much enlarged, contained a viscid, but rose-coloured, matter. The ovaria were very voluminous, rugous at their surface, and presented, in miniature, the appearance of the convolutions of the brain.

Reflections. The foregoing symptoms and appearances removed all doubts respecting the nature of the disease. We suspected that some local means had been employed to induce abortion.

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CHAPTER IV.

OF CHRONIC METRITIS, AND OF CONGESTION AND INDURATION.

CHRONIC METRITIS is much more common than the acute form, and must not be considered as its usual consequence. It presents, indeed, at its first appearance, and in its course, a degree of acuteness, differing, perhaps, only in intensity from acute metritis, properly so called. But, when least acute, it is frequently latent; so that the patient delays applying for advice until the progress of the affection, together with the inconveniences it occasions, has become consider-

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* Omitted.—TR.

able. Several months even are sometimes allowed to pass away after delivery, or abortion, or the expulsion of a mole, when attended with little pain, before the patient is induced to seek a remedy,—either because she imagines her sensations to be merely those usually attendant on the puerperal state; or because some exertion, or shock, has suddenly increased her sufferings; or, lastly, because this increase has spontaneously appeared with the return of the catamenia, previously suppressed. Although unmarried persons at the age of puberty are liable to this affection, it occurs more commonly in those who have had frequent labours, natural or unnatural. In the unmarried, it occurs chiefly in those subject to painful and irregular catamenia. Although the sanguineous temperament is not exempt, the lymphatic and the scrophulous are especially predisposed to this affection. Syphilis, and other diseases, by infecting the whole system, often give rise to the different forms of chronic metritis. Hereditary cancerous diathesis almost always occasions inflammation, previously to its fatal development; after this latter period, the existence of the diseased tissue becomes a source of inflammation to the healthy part; hence, the frequent recurrence of metritis, carried sometimes to an acute degree, and appearing to extend the disease to parts previously unaffected.

Since chronic inflammation, therefore, assumes different forms, corresponding with its specific causes, we shall divide it into four:—congestion, ulceration, granulous inflammation, and the mucous discharge: these are, doubtless, often combined,—congestion co-existing with ulceration and the mucous discharge, or this last with granulous inflammation, &c.: we shall, however, treat of them separately, beginning with the first.

Although, as in scirrhus, a new substance, probably albuminous, undoubtedly combines, in simple induration, with the fundamental tissue of the organ,—the latter appears to differ from the former, principally by a less intimate combination. The original tissue appears to be only infiltrated, and not changed, as in scirrhus; it is therefore true that the deposit constituting the congestion may be absorbed, on one hand,—and, on the other, that the appearance of the congested tissue, as

presented to the anatomist, is very similar to that of scirrhus. The uterus, swollen and hardened by chronic inflammation, presents, on incision, a greyish, reddish, and firm tissue,—distinctly characterised, however, by its natural texture, and identical with what several pathologists consider only as a thickening of the natural substance,—as *hypertrophy*. The uterus is, in fact, often distended throughout, and its volume assumes the dimensions presented in the second month of pregnancy; in some cases, it enlarges so as to fill the hypogastrium, and reach the umbilicus. "With this state," says Hooper, "the whole of the uterus is of a preternatural size, more especially the body of the uterus, without any other morbid or unnatural appearance; and this increase of size is caused by an unusual formation of the healthy structure of the organ. With regard to the extent of this unnatural occurrence, I have found the uterus more than twice the usual size: and this may be considered as the mean or most common size in hypertrophy; but it is sometimes much larger."

This hypertrophy may, according to this writer, be accompanied with hardness or softness; and it is commonly observed, especially in the former case, that the parietes are thickened, though the interior cavity is not enlarged, but rather diminished.

Hooper observes that hypertrophy frequently accompanies prolapsus of the uterus, and that its vessels are, in that case, congested; he remarks also that hypertrophy is often occasioned by distension of the organ by a fibrous tumor, hydatids, &c. In the last case, there is often hypertrophy without inflammation; for this state resembles that occasioned by pregnancy. The uterus, thus distended, becomes susceptible of the same functions as in the gravid state, and, according to the English author, just quoted, presents nearly the same weight, when delivered of its contents, as in the puerperal state (one or two pounds). The nature, however, of this change in volume is more equivocal in those cases of prolapsus which frequently lead to real inflammation, as we have already remarked; and with reference to those of enlargement without displacement, or with inclination only, secondary or primary—it seems at least, that their inflammatory character cannot be mistaken,

when the accompanying symptoms are considered, although these latter are sometimes indistinct, and the progress of the disease slow, or interrupted by remissions so remarkable as to create a doubt whether it be scirrhus or metritis. And, in these cases, is it of much consequence whether the disease be called metritis or hypertrophy? It is important to avoid the term cancer, as this affords no hope of resolution. As for hypertrophy, granting it to be primary, it must be also admitted to be dependant on some excitement, or irritation; and in what respect does this last differ from metritis[1]? This distinction would only be of importance with those physicians who think that every inflammation, chronic or acute, ought to be always treated, exclusively, with antiphlogistics; a judicious practitioner, on the other hand, recognises, in questionable cases of inflammation, as in ophthalmia, a difference, amounting almost to direct opposition, between the chronic and the acute forms.

It should also be remarked that these equivocal appearances, arising solely from peculiarities in the natural changes of the uterus, are no longer presented, when we come to treat of partial congestions of that organ, and especially of those affecting its cervix; the cervix uteri is most easy of access to the finger, and, consequently, its sensibility or enlargement may be most easily appreciated. The cervix is also affected singly, much more frequently than the fundus, in consequence of its situation and functions; but it ought to be remembered that, from the readiness with which it is reached, it may often be erroneously supposed to be the only part affected, when the uterus itself also partakes of disease. We now proceed to the symptoms and diagnosis.

In treating of anteversion, we observed that that displacement was very often, in our opinion, an effect of congestion in the uterus (p. 66); a part of the diagnosis, therefore, of chronic metritis may be taken from that of antever-

[1] Hypertrophy would be no less susceptible of reduction than inflammatory congestion, inasmuch as we are always witnessing the spontaneous reduction of that occasioned by pregnancy.

sion :—the sense of weight upon the bladder, the frequent attempts to pass the urine, and pains during that discharge, the relief in the supine position, &c. There are other symptoms, arising also from interruption in the functions of the adjacent parts, and especially of the rectum, induced by the increased weight and volume in the uterus, and by its descent, with, or without, inclination : hence, there is constipation, pain in the acts of defæcation, and of passing the urine, an uneasy sense of weight near the lower part of the sacrum, sometimes pain in the whole extent of one of the ischiatic nerves, and even paralysis of the inferior limbs. To these symptoms may be added, draggings in the groins and loins, inseparable from descent of the uterus, a sense of heat, dull pain in the lowest part of the hypogastrium,—pain, which increases at intervals, and sometimes becomes lancinating, or accompanied with a sense of itching, erosion, and heat in the deepest part of the pelvis. These aggravations of the sufferings, generally attended with transient or continued, though slight, fever, and sometimes with hysterical symptoms, occur particularly at the period of the catamenia, when the tenderness of the hypogastrium is often acute. Uterine excitement, shocks, the exertion of walking, continued standing, and efforts at defæcation, occasion uneasiness of greater or less duration and degree. The groins are sometimes sensitive on pressure, the inflammation extending to the super-pubic ligaments, the ovaria, and the Fallopian tubes. It extends also to the vagina, and the sense of heat becomes still more intense; there is also smarting, a feeling of distension in the neighbourhood of the exterior parts, more acute smarting on evacuation of the urine, extreme tenderness on examination by the vagina, the folds of which are felt to be swollen, smooth, and soft. The inflammation, at these returns, may increase so as to end in suppuration by abscess : we have proofs of this fact in cases of metritis complicated with cancer, by which it is probably first produced, and then kept up.

In all these circumstances, physical signs, ascertained by a proper examination, can alone furnish a complete diagnosis. To the signs already enumerated, may be added two

others,—the sanguineous and the mucous discharges. The catamenia are usually deranged in chronic metritis, being sometimes suppressed, or diminished in quantity, but more frequently irregular in their returns; there is sometimes hæmorrhagy, and we have observed the affection to begin with sanguineous discharge, preceded by suppression, inducing suspicion of abortion. When these discharges, however, amount to hæmorrhagy, they may be considered as a complication, or, at least, as a super-induced symptom, or effect deserving particular consideration: of this we shall treat hereafter, as also of the mucous discharge, which is frequently absent, and more commonly found in chronic metritis, with, and sometimes without, congestion.

Examination per vaginam assists in ascertaining the displacements of the uterus,—especially its prolapsus; it also enables us to estimate the degree of its tumefaction, when confined to the cervix or to the os uteri, the labia of which are, in such cases, thicker, more rounded, and sometimes more elongated than usual; their orifice frequently appears more excavated, and funnel-shaped. The hardness varies, but is always greater than in the natural state[1]; this is a fact distinctly appreciable, when one of the labia of the cervix, or one of its lateral halves, is alone affected, while the opposite part retains its ordinary volume and firmness. It may also be ascertained that the pain, felt on pressure, is only experienced at the diseased side, where there is also rather more heat. In partial congestion, it may easily be ascertained that the affected part, though hard at its centre, loses its consistence in proportion as it approaches the healthy parts,—in a word, that it is not distinctly circumscribed. In some circumstances, the partial congestion of the cervix ascends even to a portion of the body of the uterus,—a state which coincides with the pains referred to one side of the pelvis. The appendages, the broad ligaments, &c. are often diseased, in such cases; a

[1] Cases of very rare occurrence should be excepted,—that, for instance, of Duparcque, described at the 94th page of his work, under the title of *œdema*. This œdematous congestion was probably secondary to other serious and long-continued affections of the abdominal viscera.

part, or the whole, of the body of the uterus is sometimes affected, without involving the cervix; the hardness and swelling is then felt in stretching the upper extremity of the vagina by means of the finger pressed upon the sides of the cervix, or upon the front or back part of the os uteri; there is no sense of pain, in this case, except when the finger presses upon the hard and congested part. It is very necessary to remark this tenderness, since the body of the uterus, in its natural state, is of considerable firmness, and, in some cases, so far exceeds the cervix in volume, as to occasion mistakes and uncertainties, if the judgment be formed merely upon the actual results of examination. It should be observed that, in partial congestion, the affected part is often more accessible than the others, in consequence of being inclined on that side, by its increased weight. External examination may be advantageously combined with that per vaginam, when the subject is of a thin habit: the swelling and tenderness of the fundus of the uterus, if it be alone affected, may be thus ascertained; the organ may be fixed between the two hands, and its increased size estimated vertically, if it be congested in its whole extent. Examination per rectum will be useful in doubtful cases, in which partial metritis particularly affects the posterior paries, while the anterior can be more easily reached per vaginam; its condition may perhaps be determined, in some cases, by the introduction of a sound into the bladder, —not so much to ascertain the projection of the uterus in this part, as to discover its tenderness by careful pressure.

The use of the speculum can only assist the diagnosis in cases in which the os uteri is affected; in these, it will serve to confirm the results of the examination per vaginam, respecting the form of this part, and lead to further discoveries about its colour, which is generally redder than usual, in such cases, in the points primarily affected, and so much the more, as the inflammation assumes the acute form[1]; a little

[1] M. Duparcque observes: "I have seen hard congestions, and I have never found that brown-red colour mentioned by the generality of writers, whose observations on this, as on many other points, are copied without any authentication of the facts. In the greatest number which I have seen, the surface of the congested os uteri has presented a rose-coloured tint, or a mere red ramification upon a whitish base."

blood often transudes from these parts when powerfully compressed by the edge of the instrument, as the finger also recognises in the examination per vaginam.

We proceed, now, briefly to give the characteristics which distinguish congestion from scirrhus, polypus, fibrous tumor, or the early period of pregnancy. In reference to the first of these, doubts will inevitably exist in some cases, the transition from the one to the other being often insensible.

Scirrhus is, generally, uneven, knotty, harder, more frequently accompanied with hæmorrhagy, and almost always attended with lancinating pains. Scirrhus is, besides, more distinctly circumscribed, when partial; it is also less tender to the touch, and bleeds less readily on pressure; for the hæmorrhagies, which it occasions, proceed generally from the body of the uterus. It is found, by the use of the speculum, to be less red than inflammatory congestion; it is sometimes quite pale.

Polypus of little volume, and in its early stage, occasions hæmorrhagies, and is inappreciable to the touch; at a later period, and when large enough to obscure the os uteri, it is of a rounded form, generally without orifice, and is little, or not at all, tender; besides, it generally happens that its pedicle, and the orifice which it traverses, can be reached; contained, as it is, within the uterus, and of a certain volume, it occasions, like fibrous tumor, a swelling, and a change of form, unattended with pains or any remarkable tenderness, or fever, or exacerbations, unless it be complicated with metritis.

Lastly, the early period of pregnancy presents a swelling confined to the body of the uterus,—regular, pliable, and without pain. We shall say nothing about inclinations and prolapsus, which are, in the present case, merely effects, or complications. If it were true, as Désormeaux observes, that chronic metritis was often the effect of anteversion, it would be important to distinguish these cases from those in which it is its cause; there are, at present, no other means of distinguishing them than the history, especially the cause, and this frequently amounts to very little.

The prognosis of chronic congestion of the uterus is often serious, in consequence of its obstinate character and tendency

to return. Besides, when it is protracted, or when it recurs, the volume of the organ or of the affected portion increases gradually with its hardness; the reductions, which, in the intervals of the prolapsus, were at first complete, —which, at a later period, were still sufficiently marked, become less and less so at each successive examination; the organ beomes more and more *indurated*, and passes, at last, into a cancerous state.

One of the first indications, in the prevention, as well as the cure, is, to produce, if possible, a favorable change in the system by general remedies. Change of air, a country residence, substantial but unirritating diet, warm clothing, flannel, &c. may facilitate and perpetuate a cure, by preventing relapses, regulating the catamenia, &c. This latter point may perhaps be attained by the continued use of the bath, and by local blood-letting at the catamenial periods. To these may be added abstinence, or the *cura famis*, which would be, unquestionably, of more efficacy in the present affection, than in scirrhus, in which it is also recommended. Cases of induration, erroneously termed cancerous, have been thus cured; in proof of which, we subjoin the case of Pearson, published in a work upon cancer, and copied into the 'Mémoires de chirurgie étrangère.' The food was reduced to a fourth, to a third, and to a half, of the usual quantity; it consisted of vegetables, or of substances containing but little nutritive matter, with milk.

Baths, blood-letting at the arm, strict diet, and mucilaginous drinks, are often indicated in relapses of the affection; these must, however, be used with caution, lest the patient become too debilitated, and the disease more permanently chronic.

Purgatives are also indicated, to a certain extent—care being taken to prevent repeated evacuations; calomel, soap[1], acetate of potassa, &c. considered as *solvents*, may act rather as stimulants of the intestinal canal and of the absorbent

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[1] The use of aloes, in these circumstances, is generally avoided, in consequence of the congestions which it determines towards the rectum and uterus.

system generally. This may be said also of mercurial frictions, of preparations of iodine, of mineral waters, of sarsaparilla, the good effects of which are so highly commended by Clarke[1], and have been twice experienced by ourselves (B). In one of these cases, the affection appeared to be syphilitic in its origin; and in such a case it might fairly be expected that the mercurial, joined to the sudorific, treatment, would naturally be the most efficacious. Independently of this circumstance, it is only in cases of indolent congestion that these remedies will be beneficial; in other cases, they increase the disease. Saline waters, warm or cold, in baths,—sea-water baths, for instance,—are more useful in completing or confirming than in commencing a cure. The same may be observed of iodine used by cutaneous absorption, in friction (ointment of hydriodate of potassa) near the affected part. Taken internally, in the form of tincture, it produces no decided irritating effect; in friction, besides its general effect, it may immediately stimulate the uterus—a dangerous result,

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[1] We subjoin, verbatim, two cases published by Dr. Clarke:—

"A married lady, about 40 years of age, fell under the care of Mr. Pennington and the author. On examination, a tumor was found at the back part of the cervix of the uterus, of the size of a pullet's egg; it was painful to the touch, and the usual symptoms of carcinoma, in its first stage, were present. The horizontal posture was strictly enjoined, and followed; blood was taken from the sacrum repeatedly by cupping; the bowels were kept open by mild purgatives, and decoction of sarsaparilla was ordered to be taken with small doses of extractum conii. Under a long-continued course of such treatment the symptoms all ceased, and the patient was enabled to join her family, which she was incapable of doing at first. The author has seen the patient very lately, nearly three years having elapsed since he was first consulted: she reports herself well, and has no reason to believe that any disease exists.

"A widow lady, about 48 years of age, who had been a patient of Mr. Bond, at Brighton, was attacked with such symptoms as usually attend diseases of the uterus: in the cervix of which a tumor was found, on examination, as large as a French walnut. It was exceedingly tender to the touch, whether the finger was introduced into the vagina or into the rectum. The means employed in this case were repeated; cupping, abstinence from animal food, the recumbent position (the upright position, or exercise, being always attended by considerable pain), the exhibition of extractum conii, and soda, with the use of the hip-bath, and the occasional employment of mild aperients. After this treatment had been pursued during several months, the uterus was again examined, both by Mr. Bond and myself; this tumor had subsided, and the patient expressed very little pain when the former seat of it was pressed upon.

"I could relate several similar cases, attended with an equally favorable result."

if that organ be very tender; but beneficial, when the induration is indolent, and scirrhus be apprehended.

The same remarks will apply to counter-irritation. It was usual, some time ago, to form an issue at one, or both, of the femora; this often succeeded, either as a derivative, or as a sympathetic stimulant, sufficiently distant to be of moderate action. Under a more vigorous treatment, cauteries, moxas, and setons, have been applied to the loins, and sacral regions; and this treatment might be useful in cases of hard and indolent congestion; but when the uterus is tender, disposed to bleed, and subject to active congestion, it would only induce turgescence about the organs of the pelvis*.

Leeches, *in small numbers*, applied near the uterus, have a derivative, stimulating effect, partly owing to the punctures, partly to the suction: they may increase the determination of blood to the uterus, and, however beneficial in some circumstances, are injurious in others; it would, therefore, appear more proper to divert the morbid discharge, by applying them at a distance from the uterus, as at the ankles; they produce, however, very little effect when thus applied, or act, indeed, in the general way of blood-letting; the same remark may be applied to the use of dry cupping, or scarifications.

The application of leeches, in sufficient number to relieve the uterine vessels (from twelve to thirty, or more, according to the strength of the subject), may be made at the upper part of the femora, the labia pudendi, and the circumference of the anus, for the relief of the vessels of the cervix uteri;—at the inguinal regions, for the body and fundus: the action would, however, be much more immediate, if they were applied to the organ itself. M. Guibert obtained a speedy and effectual result, by applying the leeches, introduced through the speculum, to the os uteri. M. Duparcque and others speak highly of this method. The latter observes that the punctures give little or no pain. Though agreeing with him on this point, we think it right to observe that the results

* The most important remedy in chronic metritis, in the opinion of Dr. Marshall Hall, and in my own, is *a seton*.—Tr.

of these punctures are still to be feared; we have known several cases, in which an acute return has followed each internal application of leeches, whether there had been only chronic metritis, or actual scirrhus. It is in vain that they have been made to fasten at the upper part of the vagina; the effect has been the same; and it is not easy to balance the irritation which they produce by the advantages of the loss of blood.

We know not how far there would be reason to apprehend the same inconveniences from the punctures proposed by M. Dujarric Lasserve; but we certainly anticipate little success from a process which is equally fatiguing to the patient, from the necessity of introducing the speculum. This introduction is attended with several inconveniences; it may renew the pains: the other modes of examination ought also to be cautiously adopted, especially those per rectum and per vaginam, which often lead to the same results, and should only be used in cases of actual necessity. *Absolute* rest is necessary:—uterine excitement and bodily exercise must be prohibited, and shocks and exertions carefully avoided.

It will be often advisable to use emollient and narcotic remedies; the hip-bath, emollient enemata* in small quantity, made of the decoction of nightshade, henbane, poppy and marshmallow, are then indicated, with fomentations and cataplasms of the same nature upon the abdomen. Pulpy and semi-fluid injections have been used per vaginam *(Guillon, Lisfranc)*; it has more frequently been found useful to apply anodyne decoctions. Experience, however, has shewn that these injections lead to serious irritation; hence, they are only proper when the metritis is almost indolent. In every case, rest should be first recommended, and the supine position. After the inflammation has subsided, and not before, mechanical means should be adopted, if necessary, for prolapsus.

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* Mr. Stewart has remarked that opiates injected into the vagina have had but little effect in relieving painful affections of the uterus; but he has seen such remedies, passed into the rectum, very beneficial.—*Med. Chirurg. Trans.* vol. v, p. 154.—Tr.

CASES.

1. *Metritis, with abscess, complicated with ulcerous cancer.*

1. Madame Pet——, forty-nine years of age, without children, and with deficient catamenia for three months, was attacked with violent cough, accompanied with abundant purulent expectoration. She died in a few days after entering the hospital.

Examination post mortem. The uterus, of twice its natural size, presented, on its posterior and left lateral parietes, a solid, apparently compact, tumor, of the form and volume of a sheep's kidney, containing black, consistent, putrid matter: the ovarian vessels on this side were very large. The tissue of the uterus was thick and lardaceous; its internal surface was covered with a layer of sanguineous mucus, which was easily removed by washing. The internal surface of the cervix was beset with small globular concretions, of transparent tissue, resembling, in volume, number, and disposition, the eggs of the lobster, and, generally, filled with limpid serum. At the extremity of the cervix, near the border of the os uteri, there was a small fleshy excrescence, about five lines in length, with a pedicle arising from the bottom of one of the folds of the cervix. The left ovarium, surrounded with the left Fallopian tube, to which it adhered, contained a tea-spoonful of colourless serum. The other Fallopian tube was healthy; the ovarium, rugous and dry.

2. Madame Den——, forty-five years of age, entered the Maison de Santé, for ulcerous cancer of the cervix uteri, of which she died in five months.

There was fungous ulceration of the bladder; the ureters were dilated so as to be six lines in diameter; the kidneys were enlarged. The cervix uteri was entirely destroyed as far as the cervico-uterine orifice. There was an abscess, of an inch in extent, in the substance of the right lateral paries

of the uterus, which opened into the posterior cavity of the pelvis. There was a tumor, at the back of the uterus, behind the peritonæum, consisting of melanosis. The Fallopian tube and ovarium on the right side were confounded together in a softened mass.

2. *Congestion, of equivocal nature, in the uterus and mammæ.*

1. 2*.

3. Madame la Comtesse de B——, twenty-four years of age, was seized with hysteralgia immediately upon her marriage, followed by violent pains, and even convulsions. For several years since that event, there have been—1, nervous susceptibility, previously unknown; 2, pain, principally seated in the right iliac fossa, and extending, in front, between the umbilicus and the pubes; 3, abundant catamenia; 4, obstinate leucorrhœa, in the intervals; 5, and lastly, lancinating pains in the upper part of the vagina. There was seldom fever, but an icy coldness in the extremities; the patient was only easy when the femora were flexed.

In the month of December, 1825, we ascertained, by the finger and the speculum—1, that there was considerable prolapsus; 2, that the uterus was of twice its usual size; 3, that the utero-vaginal orifice was tumefied, tender, of a livid red colour, and ecchymosed; 4, that the anterior labium of this orifice presented, at its surface, two tumors of the size of a pea (see Pl. XXVII, fig. 5); 5, that the white discharge proceeded from the cervix uteri; 6, the acutely painful sensation, experienced on pressing the right and hypogastric iliac regions, led us to suspect adhesions of long standing; 7, we also observed, in the axillary border of the right mamma, two small tumors, of the volume of a filbert.

The patient remarked that, when in the south of France, the pains were removed, the catamenia were less abundant, the leucorrhœa disappeared, and she enjoyed perfect health.

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* Omitted.—Tr.

Four leeches were applied round the os uteri; eight days afterwards, the cervix uteri was reduced to its natural size and colour.

The uterine disease was greatly diminished by the treatment prescribed; but the mammary glands were much increased in size. The patient afterwards came under the care of M. Récamier. The mother of this patient had been affected with small tumors at the cervix uteri.

3. *Congestion of the uterus, of doubtful nature.*

1, 2, 3, 4*.

4. *Chronic metritis, not cured.*

1. Madame Aub——, thirty-four years of age, had been delivered of her first child in her nineteenth year. She had been regular till her twenty-seventh, from which period there had been intervals of several months, and even of a year, between the returns of the catamenia, without injury to the health.

In February, 1830, after long and fatiguing journeys, she experienced pains in the uterus for the first time, with a sense of weight in the pelvis; the abdomen was increased in size; the uterus was as large as at the third or fourth month of pregnancy; and, on applying the hand to its anterior surface, and pushing back the corresponding paries of the vagina, a large and tender tumor was discovered. I imagined this was fibrous; but there was evidently considerable acute inflammation co-existing with it. On repeated application of leeches, and other remedies, the pain was only relieved; it afterwards returned, and was increased by exercise. On the 21st of April, the cervix uteri was found to be increased in volume, its tissue hard, and its surface smooth;

* The authors confess that the cases, given under this head, are extremely incomplete: we have thought it right to omit them altogether.—Tr.

the tumor also was voluminous, but less tender; the patient complained of pain, extending from the left iliac fossa to behind the pubes. On the 18th of May, the tumor was still large, but the patient was better. She left the hospital uncured.

2*.

5. *Considerable congestion, with adhesions of the uterus and its appendages.*

1, 3, 4†.

2. The following case is that of a young woman, who had been under the care of M. Adelon, for two years, for leucorrhœa, which sometimes confined her to her bed for several months.

She had been married only three months, and was subject to suppressions of the catamenia, with pains in the pelvis, and habitual constipation.

On examination, April 19th, 1828, a tumor was found attached within the posterior border of the os externum, which was excessively tender. At a short distance further, I discovered the os uteri, of twice its natural size, resting upon the perinæum, and pushing it back, so as to make it project between the fourchette and the anus.

On the 20th of June, the patient was better, from the use of leeches, baths, and enemata. On the 25th of December, I learned from M. Adelon, that the patient was still better, but not cured, and that MM. Désormeaux and Marjolin considered it as anteversion.

6. *Syphilitic metritis, treated with mercury.*

1‡.

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* Omitted.—Tr.

† Omitted.—Tr.

‡ In this case the affection was supposed to arise from syphilis; a mercurial treatment was adopted with some benefit, but the final result was not known.—Tr.

7. *Chronic metritis, cured by antiphlogistics.*

1*.

2. Madame Bal——, thirty-four years of age, had an affection of the uterus, accompanied with hæmorrhagies. On the 18th of August, 1830, M. Lisfranc discovered a tumor, nearly as large as a hen's egg and exquisitely tender, at the anterior and inferior part of the body of the uterus, which was also exceedingly tender.

On a second examination, two months afterwards, the tumor was reduced to the size of a pigeon's egg. After the month of October, the pains extended to the right hypochondriac region, and leeches were continually applied. The hæmorrhagies ceased ; but the patient fell into a state of complete marasmus ; vomitings ensued, with deranged digestion.

On examination, the tumor had entirely disappeared. By the use of gelatinous enemata, and emollient baths, the digestion was restored. Leeches were applied to the abdomen, where there was violent pain. In the month of November, 1831, the patient was comparatively well. The principal affection was cured ; the hæmorrhagy was checked by an active antiphlogistic treatment ; the catamenia, however, have not appeared for eighteen months.

CHAPTER V.

OF SIMPLE ULCERATION OF THE OS UTERI.

Simple ulcers of the os uteri, being frequently undetected in consequence of their deep situation, have not formed the subject of any distinct theories ; they will furnish us with that of a very few considerations of a general kind.

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* Omitted.—Tr.

M. Dupuytren has well described this form of chronic metritis, in his clinical lectures, published in the journals of medicine: he observes that—"*mucous ulceration* of the cervix uteri may be easily overlooked if we proceed no further than to an examination with the finger; it might be thus mistaken for deep-seated cancer[1]; but the use of the speculum will readily lead to a discovery of the present affection. The cervix and os uteri being received into the upper part of the speculum, a superficial ulceration is perceived on one or the other of the labia of the os uteri*, as red as a cut surface, not deeper than the mucous membrane, resembling the ulceration of the nose called ozœna, and occasioning, if unremedied, fatal results." This surgeon cures this affection by cauterization. Delpech informs us that he has seen several cases of this kind, which he attributed to scrofula, and cured also by cauterization with the acid nitrate of mercury: this application was, in some cases, repeated many times. M. Jobert[2] relates that, in one case, Professor Marjolin had recourse to it twenty times before he could produce a complete cicatrization. M. Jobert himself succeeded only after fifteen

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[1] This appears to be in contradiction to the sequel; there are, however, cases of deep-seated ulceration, though they are generally very superficial, so as to elude the most careful examination by the finger. By the help of the speculum, erosions are seen, with unprojecting borders, only distinguishable by their redness. This colour is sometimes found in the whole of the os uteri, which is, in such circumstances, swollen, soft, brownish, and, in a manner, excoriated at the circumference of its orifice.

* The authors observe, in the course of a case given in another part of their work, which I have thought it right to omit (t. ii, p. 301):—"The volume of the os uteri in some persons, who have never borne children, is only that of the extremity of the little finger; in others, of a cherry; in others, again, of a plum,—without implying the slightest disease. An examination per vaginam almost always leads us to think it larger than it really is; and, hence, the advantage of the speculum. Besides, it sometimes happens that the os uteri is diseased in cases in which it is of the smallest size. We have observed ecchymoses, erosions, superficial ulcerations, and even small miliary vesicles, which could not be ascertained by the finger, and which announced serious disease. It is also of the greatest importance to have the speculum well polished, as a spot upon the instrument is reflected upon the os uteri, and excites suspicion of disease, which has no real existence; we thus, perhaps, explain a great many pretended cures."—Tr.

[2] Mémoire sur la cautérisation: *Journal universel et hebdomadaire de Médecine*, t. vi, p. 137.

applications. He observes,—"the cervix uteri being very tender, I began by applying leeches, which greatly diminished the pains occasioned by the pressure. I then advanced the pencil, steeped in the caustic, upon an ulceration more than an inch in breadth, passing it between the labia of the os uteri, where the affection had extended. Blood flowed, at first, from the diseased surface as from a sponge; but, afterwards, it entirely ceased." The same surgeon observes that the extent of the ulcerations varies from that which we have described to that of a lentil; in this latter case there are usually several, which are often finally joined together. He also gives the following symptoms:—pains in the loins, a sense of weight in the anus, draggings in the groins, heat in the abdomen, with distension in that region, as in hysteria, frequent flushings in the face, with or without leucorrhœa. M. Duparcque adds that there will occasionally be pains from excitement of the uterine organs.

Local baths, according to the plan of M. Mélier, or the use of sarsaparilla, may sometimes, as we have experienced, induce a complete cure. There was nothing, however, syphilitic in the cases which were thus treated.

It is frequently only the circumference of the os uteri which is affected with syphilitic ulcer; warty growths of this nature are sometimes observed in that part; though there are, generally, only superficial erosions, with sinuous, red, irregular borders, and a greyish or red surface. These ulcers, which always indicate an anti-syphilitic treatment, would often resist its general, and even local, action, if cauterization were not adopted. Professor Delmas, who has observed the frequent coincidence of these ulcers with a gonorrhœal discharge, in the hospital of Montpellier[1], applies a solution of the nitrate of mercury to their surface, previously washed, and repeats the application several times, if necessary. It is recorded in the 'procès verbal des Séances de l'Académie royale de médecine pour le 25 mars, 1828,'

[1] See also the 'mémoires' of M. Ricord and of M. Mélier. *Mémoires de l'Académie royale de médecine*, t. ii, 1823, p. 159 and 330.

that M. Picquet, of Bourg, has succeeded in three cases of this disease by the application of mercurial ointment.

These observations shew, then, how possible it is for chancre to be communicated to others by persons apparently only affected with gonorrhœa; and this, without invalidating the distinction between syphilis and gonorrhœa.

The facts we have mentioned, also prove that many cases of leucorrhœa depend on ulcerations of a different kind. M. Picquet says he has cured, by the use of the ointment of acetate of lead, *psoric* ulcers of the os uteri. We admit that this and other similar causes may lead to the same effects; but we are also of opinion that often no distinct account can be given of their origin. Irritation, entirely local, may, on very rare occasions, bring on, at once, enlargement, bleeding redness and ulceration of the cervix uteri. We have only to add, that incipient cancerous ulcer is often with difficulty distinguished from the simple ulcer,—that the character of ulcerous metritis is so equivocal as to be involved in complete uncertainty, and that, in such cases, the absence or presence of hereditary disposition can only inspire additional hope or fear, as appears in the case given under the head of ulcerous cancer (no. 1). It is, besides, obvious that cancerous ulceration may present, at first, the simple form, and afterwards assume the fatal character which distinguishes carcinoma.

CASES.

1. *Inflammation and superficial ulceration of the os uteri from a local cause.*

Madame Mib——, forty-two years of age, mother of seven children, and lately married the second time, had experienced, for some months, a sense of swelling and weight in the vagina, with a discharge of greenish-white matter. On examination, I discovered that the cervix uteri was low down in the vagina, very tumefied, though soft, and yielding

to the finger. This part appeared, on using the speculum, to be of a deep red colour; the borders of its orifice were superficially ulcerated, and of a red-brown. The application of the instrument occasioned the discharge of a spoonful of pure blood.

2. *Ulcerous metritis cured by sarsaparilla.*

Madame Cher——, thirty years of age, and of sanguineous temperament, had been delivered naturally, and at the full term. She nursed the first infant, but had been obliged to wean the second, in consequence of inflammation of one of the mammæ. Several abscesses formed, and opened in succession, and a cure was not completed in less than three or four months. The catamenia, however, became regular in a month after delivery, and continued so for five months. From this time, the patient complained of pains in the loins and right groin; every fortnight the blood flowed in abundance. Two years had now elapsed since her last delivery. On examination, I discovered a considerable tumefaction of the cervix uteri, and an ulceration, which, though only superficial, extended over the anterior labium of this portion of the uterus. I recommended leeches around the pelvis and anus, with sarsaparilla and other remedies, which were continued four or five months, with perfect success. In the following year the patient became pregnant.

3. *Swelling, ulceration, and excrescence of the cervix uteri, supposed to be syphilitic; considerable improvement.*

M. G—— had been delivered, in her twenty-third year, after a labour of sixty hours, though *with much manual assistance*. The delivery had been preceded by considerable hæmorrhagy, and followed by repeated syncope: after the expulsion of the placenta, the hæmorrhagy ceased. Eight days after delivery, it re-appeared with equal violence, accompanied by frequent faintings. The patient, however,

recovered her strength, and the catamenia continued to be regular for about six years. It was only a year before we were consulted, that this discharge became more abundant and more frequent, with leucorrhœa in the intervals. In the month of April, there was a frightful hæmorrhagy, followed by a copious discharge of yellowish matter. On the 24th of July, M. Dubois and myself discovered, on examination, that the cervix uteri was very low down in the vagina, its orifice directed backward, and widely open, its borders excessively thick, and rugged from ulceration. On the anterior labium of the os uteri, there was a growth of the size of a large cherry. M. Dubois proposed excision of the cervix; but the patient was unwilling to submit to the operation. M. Dumeril adopted a mercurial treatment for thirty-five days. On the twentieth, the leucorrhœa became so profuse, that we suspected a considerable abscess in the cavity of the uterus.

On a second examination, we were surprised to find that the small tumor had disappeared, and that the cervix of the uterus was reduced in size, the borders of its orifice being less hard, and almost smooth. The patient was, however, not completely cured when she left the hospital.

4. *Tumefaction, redness, and softness of the cervix uteri; incipient ulceration.*

1. Madame de W——, thirty-three years of age, experienced (in 1826) a sensation of burning heat in the uterine organs, with lancinating pains in the lower part of the pelvis: we ascertained, by the finger, and with the speculum, that the uterus was rather larger than usual, slightly tender, but apparently healthy. The hypogastric region, which was the seat of acute pain, presented neither tumor nor remarkable congestion. The patient was labouring under violent hysteria, arising from mental anxiety. An antiphlogistic treatment was, for some time, adopted, and with success.

In 1829 the catamenia were irregular, either suppressed or too abundant; the pains in the lower part of the abdomen

returned; the cervix uteri was tumefied, and exquisitely tender. On the 15th of March, 1830, there was pain in the right iliac region; the uterus was more enlarged, and lower down in the pelvis; the cervix was not much more swollen than before; the anterior border of its orifice was thicker, softer, and excoriated at its surface, and bled on the least pressure. The patient afterwards passed under the care of M. Rullier.

2. Madame M——, thirty years of age, had been regular from her fifteenth year. She was married a few months afterwards, gave birth to her first child in the following year, and had, subsequently, six other pregnancies,—three at the full term; the others, abortions, at the third or sixth month. Each delivery had been followed by considerable hæmorrhagy. The catamenia were abundant, and of long continuance, appearing at intervals of fifteen days. There was also obstinate constipation, with continual pains in the loins and groins, a sense of weight in the anus, lassitude in the femora, and sometimes leucorrhœa, though in small quantities.

January 1828. The uterus was much enlarged in the direction of its length, presenting about six inches from its fundus, which was felt above the pubes, to the utero-vaginal orifice; the latter part was extremely tender. By means of the speculum, we ascertained that the cervix uteri, which presented about eighteen lines in diameter, was of a deep red colour,—that portions of the mucous membrane were raised from its surface,—and that each exposed part was of a vivid red appearance, forming a contrast with the livid redness of the remaining part of this projection. There was also a discharge of a viscid, greenish-yellow fluid from the os uteri, which was widely open.

Under the care of M. Dumeril, the patient improved: in the month of November, 1828, she became pregnant, and, in December, experienced all the symptoms which had accompanied her previous abortions,—pains in the cavity of the sacrum and the groins; at the fourth month, the same symptoms appeared; the pregnancy was protracted until the beginning of August 1829; the labour lasted fifty hours,

owing to the rigidity of the os uteri, and the thickness and hardness of the anterior paries of the cervix; the delivery was spontaneous, and the infant was nursed by its mother.

There is no doubt that the increased determination of blood to the uterus during pregnancy, the enlargement of the cervix, and the dilatation of its orifice during the protracted labour, considerably increased the irritation and congestion which previously existed. We might, in fact, adduce several cases of congestion and ulceration of the cervix uteri, in which an antiphlogistic treatment was attended with marked success.

CHAPTER VI.

OF GRANULAR INFLAMMATION OF THE OS UTERI.

We have observed that ulceration frequently accompanies soft enlargement,—a state of inflammatory congestion, characterized by a deep redness, ecchymosis, proneness to bleed, and extreme tenderness of the os uteri, with abundant leucorrhœa: we shall now have occasion to observe the same state of things, sometimes accompanied with pruritus, almost proceeding to nymphomamia. This affection is little understood, and has never been well described: it is, in fact, a change of structure by no means common, and only to be ascertained by the use of the speculum. In some cases it has been entirely overlooked, in consequence of having been unmarked by local symptoms, or because it was complicated with affections of a more serious nature. Even on examination with the finger, the disease in question seldom presents very distinctive signs; for, if the granulations are hard, they are generally very small, being of the size of grains of sand

or poppy-seed; if larger, their softness eludes a superficial examination, even when the pain, the bleeding, &c. direct the attention to the cervix uteri.

These granulations assume two different forms, which ought to be distinguished, in reference to their causes and symptoms, by the terms *sub-acute* and *chronic*.

Under the former, may be ranged pains, redness, &c.; the elevations discovered, by means of the speculum, upon the labia of the os uteri, are sometimes few in number, of the size of peas, sub-pediculated, firm, and whitish; more frequently of the size of grains of millet-seed, whitish also, but soft, as if vesicular, in great numbers, and always without appearance of a pedicle; it is from their interstices that the blood proceeds, which flows into the vagina, by the contact of the speculum or finger, or in the act of defæcation.

To the latter, may be referred the hard, small, and whitish granulations, and the red or reddish elevations, which are less hard, or even soft, or miliary, though without softness or redness of the os uteri, where they are placed;—elevations which we might formerly have supposed to be varicose. It would, in fact, be impossible to assert that these small excrescences were always of the same nature and character; their cause, far from being always alike, is often obscure, doubtful, or like that of all uterine affections (antecedent abortions, derangements of the catamenia, &c.); it sometimes appears, more distinctly than in any other affection, to be referrible to cutaneous disease and to syphilis. Sometimes it coincides (in the chronic state) with induration of the cervix uteri; or with fibrous tumor of that organ. If this form of metritis has, when complicated, been attended with serious results, it is not generally so when it appears to be idiopathic, and only owing to the catamenial effort, to fatigue from long standing, to the exertions of business, or to habitual constipation. In this case, it perhaps consists especially of hypertrophy, of organic enlargement of the follicles of the mucous membrane of the os uteri,—a continuation of that of the vagina. The treatment, most distinctly indicated, and which we have found the most successful, is the use of emollients and local blood-letting in the sub-acute form; a

more stimulant method in the chronic (mineral waters, &c.); with specific remedies in cases of syphilis; afterwards, the derivative treatment in general (cauteries, &c.). It is of the greatest importance, of course, to form a correct diagnosis.

It is a question, whether these elevations, in the form of papulæ or vesicles, may be the origin of those globular or clustered excrescences of which we have treated in speaking of fungous cancer.

CASES.

1. *Sub-acute granular inflammation of the os uteri.*

1. The subject of this case had been affected from her infancy with inflammation of the eyelids and an eruption on the face. Her father had been also subject to obstinate cutaneous affections. The catamenia first appeared in her seventeenth year, when she was also married. In the intervals of the catamenia, there was abundant leucorrhœa. The patient was also habitually constipated, and blood was frequently discharged per vaginam during the efforts at defæcation.

On examination just before and again on the eighth day after the catamenial discharge, we observed a yellow, viscid fluid to escape in abundance from the os uteri. The os uteri, one-third larger than is natural, presented at its surface a livid redness, resembling those kinds of *nævus* commonly called wine-stains; there were also, at that part, *several small, whitish, and soft elevations, inappreciable to the touch.* It was from *the intervals between these miliary papulæ that the blood escaped* on pressure by the finger or instrument, or in defæcation, &c. This effect was the more easily produced, the os uteri being only an inch from the os externum.

2. Madame A. Menet——, thirty-five years of age, and mother of two children, had been obliged, by her professional engagements, to stand for twelve or fifteen hours daily, and exert her voice continually in singing. I have fre-

quently found the uterus affected in persons similarly circumstanced. In the present case the catamenia were abundant and irregular, accompanied with leucorrhœa, and considerable tumefaction of the uterus; the surface of the os uteri was livid, and beset with miliary vesicles; the os uteri bled on pressure, and in the act of defæcation. There were emaciation, loss of appetite, and weakness of voice. (Pl. XXVII, fig. 1 and 3.)

After the use of remedies for three months, the patient resumed her employments, and recovered her fulness of habit.

3. The subject of this case, thirty-five years of age, had been affected with profuse discharges, of red and of white appearance: mercurial frictions were recommended, and calomel mixed with honey was applied to the os uteri, which was swollen and covered with small elevations. The patient was cured in six weeks. (Pl. XXVII, fig. 2.)

2. *Sub-acute inflammation of the os uteri, accompanied with two pisiform tumors.*

Madame la Comtesse de C——, twenty-five years of age, and very healthy, experienced, in 1814, a sense of weight and pain in the uterine organs; the catamenia were irregular, sometimes too abundant. In 1824 the pains became acute, and the hæmorrhagies more frequent. On examination, the cervix uteri was found resting upon the perinæum; the os uteri, of a brownish red colour, was not much larger than in its natural state; it was, however, soft, and presented, on its anterior labium, two small, white, and solid tumors, of the size of a small pea; this part of the uterus was the seat of severe pain; on raising the organ with the finger, pain was also felt in the left iliac fossa.

On the 26th of May, 1825, after the use of leeches and other remedies, the patient was much improved in strength and appearance. The uterus had ascended, either owing to the reduction of its weight, or the increased tone of the va-

gina and ligaments. The two small tumors had disappeared. In two months the catamenia became regular. The uterus continued, however, to be tender, especially near the posterior part of its cervix. On the 1st of April, 1830, the patient was perfectly well.

It is remarkable that the daughter of this patient has been similarly affected. (Pl. XXVII, fig. 5.)

3. *Elevations of a varicose appearance upon the os uteri.*

Madame Junc——, sixty years of age, had been a widow fifteen years, and had complained, for some time, of a sense of weight in the anus, with slight pains in the loins, groins, and sacral region; she had been subject to constipation from her infancy. She had been married in her sixteenth year, and gave birth to her first child in the seventeenth, with protracted labour. Several other pregnancies had terminated favorably.

From the twenty-fifth to the thirtieth year, she had eight or ten inflammatory affections of the thorax, or in different parts of the abdomen. In the thirty-fourth, there was fever, followed, soon after, by slight uterine hæmorrhagies after mental or bodily exertion; with copious leucorrhœa in the intervals. All these symptoms, however, disappeared, and the patient recovered, by the use of mineral waters.

In the forty-eighth year, the catamenia were suddenly suppressed, in consequence of a violent emotion, and the stomach became affected. In the month of January, 1828, the patient consulted us for an affection of the uterine organs. On examination, we found the uterus rather low down in the pelvis: the os uteri, soft, and larger than usual, presented to the finger some unevennesses, which were rounded and soft, but not tender on pressure.

I endeavoured to bring the cervix to the centre of the vagina, but found it fixed by an adhesion, extending from the posterior paries of the vagina to the border of the posterior labium of the os uteri; the finger could not be passed behind this portion of the cervix uteri. By the help of the

speculum, I observed the small, softish bodies more distinctly, they were of a deep red colour, of the volume of very small peas, and without pedicles. They appeared to be only varices.

On pressing deeply on the abdomen, acute pain was felt in the left iliac fossa, and a little above. The meatus urinarius was red, tumefied, and rather tender. (See pl. IX. fig. 4.)

There were, doubtless, also adhesions of the body of the uterus and its appendages to the parietes of the pelvis, and, perhaps, to some portions of intestine, as we have often observed to be the case after continued peritonitis and obstinate constipation.

We have met with two other instances of a similar kind, —the one, a case of Professor Adelon,—the other, of Professor Alibert. In both, the vaginal adhesions formed a kind of window-work; intersecting lines were interposed between the finger and the os uteri, so as to prevent an easy access to the orifice of the uterus, which was found to be, more or less, obliterated by them. This state of things, brought on by inflammation, existed from the period of the cessation of the catamenia; both these persons had been widows for a long time.

4. *Hard granulations, with irritation.*

Madame la Comtesse de L——, forty years of age, of full habit, and with defective catamenia, had been troubled with a herpetic affection on the arm and thorax, of which she was cured. She was afterwards separated from her husband, and suffered much irritation, approaching almost to nymphomania.

On examination, there was only a redness and dryness on the internal surface of the labia pudendi, and at the entrance of the vagina; the cervix uteri, however, was more voluminous, and lower down than natural; its fundus was about two inches above the superior border of the pubes. The os uteri was covered with numerous unevennesses, like grains of sand to the touch. Pressure on the os uteri occa-

sioned pain in the cervix, and in the inguinal regions, which explained the sensation of weight in the anus, the pains in the groins, and the difficulty experienced in the expulsion of the fæces and urine.

The congestion of the parietes of the uterus was so considerable as greatly to increase the entire volume of the organ, which occupied almost the whole cavity of the pelvis.

5. *Granulations at the os uteri, with fibrous tumor, in the case of a young person who died from luxation of the lumbar vertebræ.*

Mademoiselle Dan——, twenty-five years of age, and of remarkably full habit, had been violently thrown down in the street; the lower limbs were immediately paralyzed; the bladder and rectum lost their contractility; vomitings ensued; the feet became gangrened, and death took place on January 4, 1824.

Post-mortem examination. There was luxation with inflammation of the articulating surfaces of the two last lumbar vertebræ. The uterus was of a small volume, and presented, in the tissue of its anterior, and left lateral, paries, a fibrous tumor as large as a nutmeg; the rest of the tissue of the organ was softer than natural; the ovaria and Fallopian tubes were healthy.

At the surface of the os uteri, or, rather, behind the membrane which covers it, some soft, white granulations, as large as a pin's head, occupied particularly the anterior labium, which was pliable, but much longer and thicker than the other. The patient had all the exterior signs of virginity, and the catamenia had always been regular, though rather abundant; they continued to return after the accident.

6. *Granulations, with scirrhus of the cervix and other serious affections.*

Madame L——, forty-five years of age, had been affected

with rheumatism of the right leg. She had had two abortions,—one in her thirty-third year, at two months and a half; the other in her thirty sixth, at the third month. Since the latter period, the catamenia had been regular until her fortieth year, when the periods of their return were too frequent; the discharge appeared every fifteen days, and each time more abundant than before; in the intervals there was leucorrhœa.

This state of things ceased in the forty-fifth year; but the pains in the legs became insupportable; they were confined to the left side, reaching from the foot to the hip, and into the pelvis. The full habit of the patient prevented us from ascertaining any disease of the uterus, by the abdomen; the pudenda were infiltrated; there was acute pain at the left side of the thorax, accompanied with difficulty in breathing. We ascertained that the cervix uteri was more than twice its natural size; it was also harder, and beset with numerous little grains, of the size of poppy seeds; the patient died of peripneumonia.

Post-mortem examination. Thorax. Effusion of yellowish serum; adhesion of the left costal pleura.

Abdomen. Effusion of about three quarts of yellowish serous fluid; the liver beset with tubercles in different states; the stomach and intestines of a vivid red colour: a tumor of the volume of a large orange above the left iliac fossa, and adhering to the left sacro-iliac symphysis; a tumor of less volume situated in front of the *sacro-iliac symphysis* on the opposite side. These tumors were formed by a cyst with parietes of a line in thickness, filled with a yellowish, consistent fluid: these cysts were seated in the ovaria, which were deeply diseased.

A third cyst, of the volume of a small walnut, was found on the posterior paries of the uterus, near the recto-vaginal fold, where the Fallopian tubes were bent backward and adherent.

The uterus was five inches and a quarter in length. The body of the organ, spherical in form, presented two inches and a quarter in diameter, in every direction; the cervix uteri, two inches in length; the os uteri, one inch in breadth. The interior surface of the cervix was smooth; the rugæ,

generally observed in that part, were entirely effaced; the tissue of this canal was of a bluish white colour, and very hard. Its exterior surface was slightly rose-coloured and beset with small, white, prominent, and rounded concretions, as hard as the tissue of the cervix. The cavity of the body of the uterus was occupied by a compact body, of a pale rose-colour, with uneven surface, composed of small masses of the same kind, united together by means of a reddish laminated tissue. This tumor was readily separated from a vascular membrane which belonged to it, as well as to the internal surface of the uterus.

The parietes of the body of the uterus were red, thin, and soft, presenting a remarkable contrast with the paleness and hardness of the cervix. (See Pl. XV, fig. 3.)

CHAPTER VII.

OF MUCOUS UTERINE DISCHARGE.

UNDER this title, which affords no distinct idea of the proximate cause and nature of the affection, we shall class together forms somewhat differing in these respects, as also in their prognosis and symptoms. We shall here comprise the forms of disease, termed uterine catarrh by Blatin, Gardien, Capuron, and others, known at a remoter period by the title of fluor albus, and now called leucorrhœa. It is not our intention, however, to treat in this place of the white, or other, discharges, which depend on some form of acute, sub-acute, or chronic, inflammation, or, on other important affections of the uterus or its appendages, or, lastly, on discharges of pus, formed in the ovaria, and passing through

the Fallopian tubes and the uterus[1]. It is by confounding together different affections that doubts arise of another kind, viz. respecting the original and actual seat of the discharge, or, more properly, its source. Otherwise, it would not have been impossible to refer such discharges to the ovaria, which possess none of the structure which characterises the mucous cavities, or can give rise to a mucous discharge; it could only be in the Fallopian tubes that any thing of this kind could take place; these may, indeed, in some cases, be the source of real leucorrhœa,—that is, a discharge occasioned by sub-acute, or chronic, inflammation of the mucous membrane, or by a state of asthenia, which follows after these inflammations, or by a state which is intermediate between them. We have observed, in cases of persons subject to leucorrhœa, that the Fallopian tubes were filled with a whitish, lacteous mucus, similar to that which flows per vaginam (B). It must, however, be allowed that this state of things is met with in cases in which there is no leucorrhœa; we have seen it in young persons scarcely arrived at the period of puberty (D). On the other hand, the uterus appears often to be the source of the mucous discharges; at first, if it be true that the fundus of this organ is the principal source of the catamenia, it appears impossible that the leucorrhœa, which often supplies the place of the sanguineous flow, and generally precedes and follows it, should have its source in any other part. With regard to the cervix, it is well known that it has numerous follicles, and secretes a viscid and abundant mucus, in its natural state; and that leucorrhœa is an accompanying symptom in many affections in which the cervix only is diseased; it may also be observed that the lactiform, whitish discharges, per vaginam, are very frequent in newly-born infants*, in

[1] It would be equally improper to confound with leucorrhœa, the suppurations, which, proceeding from the interior of the ulcerated uterus, may lead to distension of that organ,—to a kind of dropsy. We refer, for such cases, to our chapter on hydrometra.

* I have extracted the following interesting note from Percival's Medical Ethics; ch. iv, sect. xvi. The author observes:—

"I have been favoured by Mr. Ward, one of the Surgeons to the Manchester Infirmary, with the following particulars of the case to which this note refers.

whom the body of the uterus and the Fallopian tubes are very small, and the cervix uteri much developed, open, and generally filled with a copious viscous mucus[1]. Besides, the discharge of morbid matters through the os uteri has been

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'Jane Hampson, aged four, was admitted an out-patient of the Infirmary, February 11th, 1791. The female organs were highly inflamed, sore, and painful; and it was stated by the mother that the child was as well as usual till the preceding day, when she complained of pain in making water. This induced the mother to examine the parts affected, when she was surprised to find the appearances above described.

'The child had slept, two or three nights, in the same bed with a boy, fourteen years old; and had complained that morning of having been hurt by him very much in the night.

'Leeches, and other external applications, together with appropriate internal remedies, were prescribed; but the debility increased, and on the 20th of February the child died. The coroner's inquest was taken, previously to which the body was inspected, and the abdominal and thoracic viscera were found to have been free from disease. The circumstances above related having been proved to the satisfaction of the jury, and being corroborated by the opinion I gave, that the child's death was occasioned by external violence, a verdict of murder was returned against the boy with whom she had slept. A warrant was, therefore, issued to apprehend him; but he had absconded—a circumstance which was considered as a confirmation of his guilt, when added to the circumstantial evidence alleged against him.

'Not many weeks had elapsed, however, before several similar cases occurred, in which there was no reason to suspect that external violence had been offered; and some in which it was absolutely certain that no such injury could have taken place. A few of the patients died; though, from the novelty and fatal tendency of the disease, more than common attention was paid to them. I was then convinced that I had been mistaken, in attributing Jane Hampson's death to external violence; and I informed the coroner of the reasons which produced this change of opinion. The testimony I gave was designedly made public; and the friends of the boy, hearing of it, prevailed upon him to surrender himself.

'When he was called to the bar at Lancaster, the judge informed the jury that the evidence adduced was not sufficient to convict him; that it would give rise to much indelicate discussion if they proceeded on the trial; and that he hoped, therefore, they would acquit him without calling any witnesses. With this request the jury immediately complied.

'The preceding narrative may teach the young surgeon to act with great circumspection, when called upon to give an opinion in cases which are involved in any degree of obscurity. It behoves him to consider well the important duty he has to discharge both to an individual and to the community: and that he makes himself responsible for the consequences which may result from the influence of his judgment on the minds of the jury.'"—Tr.

[1] We have frequently observed these discharges at the 'Hospice des Enfants-trouvés de Paris;' they are very rarely syphilitic; in which it has appeared to us that the colour of the discharge was more yellow, and the consistence more considerable. On

ascertained in numerous cases; and Morgagni has observed, on post-mortem examination, that the cervix and os uteri were overspread with the puriform matter of leucorrhœa, in cases in which the fundus of the organ and the Fallopian tubes were occupied with matter of a different colour[1]. In cases of much rarer occurrence, he found the fundus of the organ to be the source of the discharge; and, in such instances, there were ulcerations, excrescences or tumors, proving that the affection was not simple catarrh. On one occasion, the uterus was only red, but the patient had died *in coitu*[2]. Hence, the uterus, and especially its cervix, ought to be considered as the source of most of the simple leucorrhœal discharges; there are some, however, which proceed in great measure, if not entirely, from the vagina,—at most from the vagina and the os uteri; this is undoubtedly the case in many sub-acute inflammations, and particularly in most of those depending on syphilis, although this affection may, in some cases, extend its ravages higher. The chronic form affords no positive proof to the contrary; for, leucorrhœa often accompanies pregnancy, and continues to the full term,—plainly shewing that the cervix uteri is not affected in such cases. Morgagni has, besides, observed the uterus and its cervix to be overspread with common mucus, and its follicles filled with transparent matter, in the case of an aged, unmarried person, the vagina being abundantly moistened with leucorrhœa, which could only have flowed from its parietes[3].

Division. Dr. Blatin has divided uterine leucorrhœa into acute and chronic: this division would ill accord with our account of this affection, for we have arranged it as a form of chronic metritis;—and for the following reasons:

1. It is only in syphilitic discharges that the acute form is ever distinctly observed; but it is seldom that the uterus

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the other hand, the discharge ceases spontaneously after some days' continuance (D). M. Rayer has observed similar discharges in cases of children more advanced, owing to different causes, and presenting different degrees of acuteness. These effects have been produced, according to several writers, by dentition, or ascarides in the rectum.

[1] Ep. xlvii, art. 18. [2] Ep. xxvi, art. 13. [3] Ep. xxxiv, art. 33.

itself is, in such cases, affected[1], if there is no ulceration; it is rather the vagina and urethra which are diseased, without any appearance of uterine discharge; 2, the same might be said of any discharge, induced by violence or irritation; 3, if the disease continues for so short a period, in the case of newly-born infants, it does not, therefore, deserve the title of acute inflammation; or, at all events, the inflammation is so slight, as to be easily overlooked; 4, lastly, in the uterine discharge, designated as acute by different writers, the affection generally continues several weeks, ceasing only for short intervals, or passing into a chronic state; it appears, like chronic metritis, in an obstinate *recurrent* form, and the term *sub-acute* is, at the most, the only one which seems to describe it. It is this term which we shall use for *sthenic* or *active* leucorrhœa, reserving that of *chronic* for the entirely *asthenic* or *passive* discharge. However different they may appear, these two states cannot be entirely separated, owing to the easy transition of one into the other.

A. *Sub-acute or Sthenic Leucorrhœa.* This form, really inflammatory, presents the following symptoms: a sense of pain at the hypogastrium, extending to the groins, sacrum, loins, &c.; to these we may add a feeling of heat, which is wanting in many other affections of the same organ; a sensation of itching, at first, afterwards of smarting, strangury, accompanied with pain and smarting in passing the urine, and sometimes feverishness. The fever may even precede the local symptoms, of which it also seems, in some cases, to be the exciting cause;—when, for instance, there exists leucorrhœa, in its sympathetic form, owing to dentition in children, &c. The inflammation often extends to the external organs of generation, which are, in such cases, tender, humid, red, and tumefied. With respect to the uterus, its orifice will be found, perhaps, more open, soft, humid, warm, and painful, than natural. The discharge follows closely after the

[1] M. Ricord has, however, lately ascertained, by the use of the speculum, that some syphilitic discharges have their source even in the cavity of the uterus. *Mémoire sur quelques faits observés à l'Hôpital des Vénériens. Mémoires de l'Acad. royale de Médecine*, t. ii; Paris, 1833, in 4to, p. 159.

first signs of unnatural tenderness in the region of the uterus; serous or sanguineous at first, especially if it succeed to menorrhagia, as we have sometimes observed, it soon becomes viscid, yellow or yellowish, often greenish, sometimes glairy, sometimes more fluid and puriform, staining the linen with a greenish yellow colour as it dries, and imparting to it a degree of stiffness like that of starch. Afterwards, it often becomes white and lacteous; sometimes mixed with slimy matter almost transparent, or consisting solely of this matter, resembling the mucus secreted by the pituitary membrane. The inflammatory state has then almost entirely subsided, and this happens spontaneously, according to Blatin and Pinel, in thirty-six or forty days. We have, however, frequently observed the inflammation to give way sooner, to pass into the chronic state, then to reappear with the catamenia, owing either to excess or some unknown cause. The colour and quantity of the discharge correspond with these changes, and it has generally appeared to us to be more viscid and high-coloured, though not always more abundant, in proportion as the inflammation was more acute.

The simple uterine discharge can only be distinguished from symptomatic leucorrhœa by the signs presented on examination with the finger and the speculum; upon this point, we refer our readers to the chapters on Cancer, Congestion, Ulceration, and Granulous Inflammation of the Os Uteri. It is not always as easy as it might be thought, to distinguish the acute or active, from the chronic or passive, form; it is, very often, only by trials of the *juvantia et lædentia*, that the precise nature of the affection, and the proper remedies, can be determined. The leucorrhœa which precedes and follows the catamenia, for instance, although sthenic, is generally unattended with pain, itching, heat in the urine, or positive signs of inflammation. In some cases of chronic and habitual or recurrent leucorrhœa, re-appearing for several days, in consequence of unusual exercise, &c. or without any apparent cause,—the nature of the affection may be entirely overlooked, or supposed to be hyposthenic, in consequence of there being no sign of local irritation; and yet an antiphlogistic treatment has succeeded surprisingly. In the climate

of Montpellier, the women generally abstain from wine; those who partake of it are subject to leucorrhœa, which is presently checked by a less stimulating diet and the use of pure water, unless it be inveterate and accompanied with cutaneous affections, as acne rosacea, &c. (D.) These kinds of leucorrhœa have appeared to us more glairy, and less lacteous, than the others; but this is, doubtless, owing to their being only incipient; at a later period, they present the usual characters.

Another source of uncertainty consists in the easy passage of leucorrhœa, at first sub-acute, into the chronic state, as we have already stated. A young woman, pale and delicate, the mother of one child, and the subject of one abortion, was affected, a year afterwards, with profuse hæmorrhagy after the catamenial discharge, with pain in the hypogastrium, loins, &c. The hæmorrhagy continued about fifteen days, with alternate increase and decrease; coagula were expelled, but there was no intimation of previous conception: the pains continued, with occasional fever, an abundant discharge of sero-mucous, rose-coloured matter, after the hæmorrhagy ceased, and great tenderness of the hypogastrium. The pains were relieved by leeches, the hip-bath, cataplasms, emollient enemata, abstinence, and mucilaginous drinks; but the hæmorrhagy continued in abundance, sometimes rose-coloured, sometimes yellow, greenish, or milk-like. Several weeks passed in this manner: the symptoms abated, but were not discontinued; they re-appeared, with pain, on the slightest exercise. The use of the hip-bath was resumed with benefit, and complete rest was ordered for more than a month. The pains at last entirely ceased, moderate exercise was taken, the discharge was white, but always abundant; the patient was consequently much debilitated, and put to great inconvenience; the digestion was impaired, with painful gastrodynia during fasting. Rhubarb was then prescribed; afterwards, simarouba in powder; the result was highly beneficial for a time: it was afterwards necessary to adopt an emollient treatment, and the cure was completed by the use of the proto-carbonate of iron. After a year of serious inconvenience, there re-

mained only transient and slight discharges of glairy mucus; the digestion was also perfectly restored, and the strength of the patient re-established (D).

This case instructs us in the mode of treatment, and in the application of remedies proper in such circumstances. Among the emollients which act almost directly upon the uterus, we would instance the hip-bath, injections, enemata, emollient fomentations and cataplasms, douches per vaginam consisting in the continual injection of an emollient, luke-warm fluid, supplied by a vessel raised to a moderate height, and conveyed by flexible tubes; it thus constitutes a perpetual lotion,—an injection applied without violence,—an internal bath, and has often been so used within our knowledge. The same effect has not always followed from injections applied with the syringe. M. Mélier thinks it would be advantageous to convey the emollient or solvent fluid even into the cervix of the uterus, by means of a canula introduced into its orifice, and guided by the assistance of the speculum. He is of opinion that this means might succeed in curing chronic inflammation of the *mucous membrane of the interior of the cervix uteri*,—an affection which he thinks very common, and characterized by redness and swelling of the interior of the os uteri; to which he attributes most cases of sterility, as much in consequence of the obstruction of the cervix as of the disease communicated to the ovaria by continuity of tissue.

The general treatment consists in baths, abstinence, or mucilaginous food, milk and water, emollient drinks, &c. To these may be added acidulous substances, mild diuretics, as nitre*, &c.

Counter-irritation will be indicated when the uterine discharge is supposed to be occasioned by some internal morbid action, as the herpetic. In doubtful cases, intermediate or mixed, it will be right to seize the particular modifications,

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* It is not at all uncommon to see leucorrhœa as an effect of hæmorrhoids; and, by directing the treatment to the cause, the effect is removed. It is also sometimes observed as a sequela of some of the exanthemata, especially scarlet fever; and it is then commonly cured in a few days by the use of the warm hip-bath, and injections of warm water. Leucorrhœa is also frequently produced by undue lactation.—Tr.

and to prescribe as it were for the symptoms, beginning always with the milder means, and proceeding to the more powerful.

B. *Chronic or passive leucorrhœa.* Although, in many cases, the hyposthenic, or passive mucous discharge is a consequence of the sub-acute form, protracted and recurrent, there are, nevertheless, cases in which this weakness proceeds originally from relaxation and local debility. In many females, the generative organs are habitually very humid, and, sometimes, even drops of mucus are found to exude, without its being considered as a morbid state, or inducing any other care than attention to cleanliness; this discharge may, however increase in quantity, and lead to much inconvenience, although only dependent on the constitution, the temperament, or even the climate. This inconvenience is very peculiar to the lymphatic, and persons of relaxed fibre, and prevails almost universally in cold and moist climates, as in Holland, and some parts of Germany.

This form is much more rare than the preceding, in very young persons; in adult age it is generally preceded by repeated excitations, frequent labours, &c. We must however admit that,—whether as cause or effect, or, rather, as having a constitutional origin,—the passive form of leucorrhœa is often coincident with amenorrhœa, and chlorosis, in young unmarried persons of retired habits.

In this form, there are no symptoms of local irritation; at the most, the external organs, or the upper part of the femora, are, at times, inflamed, from neglect of cleanliness; if there be a sense of weight in the rectum or bladder, it is only when the uterus is morbidly prolapsed or displaced,—a complication, perhaps, of frequent occurrence, but not belonging to leucorrhœa, properly so called. The discharge is generally lacteous, sometimes of the whiteness and consistency of milk, or even more fluid; hence the erroneous and vulgar ideas respecting the consequences of lactation, either not undertaken, or incautiously checked.

When the mucous discharge is abundant, it stiffens the linen, as it dries, and generally stains it with a greyish colour which is deeper at its borders. This discharge sometimes

increases at the approach of the catamenia; sometimes it diminishes and ceases at that period. The occurrence of the catamenia, in cases of amenorrhœa, has often cured leucorrhœa of long standing, with the accompanying chlorosis. Besides these changes, there are also irregularities in the quantity, consistence, and colour of the discharges; but when they are abundant and continued, they lead to uncomfortable sympathetic symptoms, as paleness, darkness round the eyelids, languor and general dejection, emaciation, pains in the stomach, especially when that organ is empty, and draggings in the epigastric and lumbar regions. Sometimes there are vomitings, and eruptions on the face, especially in the forehead.

Leucorrhœa, in its sub-acute form, and during its recurrence in the chronic form, and the mucous and slightly inflammatory discharge, attendant on the catamenia, have sometimes seemed to impart gonorrhœa, and led to unjust suspicions.

It appears that the constant humidity of the uterine organs tends to increase their relaxation; at all events this effect is produced through inattention, predisposing to different displacements of the uterus, especially to prolapsus. Sterility has often appeared to be connected with this relaxation, and, with its removal, other accompanying symptoms have simultaneously disappeared, as amenorrhœa, &c.

Tonic and astringent remedies are therefore the most proper for the passive and primary form of leucorrhœa. We hear of the danger of checking leucorrhœa: the effects of the recurrence of inflammation have sometimes been mistaken for this; but it is also evident that, if the discharge be of long standing, and *habitual*, it can only be safely suppressed by supplying its place by an issue. We have more than once checked hyposthenic leucorrhœa, without difficulty or inconvenience, by astringent injections applied in the usual manner (solution of the acetate of lead, and of the sulphate of zinc, decoction of bistorte, and of pomegranate, &c.); we have more frequently used, conjointly or separately, tonics and astringents taken internally: the use of the proto-carbonate of iron, in doses containing from three to six grains a day, has been followed by beneficial results: we have observed its effect

in the course of a day or two (D), especially when there were severe draggings of the stomach; we have also added to it, with advantage, the simarouba, bark, and other bitters. Wormwood (*Alibert*) is also recommended, and the ergot of rye*(*Bazzoni*), chalybeate waters, and other astringents, which, though more active, are perhaps more dangerous, as alum, &c. In some cases, opiates have succeeded (*Alibert*), and laurel-water, administered internally and in the form of injections (*Carron du Villards*); a treatment involving the admission of spasmodic leucorrhœa (*Gardien*); such, at least, has been the explanation of this affection, when modified by moral and nervous causes. The diet should be regulated according to the directions given for the other remedies, with a view to strengthen, without irritating. Flannel and other warm clothing will be proper, if humidity and cold appear to be the principal causes of this affection.

It will be right, however, to arrest the progress of the disease before it has gone too far to admit of the stimulating treatment. Astringent injections will readily induce a recurrence of the disease;—wine and highly seasoned food will lead to the same result: this explains the trite remark, that the abuse of mineral waters may occasion leucorrhœa. The observation is true, with reference also to chalybeate waters, and especially to thermal waters, in the form of baths. We have lately heard of several curious facts: thermal waters, depositing a large proportion of the oxide of iron, have been known to suppress asthenic leucorrhœa, after the use of two or three baths; but the discharge returned with excessive violence, when they had been used for a long time; in such cases, the affection appears to be obstinate, and can only be cured, and sometimes only relieved, by the use of domestic baths and other soothing, or general cooling remedies (D).

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* The use of the secale cornutum, in chronic uterine leucorrhœa, has been particularly recommended by Dr. Marshall Hall, in his Commentaries on the Diseases of Females.—Tr.

CASES.

1. *Sub-acute leucorrhœa of suspicious nature.*

The following cases are given with reference particularly to the origin, causes, and treatment, of this affection.

Madame de La——, forty years of age, had had several natural labours; the catamenia were still regular; she complained only of obstinate constipation and leucorrhœa. She was deeply affected by the death of her sister, *who had died of cancer of the uterus*, and the patient apprehended that she was affected by symptoms of the same disease,—as pains and draggings in the loins; a white discharge, sometimes abundant; torpor of the bowels; her constitution being, in other respects, very like that of her sister.

On examination with the finger, we found no particular alteration; the cervix uteri, of its natural volume, and without tenderness, was directed to the right of the pelvis, and was very low down. With the assistance of the speculum, some reddish-brown spots were observed on the os uteri, placed upon a base almost white. A viscid, yellowish fluid issued freely from the orifice. We recommended an application of caustic potassa on each side, and, a little above the coccyx, enemata, with the sulphate of magnesia, and flannel next to the skin. The caustic brought on acute inflammation, which was subdued by remedies, and the patient left the hospital in a month. (Pl. XXIII, fig. 3.)

2. *Leucorrhœa, probably symptomatic of serious disease of the uterus.*

Madame Dup——, thirty-five years of age, consulted me for uneasiness in the uterine organs. The catamenia had first appeared in her thirteenth year, and from that time had been irregular and difficult, always preceded and ac-

companied by pains, and generally by the expulsion of coagula or membranous shreds. She had had several abortions and two premature labours of children born dead. The os uteri was widely open, and was not of the mammelated form presented in the natural state; its borders were softish, and without any ulceration, when examined, though the abundance and nature of the discharge from the cervix uteri denoted some serious affection of the interior surface of that part of the organ. The patient was habitually constipated, with deranged and sluggish digestion, and loss of sleep. (Pl. XXIII, fig. 2.)

3. *Uterine discharge, probably syphilitic.*

Madame Lep——, thirty-four years of age, a widow, and without children, was subject to nervous attacks and uneasiness at the heart, with a sensation of burning heat, extending from the left side of the thorax to the pelvis. The catamenia, which had first appeared in her thirteenth year, had been, for some time, irregular, taking place at intervals of fifteen days, and in greater abundance than formerly, with leucorrhœa in the intervals. M. Dumeril treated the case as hysteria; the avowal of the patient led us afterwards to suspect syphilis; a mercurial treatment was adopted, and, in eight days, the leucorrhœa ceased. In the course of a month the symptoms had disappeared, and, in the following year, the catamenia became regular, and the patient's health re-established.

SECTION SEVENTH.

IRREGULARITIES OF THE CATAMENIA.

CHAPTER I.

GENERAL OBSERVATIONS.

We have already shewn that inflammation of the uterus, and especially the chronic form, is evidently a cause of uterine hæmorrhagy; we shall sometimes observe metritis following after the hæmorrhagy, and often witness the co-existence of both affections; both are attended with local excitement, discharge, and congestion. The same connection will be observed in dysmenorrhœa; and even amenorrhœa and menorrhagia are, frequently, only different effects of the same cause, often following after and alternating with each other. It is for these reasons that we now proceed to treat of the various irregularities of the catamenia together.

The sanguineous exudation, or *natural hæmorrhagy**, at the interior of the uterus, is known to take place during the whole life, in healthy subjects, with the exception of the periods of infancy and old age, when it would present a morbid or suspicious character, or depend entirely upon particular constitution. We have alluded, in our Introduction (p. 14), to these apparent returns of the catamenia, and to the point of view in which they are to be considered; we have seen that they are generally real, though symptomatic[1], hæmorrha-

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* It is a pity that the authors have not restricted themselves to the appropriate term of catamenia, in this and similar cases.—Tr.

[1] *Ingruente febre, octogenaria mensibus purgata est.* Freind *Emmenol.* cap. ix.

gies. We mentioned, also, in the Introduction (p. 11), some instances of premature catamenia; in some cases this discharge has appeared in the third year *(Bourjot-Saint-Hilaire)*, at the ninth month *(Clarke)*[1], and even at the third *(Comarmond)*, attended with the other signs of puberty. In many cases, however, a similar discharge, induced without any assignable cause, of short or long continuance, of irregular recurrence, and unaccompanied with any other sign of puberty, has been erroneously classed among those premature manifestations so frequent in the male sex.

Menorrhagia occurring in infants and children is generally morbid, and of little importance, though accompanied with effects proportioned to their degree and the nature of the cause; it may be attended or preceded by a febrile action, or co-exist with other inflammatory affections, which may sometimes increase the uncertainty, — as tumidity of the mammæ. Such was the case of an infant, given in the *Gazette médicale* (27 Septembre 1832), and of which we subjoin the details, as communicated to the editor by Dr. Mallat[2]. At a later period, menorrhagia is of little import-

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[1] See the *Nouvelle Bibliothèque médicale*, 1829, t. i, p. 92.

[2] Madame Bidaut, twenty-seven years of age, of a strong constitution, and mother of four healthy children, was delivered, on the 27th of last July, of a healthy girl. Some days afterwards, some blood was observed, several times, on the infant's clothes, which the nurse attributed to hæmorrhagy of the umbilical cord. In fifteen days, a very long coagulum was discovered in the vagina; the mammæ were also exceedingly enlarged, which the mother attributed to an abscess. From the period of this enlargement, the blood ceased to flow, the mammæ having been in their natural state some days before, when the discharge appeared. The infant was supposed to be weakened by the loss of blood, which had continued for ten days, at least; small coagula had also been discovered several times at the os externum.

The infant cried without ceasing, and was in a state of suffering; it appeared healthy; the pudenda were much enlarged, the clitoris and nymphæ excessively prominent. The abdomen was tumid, though soft; the hypogastrium was natural; the pulse was full and very frequent. It took the breast with great eagerness. The mammæ, which were very tender, were of the size of a large egg; the nipples were very distinct; the mammary glands were perfectly moveable, and yielded, upon slight compression at their base, a clear white fluid, nearly resembling, in taste, the colostrum or early milk. With respect to the treatment, I might have acted upon the sympathies existing between the mammæ and the uterus, and have subdued the

ance, perhaps excited by some vicious habit, and ceasing of itself, when that is removed.

At the period of puberty, this discharge is only morbid when it takes place vicariously, or when it is irregular in quantity or its periodical returns, of which we have already given the limitations in the Introduction of this work: it is considered to be irregular when these limitations are no longer observed.

There are, indeed, peculiarities at the period of puberty, which ought to be particularly noticed in this two-fold point of view. Pregnancy checks the catamenia, and amenorrhœa is then a natural state; delivery brings on, during its continuance, hæmorrhagies, which are of little moment, or are even beneficial; the hæmorrhagies, however, which occur during pregnancy, and those excessive discharges which accompany or follow after delivery, often lead to serious and even fatal results. Abortion, unnatural attachment of the placenta, and inertia of the uterus, which are connected with these hæmorrhagies, as their most usual cause, or their immediate effect, prove that they have nothing in common with ordinary menorrhagia; this distinction is fully marked by the attendant circumstances, which, as being entirely obstetrical, are foreign to the present work. We shall not treat, therefore, of *puerperal hæmorrhagies*, or of the suppression of the lochia; upon this subject, we refer our readers to Madame Lachapelle's 'Pratique des accouchements.'

To these hæmorrhagies, produced by increased determination, by the death of the fœtus, by the accidental detachment of the placenta or membranes during pregnancy, may be added, in reference to their cause and mode of production,

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affection of the mammæ, by encouraging the uterine discharge; but I thought it would be dangerous to establish this function so prematurely; I ordered a temporary weaning, and prescribed warm water and sugar, as a laxative and sudorific, with warm cataplasms at the feet and mammæ, to evacuate the milk; and then a cold cataplasm to be afterwards applied to these parts, to induce resolution. In a very few days the mammæ were restored to their natural state, and the infant to perfect health.

those which appear during false conception, and after the expulsion of any kind of mole; these forms of hæmorrhagy also resemble, in some respects, those which follow after delivery, arising from distension of the uterus from the presence of coagula, the placenta, &c. The same resemblance may be traced between puerperal hæmorrhagies and those which are occasioned by calculus, polypus, or fibrous tumor; and, lastly, by inversion of the uterus,—another cause of obstinate hæmorrhagies. We have also observed that fibrous tumors, formed near the uterus, may occasion hæmorrhagies by irritation or determination. The same may be said of cancer of the neighbouring organs. Hæmorrhagies, brought on by scirrhus or chronic metritis, are produced by similar actions in the affected organ. If the symptomatic form of hæmorrhagy sometimes resemble the primary in this respect, it is often entirely different, — as, for instance, when it is owing to the erosion of the vessels by ulcerous cancer, and resembles those occasioned, in the puerperal state, by laceration of the uterus or vagina. Striking resemblances and differences may also be observed between the forms of hæmorrhagy described in the following chapter, and those which merely constitute a part of the symptoms of a serious general disease; for if different febrile and eruptive diseases bring on, by determination, true active hæmorrhagies, there are other hæmorrhagies of a totally different character; —the adynamic, typhoïd, and contagious affections,—purpura and scorbutus, which occasion a kind of solution of the blood, and passive transudation of that fluid through different mucous membranes, present very different phenomena, even from those which characterise the hæmorrhagies which are termed passive, and which might, perhaps, be more properly termed chronic, and of which the uterus is the source, in a primary sense.

This notice of hæmorrhagies, occurring as mere symptoms, may be sufficient. We shall add a case or two and proceed to study those which are primary, and far less common, and, from the inattention of practitioners in regard to the examination per vaginam, too frequently overlooked.

CASES.

1. *Protracted catamenia: cancer of the rectum extended to the uterus**.

2. *Hæmaturia, owing to irregularity of the catamenia.*

1. A young woman, having had several abortions at very early periods, observed, ten days after the catamenia had ceased to flow, some blood in the urine, which she considered to be a symptom of abortion. I found the cervix uteri lower down and more tumefied than natural; the finger, on being withdrawn, was stained with blood. I imagined that the ovum was partly or wholly detached. The blood continued to flow until the following day, but only in the act of micturition; there was a burning heat in the urethra, and excessive itching of the meatus urinarius. Acute pain was felt on slightly pressing the anterior paries of the vagina, in the direction of the urethra. A discharge of pure blood preceded the emission of the urine; and, on introducing the catheter, a glassful of sanguineous urine, and some small sanguineous coagula, issued. The desire to pass the urine became more frequent, and that discharge was followed by a sense of constriction within the neck of the bladder and its exterior orifice. There was no pain in the loins, or in the region of the bladder.

The patient was then twenty-three years of age; the cause of the affection was, most probably, irregularity in diet; relief was obtained by emollient lotions and mucilaginous drinks; on the fourth day the catamenia returned, before their usual period; the urine was still tinged with blood. The baths were continued, and the patient cured†.

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* According to the patient's account, the catamenia had continued to the sixty-eighth year of her age, having ceased only ten months before Madame Boivin's attendance. There was, as the title expresses, cancerous disease of the rectum, which would, had life been protracted, soon have penetrated the cervix uteri.—Tr.

† This, and the subsequent case, are any thing but satisfactory.—Tr.

2. Madame la Comtesse de R——, twenty-six years of age, and of remarkably full habit, complained of acute pain in the bladder, with extreme difficulty in passing the urine, and a burning heat at the orifice of the urethra, especially after micturition. We found the meatus urinarius swollen, red, and exquisitely tender; the introduction of the catheter occasioned severe pain; the urine was mixed with blood. The catamenia had appeared *twice during the month.* The patient referred her complaint to a stimulating diet, as in the preceding case.

Seven or eight leeches were applied to the anus; baths, mild drinks, and an emollient diet were prescribed, and the patient recovered.

CHAPTER II.

OF PRIMARY UTERINE HÆMORRHAGY.

When we consider the structure and functions of the uterus at the period of puberty, it might be expected that the discharges would be more frequent and profuse, did we not remember that the turgidity is naturally removed by the effects which it has produced,—just as epistaxis cures the inflammatory fever by which it was caused.

The quantity of blood, necessary to produce this effect, varies in different persons, as we have observed in our Introduction; the discharge, however, is morbid, when the subject is weakened rather than relieved by it. This weakening is occasioned, either by the flow of blood being too profuse in a given time, or by its being protracted beyond the natural period; or, lastly, by its too frequent recurrence.

In these several points of view, hæmorrhagy may consist only in an increase of the natural catamenia: with regard to its frequency,—some persons are subject to more numerous returns of the catamenia than others; in some cases, they occur twice in the month, though rarely without producing serious inconveniences; they are, much more frequently, irregular in their returns.

There are also phenomena, preceding or accompanying this discharge, which distinguish *active* hæmorrhagy from the natural catamenia. Its approach is, generally, intimated by signs of plethora and of *increased action*,—as, shiverings succeeded by heat, frequency of the pulse, a sense of weight and of fulness,—of heat and pulsation in the region of the sacrum, and in the lower part of the hypogastrium,—of itching and heat in the pudenda,—of swelling of the mammæ, and, as it is said, of the hypochondria; the blood is red, warm, fluid, sometimes flowing in great abundance, so as to bring on faintishness, syncope, and even death; sometimes, drop by drop, also to an extreme quantity; the flow may then cease for a moment, only to return with renewed activity. Frequently, a coagulum is formed in the vagina; the blood accumulates behind this obstacle; and, on making some effort, or after tenesmus, or during sensations of weight in the anus or upon the bladder, the whole suddenly gushes forth, producing great terror,—without, however, occasioning results more serious than those induced by moderate, though continued or repeated, hæmorrhagy. This discharge, in fact, however inconsiderable, if frequently repeated, or if continued, may bring on excessive debility, and ghastly paleness; the blood becomes pale and serous,—both that which flows from the uterus, and that which supplies the rest of the system. Hence, the state of languor, and sinking, the weakness of the pulse, the œdema of the limbs, the flushings of the face, which soon appear, have procured for this affection the term of *passive*,—for which, the name of chronic might be properly substituted. The character of the affection has then become, in most cases, really asthenic,—like that of leucorrhœa of long standing, which sometimes alternates with the hæmor-

rhagy[1]; which, although it is in that case only secondary, ought still to be treated in a very different way from cases of active and recent hæmorrhagy.

Excessive uterine hæmorrhagies, therefore, are frequently of serious prognosis, in consequence of the rapid, or slow, exhaustion, which they produce: this is, however, hardly ever fatal, and the hæmorrhagy is often checked,—either spontaneously, or by the use of remedies,—without producing any remarkable or dangerous prostration of strength; but the acute and active, the intermittent and recurrent hæmorrhagy, may bring on other dangerous results connected, exclusively, with the uterus.

1. We have observed, in the case of acute uterine hæmorrhagy,—as in that of dysmenorrhœa,—that the influence of the increased action, combined with the local process of exudation, produces but little discharge, though it occasions inflammatory congestion. We are not aware that, in such cases, we have mistaken the cause for the effect; and, if any doubt remain on this point, the possibility of the fact may be proved by the frequent instances in which we have observed profuse hæmorrhagies followed by puerperal metritis.

2. It is obvious that repeated congestions—though each time less in degree—in chronic uterine hæmorrhagy, would easily induce chronic metritis; they occasion, however, more particularly, an entirely distinct affection of the cervix uteri, which requires to be specifically described. Perpetually charged with the blood accumulated in its vessels, this portion of the uterus changes its structure, and becomes much more vascular, soft, and voluminous; the mere contact of the finger causes it to bleed, &c. producing, at the same time, acute pain; for there is always a certain degree of inflammation. On applying the speculum, the os uteri is observed to be swollen, smooth,

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[1] "The leucorrhœal and menorrhagic discharges, to which the patient had been subject since her last confinement, appear to me to be attributable solely to a state of relaxation and debility. There is nothing remarkable in the volume of the uterus; it is softish throughout, and its cervix alone a little swollen: there are also some unevennesses in that part, which appear to me to depend entirely on previous labours."—*(Consultation of Madame Lachapelle.)* See further on, No. 2.

or superficially excoriated, of a deep violet, or rather brown-red, colour, resembling that of a coagulum of venous blood. This condition frequently leads to a particular form of cancer, —the hæmatode; but, before it proceeds to this extent, the altered structure may continue stationary for a long time, and even entirely disappear under judicious treatment; it may also accelerate the effect of some serious complication, and thus occasion an early, and unexpected, death.

Uterine hæmorrhagies are frequently occasioned by other affections of the same organ,—as polypus, cancer, even sub-acute metritis, and syphilis, accompanied by inflammation of the same nature in the internal and external uterine organs. The causes are, however, often very obscure. When apparently induced by fright, sudden emotion, physical concussion, laborious exercise—as dancing, walking, or riding,—immoderate heat, the use of fermented liquors, or excessive excitement of the uterus, there has probably been a predisposition,—an internal cause,—temporary, or constitutional. This predisposition must be admitted, when the hæmorrhagies succeed to any of these exciting causes, at the approach, or during the flow, of the catamenia; for healthy persons are daily subjected to the same causes, without the same effects. The abuse of emmenagogues has led to a similar result, although this latter might be attributed to that state of the uterus for which the emmenagogues themselves were prescribed; for it is usual to observe a copious evacuation after these suppressions of the catamenia. The same may be said of the first discharge which takes place after delivery, and lactation.

It appears, therefore, that young married women, and those who have had several abortions, together with those of lymphatic, nervous temperament, are most liable to this affection. We have also observed that the catamenia generally continue, at each return, for a longer period, and appear, in greater abundance, in persons of this temperament, than in the robust and muscular; hence, the weakly often consider themselves to be of very sanguineous temperament, judging only by the abundance of the discharges.

Uterine hæmorrhagy is more particularly to be appre-

hended at the period of the cessation of the catamenia. This discharge generally becomes irregular before its final cessation; it is suddenly suppressed, and then re-appears, at regular or uncertain periods, frequently becoming so violent and profuse as to injure the health. Although these irregularities may be expected to cease after several months, their progress ought to be carefully watched, and every prudent method of treatment adopted. Should this state of things continue beyond two or three years, it would be difficult, as well as dangerous, to consider it natural; there may be disease, and perhaps of a serious nature, in the uterus, which ought to have been ascertained, before the hæmorrhagies had become inveterate. This suspicion should be especially excited by any return of uterine hæmorrhagy, after years of cessation of the catamenia.

Treatment. On this part of the subject, we shall confine ourselves to the treatment which reason and experience suggest in acute, and chronic, hæmorrhagy,—the prevention of which consists entirely in avoiding the exciting causes.

1. Acute menorrhagia, like every active hæmorrhagy, may, in some cases, indicate local or general blood-letting, if there be no reason to apprehend the consequences of increased debility. The discharge may frequently be suppressed by milder sedatives — as, abstinence, absolute rest, soothing drinks, tisans of rice*, barley, and comfrey; mucilages, emulsions, with nitre, or citric acid, sirop of currants rendered slightly astringent by sirop of quinces (! Tr.). Small and frequent doses of ipecacuanha, so as to induce nausea, have checked the hæmorrhagy, — probably by diminishing the activity of the circulation. Stoll and Finke have used it in an emetic dose, when the discharge has been owing to gastric derangement. Osborn, and many modern practitioners, have employed it for the purpose of derivation, repeating the emetic dose two or three times, and following it by a saline purgative. Others have directed the hands to be put into hot water

* 'Sume hoc ptisanarium oryzæ!' Hor.—Tr.

(manuluvium), and cupping-glasses to be applied over the mammæ, &c.

A cool atmosphere is useful in this affection; but cold water, ice, &c. externally applied or taken into the stomach, is only to be used in alarming cases. In these, the plug might be applied in the vagina, as in hæmorrhagy during pregnancy.

2. When the affection has become chronic or passive, tonic and astringent remedies are indicated, — as, saline, mineral, and chalybeate waters, catechu, colombo, kino, the bitter principle of vine leaves, cinchona, diluted and sheathed mineral acids, the bitter and acid principle of green oranges *(Frank)*, alum in solution or pills, nitre in large doses (from one to two drams a day), and even savin *(Sauter, Wedekin)*, which is considered a powerful emmenagogue.

It ought, however, to be premised that these two principal indications are not always very distinct;—that there are equivocal or mixed cases, in which the practitioner must be guided by careful and judicious observation. Uterine hæmorrhagy of long continuance is sometimes aggravated by a tonic treatment,—the active state not being sufficiently subdued, or too readily recurring: this treatment, on the contrary, is found to succeed, even with symptoms of activity, and, even in cases of recent date, in the delicate, weak, nervous, and exhausted. Much precaution and moderation, however, are necessary in the choice of means. Thus, we have sometimes preferred the diascordium to every other astringent, and this mixture of tonic ingredients and opium has completely succeeded, very recently, in the case of a person who was pale and thin, and had been debilitated for a long time by obstinate intermittent fever, — subject, besides, to painful dysmenorrhœa. The hæmorrhagy, which came on at the periods of the catamenia, and without any assignable cause, was accompanied by pains in the uterus, similar to those attending the catamenia, and continued for more than eight days afterwards, when we succeeded in checking it by the use of this remedy, in doses of half a dram a day. One dram and a half sufficed for the cure (D).

It is not easy to specify the form of uterine hæmorrhagy in which it would be proper to administer the ergot of rye. This remedy has been employed in Italy, by Spirani, Pignana, and Cabini; and, in France, by MM. Duparcque and Récamier. It is said that this latter has succeeded in numerous cases (sixteen out of eighteen) of other hæmorrhagies[1], by the use of this remedy.

CASES*.

1. *Tumefaction, sanguineous congestion, and erosion of the os uteri; death.*

1. Madame Tan——, thirty-two years of age, mother of three children, had been much afflicted by family circumstances. The catamenia had been suppressed for five months. There were also violent pains in the head, and diarrhœa, followed by acute suffering in the calf of the left leg, extending to the hip. The patient consulted us on the 1st of March, 1828, and died on the 5th of that month.

Post-mortem examination. There was no remarkable appearance in the left leg, or in the abdominal viscera, except a slight inflammation of the omentum.

The uterus was retroverted, and of its usual volume; but its orifice, carried towards the arch of the pubes, was widely open. The anterior border was from eight to ten lines in thickness, and of a red-brown colour; the epithelium was easily removed by the application of the finger to the circumference of the orifice. The ovarian vessels were filled with blood; the ovaria themselves were healthy and very large; on the left of these there were two small cicatrices. (See Pl. XXVI, fig. 1.)

2. Madame Guer——, forty years of age, entered the

[1] See the *Gazette médicale*, 1831, no. 51; and 1833, nos. 19 and 22.

* These cases are erroneously placed in this chapter; there is either no hæmorrhagy at all in them, or it is not idiopathic.—Tr.

Maison de Santé, November the 22d, 1827, for chronic asthma. She had, for fifteen years, experienced much difficulty in breathing, accompanied with cough without expectoration; these symptoms had increased for some months, so as to induce faintness, and even syncope. During the last fifteen days, there had been loss of appetite, and vomitings of serous matters; the food was returned immediately on being swallowed; the bowels were almost always open. The patient was unable to lie down. The catamenia had been, for some time, much more abundant than formerly; this circumstance led us to suspect some affection of the uterus, or of its appendages. The patient died suddenly.

Post-mortem examination. The uterus was larger than natural; it was about four inches in length, and was situated so that its anterior surface was directed towards the left side of the pelvis. The right Fallopian tube corresponded with the symphysis pubis; the posterior paries of the uterus, which was much more rounded and prominent than usual, was situated at the right side of the pelvis. The Fallopian tubes were adherent to the body of the uterus. The right ovarium was three inches in length, and resembled, in form, colour, and softness, a portion of intestine, for which it was at first mistaken. The other Fallopian tube and ovarium were healthy.

The os uteri was red, charged with blood, and twice the volume usual in the unmarried state. There was nothing remarkable in the cavity of the uterus; its parietes, however, were an inch in thickness. The posterior paries was thicker still. It contained a round, fibrous tumor, of fifteen lines in diameter; in this part, the tissue of the uterus, vividly red, was soft, and only two or three lines in thickness. (Pl. XV. fig. 1.)

2. *Two cases of swelling, with congestion of the os uteri; cure, in the one case, complete; in the other, temporary.*

1. Madame Th——, forty years of age, without children, and of sedentary habits, was very subject to constipation, and complained of pains in the loins, draggings in the groins,

lassitude in the femora, and a sense of weight in the anus, with repeated and abundant hæmorrhagies.

I found the uterus of more than twice its natural volume; the os uteri was resting on the perinæum, and was tender to the touch. By the help of the perforated lever, I brought the organ into the axis of the vagina, and examined it with the speculum. The cervix uteri, of the volume of the larger extremity of an egg, was soft, of a red-brown colour, and bled on being touched.

Leeches were applied, and repeated every fifteen days; cupping-glasses were ordered over the sacrum, and the use of the hip-bath; in the course of a month, the hæmorrhagies ceased; the catamenia were more regular; the bowels more free. At the end of six months, I found the uterus still voluminous, though its cervix had re-assumed its natural size and colour.

2. Madame C——, thirty-three years of age, after having had five natural deliveries, became habitually subject to a greenish-white leucorrhœal discharge of great abundance, unattended with any suffering in the uterine organs.

Being consulted, December 15th, 1824, we found the uterus, though voluminous, in its natural position; the os uteri was swollen, and rather soft than elastic; there was a little sanguineous discharge. We ascertained, by the speculum, that the os uteri was of a red-brown colour, and its borders excoriated; the discharge proceeded from the interior of the orifice; this part of the uterus was not at all tender. A little blood was taken from the arm, leeches applied to the anus, the baths of Barege were used, and sarsaparilla administered. In a month the leucorrhœa ceased, and the catamenia returned at regular intervals.

On the following year, towards the autumn, the symptoms reappeared, and a similar treatment was adopted, with the same success. This recurred in four successive years. The symptoms once more appeared, two years after the patient had lost her husband; the catamenia became more abundant and irregular in their period. On a fresh examina-

tion, January 25th, 1830, we discovered that the uterus was in its natural situation, without any remarkable adhesions; the os uteri, of the size of a large chesnut, was widely open, with its borders excoriated; the anterior labium presented a superficial ulceration all over its surface, exposing the submucous tissue, which was vividly red, and bled on the slightest touch. It resembled the tumid and bleeding gums of scorbutic persons. The patient was afterwards placed under the care of M. Bally, and we heard of her no more. (Pl. XXVI, fig. 5.)

3. *Symptomatic uterine hæmorrhagy, owing to chronic metritis, tending to scirrhus.*

Madame Desr——, thirty-one years of age, and of strong constitution, had given birth to three children, in her seventeenth and two following years. At her last confinement, the accoucheur had been obliged to introduce the hand into the uterus, for the extraction of the placenta, the umbilical cord having been broken; violent hæmorrhagy ensued for three hours. During four years, she had complained of violent pains in the loins, at the periods of the catamenia, which continued from four to five days; considerable hæmorrhagies ensued, on excitement of the uterine organs. The periods of the catamenia became too frequent, and acute pains were felt in the vagina.

Being consulted, September 25th, 1825, we discovered the os uteri, about two inches in diameter, at the entrance of the vagina, with its orifice widely open, and its edges hard and thick. On passing the finger behind the pubes, the body of the uterus was ascertained to be greatly enlarged; the fundus was felt with the other hand, applied upon the hypogastrium, which was excessively tender. The anterior paries of the rectum was pushed backward by the volume of the uterus. On attempting to raise this organ, an insurmountable resistance was perceived, and the patient complained of violent pains in the circumference of the pelvis, especially in

the region of the sacrum. The patient's mother was dying, at this period, of cancer of the uterus.

In March, 1827, the patient having, for two years, led a more quiet life, the disease of the uterus was not increased.

4. *Uterine hæmorrhagy, with subacute metritis of syphilitic nature; cured by mercury.*

1, 2*.

3. Clara Ch——, twenty-two years of age, entered the Maison de Santé for acute metritis, in consequence of excesses. The catamenia had been, for several months, almost suppressed. There was, afterwards, burning heat in the uterine organs, with colic pains, slight gonorrhœa, and pains in the hypogastric region, which were relieved by leeches and baths. After some months, the catamenia became excessively abundant, and continued for seven or eight days at each return. There were debility, paleness, voracious appetite, deranged digestion, acute pains in the uterus and its appendages, at each evacuation of the bowels; absence of these pains during the flow of the catamenia, and leucorrhœa in the intervals.

A few months afterwards, the patient was attacked with vomitings after meals, diarrhœa, burning heat in the loins, rectum, and pudenda; afterwards, with violent pains in the head, and fever; the catamenia almost entirely ceased; difficulty of breathing followed, with frightful dreams, and confusion of ideas; there were frequent dejections, sometimes involuntary, sometimes accompanied by tenesmus; the pains in the pelvis became more intense; the uterine secretions were tinged of a greenish colour; the pudenda were very red, and affected by itching and acute smarting; the expulsion of the urine, which was red and turbid, was attended with a burning pain; the headaches became more intense, especially at night.

We found the abdomen enlarged, and painful, on pressure, at every part; there was also diarrhœa. The vaginal

* Omitted.—Tr.

portion of the cervix uteri was very much swollen, hard, uneven, and excessively tender. On applying the speculum, some days afterwards, the pudenda were red; the anterior labium of the os uteri was found to be the seat of a considerable ulceration; a greenish, viscid, and abundant matter issued from its orifice. (Pl. XXVI, fig. 4.)

By the use of mercury and other remedies, the patient was cured in two months, and the ulceration completely cicatrized.

CHAPTER III.

OF DYSMENORRHŒA.

By *Amenorrhœa* we denote a general and local inaptitude to the *production* of the catamenia,—by *Dysmenorrhœa*, an inaptitude to the *evacuation* of the redundant blood, contained in the vessels of the whole body, and in those, particularly, of the uterine system. Dysmenorrhœa will therefore constitute, not merely the painful and difficult flow of the catamenia, but also an incomplete discharge, simply manifested by increased action, turgidity, and hæmorrhagic effort,—what some writers have called sthenic, or plethoric, amenorrhœa[1]: there will, in fact, always be an active state, sometimes universal, sometimes extended more or less to the uterus and its appendages. In amenorrhœa, on the other hand, there will always be hyposthenia, and inertia, at least general, and often also local. It is obvious, therefore, that the indications in the two cases will be very different: they are indeed completely opposite.

Etiology. If the development of the ovaria produce

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[1] See, particularly, Royer-Collard, *Essai sur l' aménorrhée*, p. 67 et 69.

sympathetically a general excitation, constituting puberty;—if, on the other hand, the uterus do not share in this general excitation;—if it undergo not this kind of hypertrophy, so necessary for its natural functions,—the plethora and hæmorrhagic effort will still take place, even without finding the natural passage for the blood, through the venous sinuses within the uterus.

On the contrary supposition,—that the uterus too readily shares in this activity,—that its susceptibility exceeds the natural limitations,—it may become the seat of excessive congestion, and inflammation[1], which would check the exudation of blood,—as inflammation of the lungs checks the hæmoptysis which had occasioned it; or, as the increased intensity of pulmonary catarrh suppresses expectoration; or, again, as puerperal metritis sometimes arrests the lochia: inflammation, or irritation, of the uterus, owing to accidental local causes[2], may also occasion dysmenorrhœa, and even present mechanical obstacles (false membranes) to the discharge of the blood.

It would doubtless be hypothetical to say, that, in some other cases than those of inflammation, the internal surface of the uterus is so organically or spasmodically disposed, as to prevent the discharge of the catamenia from the uterine vessels; if, however, this impervious condition be questionable, it may perhaps be admitted that the cervix of the uterus and the inferior orifices of that organ are sometimes so contracted, as to allow only a very difficult and painful passage to the blood, secreted at the interior of the body of the organ*.

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[1] See Freind (*Emm.*) *Opera*, p. 100 et 115.

[2] Chaussier, Frank, and our own cases.

* Dr. Mackintosh states that the majority of cases of dysmenorrhœa, so far as his investigations have extended, depends upon a small os uteri. The treatment he proposes is mechanical dilatation of this orifice by means of metallic bougies of different sizes. He relates one very remarkable case of amenorrhœa treated successfully in this manner in the year 1826, and adds, "since that period I have treated fifteen cases of dysmenorrhœa by dilating the os uteri, and have permanently cured all the patients; among these the two cases of amenorrhœa formerly mentioned are not included.

"Of the fifteen patients, eight were either young unmarried women, or living in a

Perhaps congestion of the cervix uteri may sometimes lead to the same result; we have observed it to follow after anteflexion, and shall hereafter give a fresh example of this kind. Without alteration in form, however,—without congestion,—and, doubtless, in consequence of the natural narrowness of the uterine orifices in the virgin state, dysmenorrhœa of this kind is very often observed to attack the young. This disposition, which often disappears after marriage, and, especially, on pregnancy and parturition, frequently combines with one, or the other, of those states of which we have already spoken, alternates with them, and cannot, consequently, be accurately distinguished from them. It may also be confounded with total obliterations of the cervix uteri, or of the vagina, which nevertheless allow the uterus to produce and retain the blood, with which it is excessively charged throughout.

Symptoms. The appearance of hæmorrhagic effort and plethora will obviously constitute, in every case, the essential part of this disease, whether the symptoms be limited to those of general plenitude,—or, whether there be marks of more determined congestion of the organs of the pelvis,—or, lastly, whether the uterus in particular be specially affected with hæmorrhagic effort. It should also be observed, for the reasons already given in the chapter on metritis, that, even when there is no real complication of hysteria, the signs of plethora are accompanied by spasmodic symptoms, and sympathetic sufferings of more or less intensity. It will be easy to refer to each of these organs the several phenomena which we shall now describe,—symptoms which frequently precede the first appearance of the catamenia, and, partly, recur at each return, in many young and unmarried persons:—

General oppression, aching of the limbs, headache confined to the forehead, or spreading over the cranium, alternate flushing and paleness of the face, transient heats with perspiration; dizziness; nausea; anorexia; palpitations,

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state of widowhood; seven were married, and living with their husbands—of these seven, four subsequently fell with child." *Elements of Pathology and Practice of Physic*, vol. i, p. 346 and 355.

often very violent, though transient; oppression during their continuance; full and strong pulse,—sometimes frequent,—then momentarily small; in some cases, hæmorrhagies, either from the nose, the urinary passages (see the preceding chapter), the vagina, bronchia, the intestines, the lactiferous ducts, or even through the conjunctiva, or the skin, and still more frequently from some ulcerated part[1].

Sometimes there are different forms of inflammation,—especially of the mucous membranes,—which are the effect of this increased action unconnected with natural crisis, and manifesting its determination to the uterus by a sense of weight and pain in the loins, groins, hypogastrium, and the upper part of the femora, by transient colic pains, and ardor urinæ.

When the congestion is more determined, it imparts an inflammatory character to the affection of the uterus; but, at first, there is, generally, a spasmodic state of this organ, sometimes induced by the presence of a little blood in its cavity, sometimes by the congestion in its vessels, or in its tissue only,—a state, characterized by painful cramps, and real uterine pains, exactly resembling those which follow after delivery,—a state, in short, which alone deserves the term of dysmenorrhœa, in the opinion of most authors. This analogy is distinctly marked, as we think, in the following case:—

A young woman, the mother of several children, of nervous temperament, that is, subject to spasmodic affections, had been labouring, after a recent delivery, for some days with acute fever. A month after parturition, the catamenia appeared, though in greater abundance than usual, and continued to flow for ten days; they were suddenly checked, and uterine pains ensued, with a sense of constriction in the hypogastrium, extending to the right groin; there was no fever. These pains recurred, though at longer intervals and with less intensity for eight days; no coagula were expelled; baths, cataplasms, and abstinence, were all that was prescribed.

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[1] See Freind, *Emménol*, cap. viii, *Opera*, p. 92, and Royer-Collard, *l. c.* p. 28, &c. We have very lately seen purple spots, in great numbers, on the feet and legs, in such circumstances (D).

About the period of the catamenial return, the patient, being afflicted by the illness of her child, and having passed several sleepless nights, was attacked, for four days, with violent uterine pains, without any discharge; there was no fever, but perspirations and oppression, with tears; the abdomen was not at all tender on pressure. Twelve leeches were applied to the groins; the hip-bath, enemata, and an antispasmodic draught with castor, were administered with relief. On the following day, there were increased pains, fever, altered countenance, and vomitings; a poultice, the hip-bath, and enemata, were ordered. The catamenia flowed, preceded by coagula. The pains ceased, but gradually, and terminated with the discharge in eight days (D).

Similar pains occur even in unmarried persons, from the expulsion of a *coagulum*,—sometimes very solid, compact, and presenting the triangular form of the body of the uterus. Madame Lachapelle has described cases of this kind. Others have observed similar expulsions, and have even mechanically withdrawn the blood, either fluid, or coagulated in the form of a small triangular mass, and covered with a thick membrane formed by inflammation, or excitation, of the interior of the uterus. Chaussier has well ascertained the nature of this production, which had been mistaken for prolapsus of the internal membrane of the uterus, detached and inverted[1], and has admirably described it in a letter upon the structure of the uterus[2]: "A young woman, of ardent temperament, supposed herself pregnant, in consequence of the suppression of the catamenia for two months. On the following month, the symptoms, which usually precede the catamenia, re-appeared; there was, however, no discharge: the patient complained of much pain, spasms, and, especially, of an unusual sense of weight. On examination, it was discovered that the uterus was low down in the cavity of the pelvis; its orifice, open and widened, was occupied by a kind of soft, smooth, indolent tumor, of the

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[1] *Œuvres médico-chirurgicales* de Collomb, p. 246.

[2] Appended to the translation of 'Rigby and Duncan on uterine hæmorrhagies;' by Madame Boivin.

form and size of a common fig, with an elongated, contracted summit, apparently adherent, attached to the interior circumference of the cervix and of the os uteri; but, upon gently drawing this tumor, in order to lay hold of it with the fingers, it gradually lengthened, and entirely separated, all at once, without causing any pain. We then clearly ascertained that it was only a buffy sac, having its cavity filled with semi-fluid brownish blood. Its form was exactly that of the uterus, when inverted; its base, or the part projecting into the vagina, was broad and rounded; its pedicle, or the portion adhering to the cervix and os uteri, was elongated, tubular, fimbriated or slightly ragged at its extremity, and of uneven form; lastly, its dense, compact, whitish, uniform tissue presented no fibrous or areolar appearance, or any trace of vascular ramifications, and dissolved entirely in a solution of alkali. Immediately after the extraction or detachment of this membranous sac, some brownish blood was discharged. The pains and spasms entirely ceased; the catamenia became regular; and the patient experienced no inconvenience*."

Morgagni[1] gives a case, in which the uterus secreted and excreted buffy sacs of precisely the same kind, though empty, and appearing to have contained fluid. Frank[2] compares some similar concretions, though less entire, to the decidua, and Désormeaux[3] adopts this opinion. He has observed one of these false membranes present the exact form of the cavity of the cervix uteri. It is, in fact, to a false membrane, produced by inflammatory action of the uterus, that we must attribute these productions, which sometimes become organized. Several cases of Collomb seem to prove this fact, inasmuch as the ligature was necessary to separate the membranous sac from the uterus. One of us has observed an enormous tumor formed of concentric layers, hollow, and communicating with the interior of the uterus, which supplied it with blood; this production, which we might have classed with the *polypi*, in a former chapter, appeared to us to admit of no

* This case has been alluded to, p. 195.—Tr.

[1] Ep. xlviii, art. 12. [2] *De retent.* § 866. [3] *Dict. de Méd.* art. *Utérus.*

other origin than that of the deposit, and successive organization, of layers of catamenial blood, mixed with an albuminous exudation, and detached, by other blood, from the surface at which they were at first formed and moulded. The case subjoined to this chapter will exemplify this fact, and supply the details of the diagnosis peculiar to this particular and doubtful form of dysmenorrhœa. (See also Pl. XIX, fig. 3 and 4.)

Diagnosis. It is not right to characterize as hysterical, all the affections, which relate to deranged uterine function; this would be to confound dysmenorrhœa with hysteria, properly so called; there are cases, however, in which the diagnosis is involved in some uncertainty, which is, nevertheless, easily avoided by careful observation. It would be more difficult, perhaps, to determine whether hysteria be occasioned by dysmenorrhœa, or vice versâ.

The same doubts will naturally occur, in cases of slight metritis, which may, much more distinctly than hysteria, be sometimes a cause, and sometimes an effect, of dysmenorrhœa. The doubts relate to the origin of the two states, the priority, and the previous causes, which must be accurately traced. We would further observe, that secondary metritis is generally preceded by uterine pains, and pains in the groins, unaccompanied by fever or tenderness of the hypogastrium.

The abundance of the sanguineous discharge, which soon succeeds to the uterine pains, the flow of liquor amnii, &c. will speedily distinguish abortion from dysmenorrhœa.

We have observed that certain irregularities of the catamenia may act upon the bladder so as to produce an exudation of blood at its interior. We shall see, in the following chapter, that there are serious affections of the urinary passages, connected with amenorrhœa. We need not, therefore, be surprised to find dysmenorrhœa sometimes accompanied with symptoms of real or apparent cystitis. This remark is confirmed by the following facts.

At the beginning of the year 1823, one of us was consulted in a case of doubtful pregnancy. For several years, at each period of the catamenia, headache, pains in the legs, the lower part of the abdomen, the region of the uterus, and

even the epigastrium, and sometimes accompanied with vomitings and severe cough, preceded the discharge two or three days, and ceased when that took place. This discharge, after continuing two or three days, was suppressed for the same period, and then re-appeared for a day, unattended by pain. At the time we were consulted, the catamenia had not appeared for about six months, but had been replaced each month by leucorrhœa; and, at the same time, the symptoms we have already stated had appeared, with the addition of diarrhœa, pains in the loins and uterus, acute pains in the bladder, incomplete retention of urine, and very difficult micturitions, &c.; there were also flushings of heat, spasmodic symptoms, and even faintings. The difficult micturitions and retention of urine were the most obstinate symptoms; they continued each time from eight to ten days. The abdomen appeared to have enlarged; but there was also a remarkable increase in the general fulness of habit. (D.)

The diagnosis was much more obscure, or, at all events, the opinions were more divided, in the case of a young woman, fourteen years of age, tall, of mixed temperament, in whom the catamenia had not yet appeared. She was habitually pale, though subject to frequent and sudden flushings, with some degree of headache cardialgia, dyspnœa, a sense of strangulation, globus hystericus, &c. constant loss of appetite, obstinate constipation, colics, lumbrici; no fever or tenderness in the abdomen, excepting in the hypogastric region; this latter part was the seat of a painful sense of weight, extending to the femora and the loins, sometimes between the shoulders; pain on passing the urine, which was very limpid.

Prognosis. Dysmenorrhœa is sometimes only a slight affection, though generally attended with much suffering, and even danger. It is enough to know that it may lead to metritis; and that even slight though repeated metritis, or merely frequent congestions, may dispose the uterus to serious diseases, and chronic enlargement; and, lastly, that, in cases perhaps the least unfavourable, this state of things may be inverted,—the uterus gradually losing its function of se-

creting the catamenial blood, and amenorrhœa thus becoming complete and obstinate.

Treatment. Dysmenorrhœa is, in some cases, so like amenorrhœa, that it indicates a similar treatment: whether the increased action be insufficient, or, what is more probable, the uterus require a special excitement, it is unquestionable that emmenagogues, especially aloës, sometimes bring on or complete an approaching, though imperfect and tardy, catamenial discharge. The mugwort has frequently produced the same effect. In the same manner, a difficult discharge has often been facilitated by sinapisms to the feet and femora, very warm hip-baths, and fumigations to the os externum.

These remedies have been considered as derivative, as determining the blood to the uterus.

The same effect has been attributed to local blood-letting, and bleeding from the foot; but this treatment has only succeeded in cases of metritis, or in local states approaching to inflammation, co-existing with an increased action of a febrile nature, or closely bordering on it; bleeding at the arm, general baths, cataplasms, and lukewarm hip-baths, would have led to the same results. "I have observed," says M. Roche[1], "in cases of plethoric persons, that bleeding at the arm, on the eve of the catamenia, brings on an almost immediate discharge, flowing in abundance, and unattended with pain." These means have the further advantage of removing the symptoms by curing the plethora and local congestion. Narcotics, as opium and poppies, are sometimes necessary, as well for removing the uterine pains, as the hysterical symptoms. In adopting copious blood-letting, however, we should be cautious of protracting the affection, and inducing complete amenorrhœa.

The action which induces the catamenia ought frequently to be sustained by appropriate diet, and still more by exercise. Great advantage is also obtained by country air and exercise.

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[1] *Dict. méd. et de chir. prat.* t. vii, p. 384, art. *Dysménorrhée.*

CASES.

1. *Dysmenorrhœa, owing to anteflexion of the uterus*[1]*.

2. *Hollow polypiform tumor, apparently owing to dysmenorrhœa. Extirpation by the ligature*[2].

Madame Val——, forty-four years of age, had been married in her twenty-third year, and confined, at the full period, in the following year; in her twenty-sixth, she miscarried at the third month; ten years afterwards she experienced great sorrow, and the catamenia became more frequent and abundant. In February, 1818, there was considerable hæmorrhagy, which lasted for three months; there was also nausea, fainting, and want of sleep, with extreme debility and emaciation. On December the 15th, 1819, violent pain in the ischia and hypogastric region was occasioned by a fall. Several days afterwards, there was an unusual difficulty in evacuating the bowels; a sense of weight in the vagina, and of a large body about to protrude from the os externum: this circumstance actually occurred, and the patient returned the tumor, considering it as the uterus prolapsed. The hæmorrhagy continued, though with less violence than before.

On the 8th of January, the tumor, of the volume of the fœtal head, was round, smooth at its posterior surface, solid, and scarcely allowing the finger to be passed round between its surface and that of the vagina; at its base there were some unevennesses, and at its anterior surface there were longitudinal furrows.

On the 12th of January M. Dubois applied the ligature; on the same day we found the tumor less voluminous, softer, and more rugous, than on the 8th. We accordingly concluded that it was hollow, and that some of the blood, which had been previously discharged, had proceeded from its cavity.

The fundus of the uterus was felt above the pubes; the

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[1] * Case by M. Dugès. Omitted.—Tr.

[2] Case by Madame Boivin.

patient observed that the abdomen was considerably diminished since the fall.

On the day of the ligature, there were nausea with vomitings, followed by syncope; slight pains in the hypogastric region; in the night, fever and thirst. On the 15th the tumor came away. On the 18th there were fever and intense thirst; palpitations, followed by syncope; pain in the knee, extending to the hip. The patient recovered her health, but her right leg remained so painful that she was obliged to use crutches.

Description of the tumor. This tumor, after its detachment, presented the form and volume of a bottle of caoutchouc. Its tissue, covered exteriorly with a fine membrane, was red, fibrous, and lax in its two upper thirds, near its insertion in the uterus; but more contracted at its base, which constituted the lower part of this sac. The interior was apparently not lined with membrane: its rose-coloured surface, of a reticulated tissue, was removed by scraping with the back of the scalpel. On being pressed between the fingers, blood exuded from the surface.

On each side, towards the middle part of this cavity, there were two orifices, extending into the substance of the parietes, and opening exteriorly, after passing in a right line on each side of the base of the tumor. A probe, of a line in diameter, was easily introduced into it. The tissue of the tumor appeared, on incision, like that of the uterus some days after natural delivery; the preparation has indeed been mistaken, by several persons, for the uterus, with the ovaria and extremities of the Fallopian tubes detached. I am of opinion that this tumor was produced by those plastic concretions which are sometimes formed at the period of the catamenia, line the cavity of the uterus, increase its thickness by the application of fresh layers in succession, and take the figure of the organ in which they are moulded.

This production had probably formed, at first, a false membrane lining the uterus, and was gradually detached. The exterior and smooth surface of the tumor was therefore interior before its inversion. The blood which was dis-

charged, issued, doubtless, by the two orifices. The symptoms presented, on applying the ligature, might be attributed to the dragging of the cervix uteri, to which the tumor still adhered: perhaps also, the noose had been applied to the cervix uteri itself.

The exact dimensions of this tumor are as follow: the figure of it is given in the Atlas (Pl. XIX, fig. 3 and 4).

		Inches.	Lines.
Dimensions.	Length of the tumor - -	4	3
	Breadth of its base - - -	3	4
	Breadth near the ligature -	0	8
	Thickness of its base - -	1	6
	Thickness of each paries -	0	9
	Depth of the cavity - - -	2	3

CHAPTER IV.

OF AMENORRHŒA.

By Amenorrhœa, we denote the absence of all the general and local phenomena of the catamenia, and the inability to produce them.

Sometimes, however, this inability is radical, constitutional, and permanent; sometimes it is only temporary, accidental, transient, and generally incomplete. We proceed to treat, first, of the latter form.

A. This form of amenorrhœa is that more particularly termed *suppression* of the catamenia. Sometimes its causes are little known, and the catamenia are merely retarded for a few days, or weeks, or one or two months. A shock, occasioned by an active medicine, as an emetic,—alarm, emotion, or a sudden chill, may check the catamenia, immediately before, or during, their discharge. The same effect may be produced by immersion of the hands or feet in cold water, or by the use of iced water, which checks the increased action, exactly as the

same causes arrest epistaxis. On the same principle, blood-letting, even from the foot, may check the catamenia. These transient suppressions,—which, when spontaneous, are often unattended with inconvenience, and give way, together with the slight indispositions,—the gastric or other derangements which occasioned them—are sometimes of as little importance, when they originate in the causes we have already mentioned. The imprudence of some persons, however, in checking the catamenia by immersing the hands in cold water, is sometimes followed by severe symptoms of *hysteria;* in other cases, by *dysmenorrhœa* and even *metritis;* or, lastly, by inflammation of the viscera, acute fever, violent headache, &c. These last states may prove perplexing: for if inflammation, if fever, be a result of suppression, this latter may, in its turn, be the mere effect of inflammatory and febrile action. The distinction is necessary as a guide in serious circumstances, in which indecision is as dangerous as misplaced activity. We have witnessed the frightful and rapid progress of peripneumonia, in its simple form, or complicated with rubeola, owing to the fear of suppressing the catamenia which were just approaching, but imperfect, and retarded; whilst these irregularities were, evidently, only owing to a general derangement, brought on by inflammation, exanthema, &c.

Among the inconveniences arising from the accidental suppression of the catamenia, is that of its sometimes passing into permanent amenorrhœa,—from the acute into the chronic form.

If there be inflammation, general and local blood-letting may be required: if only febrile, hysteric, or other symptoms, local blood-letting, baths, and antispasmodic remedies will be proper.

B. *Permanent Amenorrhœa* may also be called constitutional, as it always depends on a general, primary, or secondary, state:—when primary, it is owing to a naturally weak constitution, to an excess of phlegmatic or nervous temperament, or to considerable exhaustion,—a real anæmia,—the result of profuse hæmorrhagies, or abundant blood-letting[1]. We have known the catamenia not to appear for

[1] Freind, *Emmenologia*, caput 9, oper. p. 96.

several months, or nearly a year, after dangerous puerperal hæmorrhagies, and have observed the common uterine hæmorrhagy followed by a suspension, though for a shorter period, of the catamenia; these circumstances, however, equally prove the real influence which we have attributed to a weak or impaired constitution.

Amenorrhœa is sometimes symptomatic of disease. Thus, pulmonary phthisis frequently suppresses the catamenia. The same may be said of chronic congestions of some of the abdominal viscera, &c.; amenorrhœa is sometimes natural,—during lactation, for example.

This affection is sometimes observed in persons in whom the uterus is atrophied, and even absent; in this latter case, the rest of the uterine organs have, generally, been more or less defective, the general system no longer undergoes the action indicated by the phenomena of puberty, the catamenial effort is absent, and amenorrhœa is complete. Where the uterus has been simply imperforate or imperfect, the effort, at first intense, has gradually subsided, and dysmenorrhœa has spontaneously disappeared.

For instances of remarkable malformations, we would refer to what we have already said in our Introduction[1]; and, with regard to atrophies, in different degrees, and more or less capable of being cured, we shall give some detailed examples of these in the progress of this work, merely referring, for the present, to those of Morgagni[2], Frank[3], and others.

Lastly, a state of asthenia, slowly established in the uterus, may, in time, extend to the rest of the system, and occasion temporary or permanent amenorrhœa, as may be proved by cases of chronic *leucorrhœa*, prolapsus uteri, scirrhous or other congestions.

The word amenorrhœa implies, in itself, the absence of the catamenia; on the one hand, however, dysmenorrhœa

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[1] Pp. 21, 22. See also Haller, *Disputationes anatomicæ*, tome v, p. 127.

[2] The adult uterus as small as that of a newly-born infant: *Ep.* xlvi, *art.* 20.

[3] Of the size of a hazel-nut: *De retentionibus*, § 869. It is to such cases only that the name of *organic amenorrhœa* should be applied: he applies it, however, to several other forms of dysmenorrhœa or amenorrhœa.

may sometimes be conjoined with amenorrhœa, and differ only by the symptoms of the catamenial effort; and, on the other hand, amenorrhœa is not always *complete;* for, among the affections which claim that title, may be ranked every remarkable diminution in frequency and quantity of the catamenial flow, dependent upon the same causes as perfect amenorrhœa. In this extended sense of amenorrhœa, we may include that series of affections constituting chlorosis: hysteria, which is often complicated with amenorrhœa, is, in reality, less connected with it, co-existing sometimes with the most regular catamenia. Chlorosis, on the contrary, in spite of the symptoms which have appeared in cases of men*, or of women in a healthy state of catamenia[1], may be considered as denoting that state of languor on which amenorrhœa depends. It may indeed be absent, when the catamenia are deficient or irregular; but it probably never exists without actual derangement (and always deficiency) of that discharge.

The principal characteristics of chlorosis are a greenish yellow, or excessively pale, colour,—a paleness, particularly observable in the face, though extending over the whole body, apparently denoting a *bloodless state*†. This opinion is con-

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* In speaking of chlorosis, Dr. Marshall Hall observes:—"It occurs principally in female youth; but not unfrequently in married persons, and it is not entirely unknown in *children*, and in the young and delicate of the *male sex*."—Tr.

[1] Frank, *Epitome de retent*, § 865; Rahn. *De chlorosi*, § 16.

† "There is, in chlorosis, a remarkable state of the capillary system of circulation, both of the vessels and of the fluids; it is this which gives origin to the exanguious appearance of the countenance, prolabia, tongue, gums, and general surface; to the tendency to œdema; and to different species of hæmorrhagies, especially those of the mucous and cutaneous surfaces, as epistaxis, melæna, hæmatemesis, and even purpura; and it is from this circumstance that the catamenia become almost colourless and aqueous. I have observed the blood which has flowed from the nose scarcely to tinge the sheet, and that taken from the arm to resolve itself almost entirely into serum, with scarcely any crassamentum. This disorder affords, therefore, one of the most unequivocal examples of the humoral pathology."

"There is, indeed, a remarkable similarity between the effects of loss of blood, and the state of bloodlessness which obtains in chlorosis. The general symptoms;—the tendency to affections of the head resembling arachnitis, and to affections of the heart resembling organic affections of this organ;—the condition of the general surface, and of the capillary and larger circulations; the proneness to œdema and serous effusions generally, are, indeed, identical in both these conditions." *On the Constitutional Diseases of Females;* by Marshall Hall, M.D. &c. pp. 80 and 82.—Tr.

firmed by the temperature of the skin and the state of the pulse, when the disease is of short standing and uncomplicated; the skin becomes hot and dry, and the pulse quick and frequent, only when there is chronic inflammation, pulmonary catarrh, diarrhœa, &c. At most, in the simplest cases, the pulse becomes frequent at night, and slow and small during the rest of the day. There is frequently tumidity; but real œdema of the feet or hands appears only at a late period. The muscular strength declines with the general languor, and there is a proportionable dejection of mind. Diminished or deranged appetite, tardy digestion and flatulence, increase the feeling of sinking. The tongue is, however, generally pale, moist, and clean. Temporary symptoms of reaction are sometimes manifested by slightly acute inflammation, palpitations, flushings, &c. They gradually become more frequent, as the health is restored; for chlorosis, as well as amenorrhœa, sometimes disappears of itself, after some months, or years, as the strength and general constitution improve with the growth, and as the patient gets a little older. Generally, however, attentive treatment is necessary for these happy results, as the affection may indeed proceed to a fatal issue, either in itself, or as complicated with organic disease of the lungs, or abdominal viscera; whence, phthisis, or dropsy[1].

In cases, in which the uterus is wanting, there is no catamenial flow, but an approach to the characteristics of the male sex: in those in which amenorrhœa seems to depend on atrophy or defective development of the same organ, from the period of puberty, or even of birth, there is sometimes a similar change, always sterility, and absence of the catamenia; sometimes, the atrophy disappears, and the organ becomes capable of fulfilling its functions, while the whole system revives and supplies the matter of its secretions*.

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[1] Royer-Collard, p. 62, 99.

* We have here omitted several observations of the authors. With these observations we have a great and national pleasure in contrasting the beautiful, the chaste, and the wise remarks of Dr. Hamilton, of Edinburgh, in his philosophical treatise on Purgative Medicines, a work of unparalleled excellence and value. This author observes:—"The partial and temporary suspension of the influence of the genitals,

From amenorrhœa we must, of course, carefully distinguish pregnancy, and uterine diseases.

Treatment. In symptomatic amenorrhœa, the treatment should be directed to the removal of its causes, and of its immediate effects. Sometimes it may be cured by a treat-

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according to this theory, greatly affects the general system. But there are instances where this influence is altogether and irretrievably lost, and where no disease ensues. Castrated and spayed animals suffer certain changes of constitution, but they retain the enjoyment of perfect health. And in our own species, eunuchs, however much degraded in the estimation of society, in consequence of their emasculation, are neither a short-lived nor an unhealthy set of men. Reasoning from this analogy, I do not understand how the influence of the female genitals can be so great, as that its partial suspension should occasion retention of the menses, or should induce chlorosis.

"Another theory has been broached on this subject, which it elucidates by a reference to sexual desire. Insinuations injurious to the purity of mind, and offensive to the modesty of the fair sufferers, have been thrown out. The Medical Moralist talks of the Chlorosis Amatoria, and follows up his notion with apposite counsel. Into what contradictions do the refinements of dogmatism lead us! Can passion exist, when the organs which rouse it have not, as yet, been evolved into action; or, if evolved, have been afterwards rendered effete by disease? What bounds can we set to regret, if, in consequence of this ungenerous, and, as I think, groundless supposition, delicacy and reserve have allowed concealment to feed on the damask cheek, and to lead its pale victim to an untimely grave!

"I could not avoid entering upon these discussions, which I have conducted with all brevity: I thought it was necessary to show, that the doctrines on the subject of chlorosis are neither so clear nor so well founded as to warrant the conclusions which follow necessarily from them. In this manner the reader is prepared for the candid consideration of what I have to propose; a candour perhaps not the less wanted on this account, that my opinion of the disease may appear at first sight too simple, and my practice too little adorned with the show of varied prescription.

"It would have been fortunate if medical inquirers had always followed the progress of diseases, step by step, and viewed them as a whole, from the first deviation from health to their termination. A contrary procedure has often betrayed them into confusion and error.

"Thus, in chlorosis, the doctrine of the cacochymia of the juices, and that of the peculiar state of the genitals affecting the whole system with flaccidity and laxity, are evidently founded on the appearances which the disease exhibits, when it is fully formed; and from which appearances also it has its name; when, at the same time, the history of its incipient state has been little regarded.

"The slightest attention to the history of the disease evinces, that costiveness precedes and accompanies the other symptoms. Costiveness induces the feculent odour of the breath, disordered stomach, depraved appetite, and impaired digestion. These preclude a sufficient supply of nourishment, at a period of growth when it is most wanted: hence paleness, laxity, flaccidity, the nervous symptoms, wasting of the muscular flesh, languor, debility, the retention of the menses, the suspension of other excretions, serous effusions, dropsy, and death."—*Obs. on Purgative Medicines*, by James Hamilton, M.D. eighth edition, p. 85—87.—Tr.

ment similar to that of dysmenorrhœa, arising from uterine torpor.

The most successful remedies in chlorotic amenorrhœa are the different preparations of iron. We have already seen their efficacy in chronic leucorrhœa,—an affection often complicated with amenorrhœa. It should be continued in proportion to the weakness and general languor, internally, and in the form of baths (mineral waters), if necessary, &c.

Iodine has been often used with equal success, either in solution in alcohol, or in substance.

To these remedies may be added,—mineral and thermal waters, sea-water baths ; bitter, stimulating, and even astringent substances,—as kina, gentian, &c. ; strict diet, change of scene, travelling, exercise on foot or on horseback, dancing, change of air, a dry atmosphere, a warm and serene temperature, astringent wines, aërated waters, nourishing and animal food.

Some of these substances, besides being general stimulants, act in a special manner upon the uterine organs, and are termed *emmenagogues*. The use of these remedies, combined with strict regimen, is more proper in the present affection than in dysmenorrhœa. Aloës, rue, and savin, have often been found efficacious,—the first in pills, in doses of one or two grains a day,—the other two in powder, infusion, or syrup ; sometimes in considerable quantity, as half a dram, at most, of the dry substance, in the twenty-four hours. Saffron, in similar quantities, has been found useful. Ammonia has also been recommended. Turpentine has been proposed in cases of amenorrhœa complicated with leucorrhœa, by M. Guibert[1]. Dr. W. Dewees[2] approves highly of the tincture of guaiacum, which he thinks equally available in amenorrhœa and dysmenorrhœa. This kind of treatment appears to us only proper in chlorosis.

Stimulating injections have been used. Electricity has been applied to the region of the uterus, with success, and without inconvenience. Galvanism (*Andrieux*) would

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[1] *Revue médicale*, 1827, t. iii, p. 32.

[2] *Annales de litt. méd. étrangère*, t. xvii, p. 357, &c.

perhaps be less useful than the electric spark and shock *(Mauduyt)*.

A less direct, though local, stimulation may be produced by rubefacient liniments, applied to the femora, the hypogastrium, &c.: this means, however, is more proper in those cases of dysmenorrhœa in which the uterus requires to be excited. Very recently, the frequent application of leeches, in small numbers, to the mammæ[1] has been much commended.

CASES.

1. *Amenorrhœa treated with iodine*.*

2. *Symptomatic amenorrhœa: death, and post-mortem examination†.*

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[1] Ch. Loudon. *On the cure of amenorrhœa, &c.* 1832.

* † These cases are entirely omitted, as being too indefinite to illustrate the subject of this chapter.—Tr.

SECTION EIGHTH.

OF UTERINE NEUROSES.

CHAPTER I.

GENERAL OBSERVATIONS.

THE evidence or diagnosis of uterine diseases has been observed to become successively more and more defective as we have passed from physical diseases to those which are eminently vital,—viz. to inflammation and sanguineous discharges,—and to the subject of the present chapter. There is also great uncertainty in regard to the original seat of these affections, none of them being, in fact, distinctly or exclusively assignable to the uterus. Hysteralgia belongs rather to the vagina and pudenda, than to the uterus; nymphomania has been often attributed to the pudenda, and to the clitoris; this latter, and hysteria, may also depend as much, or more, on the internal appendages, particularly the ovaria.

With regard to nymphomania,—it is generally acknowledged that, in its extreme degree, it belongs to the class of mental aberrations, though its ordinary source is admitted to be in the uterine organs. When, on the other hand, it is considered that inflammation of the uterus, of the pudenda, of the ovaria, frequently exists without nymphomania,—and that the pruritus occasioned by cutaneous affections, that vicious habits and repeated excitements, are not invariably attended by this affection,—a question arises, whether the

mental aberration is not a cause rather than an effect. Might it not be said, for instance, that, if so great a proportion of prostitutes ($\frac{1}{20}$, *Esquirol*) be found in the female lunatic asylums, vice has, in their cases, been the effect of incipient mania, at least as often as the cause? If any doubt remain in such circumstances, it would be entirely removed in the cases of married persons, who may sink gradually into a state of mind which, except in its extreme degree, presents all the characteristics of nymphomania. When it is further considered that vicious habits are supposed to be *contracted* by solitary lunatics, we shall be induced to think, with Georget, that nymphomania may only be a secondary form of mania, properly so called, and that the affection of the uterine organs gives to it only a particular form, or other symptoms; just as those lunatics who are affected with inflammation and ulceration of the intestines, draw erroneous conclusions from real sensations, and speak of poisons, of internal heat, or of animals contained in the viscera;—that this uterine affection may be an occasional, though not an efficient[1], *cause* of the mania. Nor in this latter case is it quite correct to say, with M. Louyer-Villermay and others, that the *uterus* is the seat of the affection; for, according to their remarks, and the cases which they have themselves observed or compiled from other writers, there is turgidity of the *external* organs,—especially the *clitoris*[2],—sometimes a remarkable distension in the *ovaria*, and *also in the Fallopian tubes*, though sometimes only in the uterus. These reasons have induced us to treat of this affection in this place, though we are of opinion that the brain is primarily affected in real nymphomania.

These remarks do not apply to hysteria, though it has been contended that this affection also is less dependent on

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[1] Our colleague, Rech, Professor of Pathology at the school of Montpellier, and medical attendant at the Lunatic Asylum of that town, thinks that nymphomania has its seat sometimes in the brain, and sometimes in the uterine organs.

[2] It is wrong, however, to refer this affection entirely to the clitoris, as M. Nauche and other writers have done, in substituting the term clitorimania for that in general use.

the uterus than on the brain. According with Willis[1], and Charles Lepois, Georget has attempted to prove that the brain is its primary seat, and even suggested the terms *cérébropathie*, and *encéphalie spasmodique*,—terms better adapted to epilepsy; and he has given a very incorrect definition of it, as consisting principally in fits or paroxysms, attended by *general convulsions*, and often by an incomplete *suspension of the intellectual functions*. He has selected symptoms, the best accommodated to the opinion he entertained. The loss of consciousness and the convulsions are more particularly characteristic of an affection which has been often confounded with hysteria, but ought to be entirely distinguished from it, as it invariably appears under the same form and circumstances,—the *eclampsia* of the puerperal state. Even this affection affords no support to the opinion of Georget; for the state of the uterus so distinctly modifies it, that its primary and real source may fairly be traced to that organ; though there be several circumstances, in the etiology of this affection, not connected with the uterus.

It is thus that the source of hysteria has been generally assigned to the uterus in its empty state; and this opinion, already propounded by Hippocrates, has been lately discussed with considerable attention by M. Dubois, of Amiens, who arrived at a different conclusion from the preceding. The frequent irregularities of the catamenia in hysterical persons; the existence of disease of the uterus in several of these cases, or, at all events, the appearance of several of the symptoms of hysteria in simple metritis, or cancer of the uterus, as we have often observed, and already remarked[2]; even the sensations of the patient, who sometimes complains of acute pain in the hypogastrium, during the paroxysms, and feels the spasm proceeding from the uterus, and limited to that organ; the considerable effect produced on the affec-

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[1] *Affectio dicta uterina à cerebro et nervoso genere dependet.* (Will, *de morb. conv.* p. 104.)

[2] See a remarkable case in the 'mémoire' of Dr. Piorry on neuroses. *Journal universel et hebdomadaire de médecine*, t. x, p. 339.

tion by the absence or excess of uterine excitement* ; lastly, the exemption of children, and of persons of advanced age, from hysteria, together with the appearance of its attacks, generally, at the period of the catamenia:—these circumstances induce us to believe that, if the source of these symptoms be not indeed uniformly found in the uterus, it is, at all events, found in the uterine organs, frequently indeed in the ovaria, which have been often found diseased[1].

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* Dr. Hamilton ascribes hysteria to a morbid condition of the intestinal canal:—"These symptoms," he observes, "undoubtedly denote a preternatural affection of the stomach and alimentary canal. In my opinion, they afford conclusive evidence that this affection is primary, and that the other multifarious symptoms of hysteria depend upon it. I have therefore thought it reasonable to attend particularly to the state of the stomach and intestines, and to employ, in the first place, purgative medicines to remove the constipation of the body, which most commonly prevails in hysteria.

"I have seldom seen vomiting and purging in cases of pure hysteria ; but even their presence would not deter me from exhibiting purgatives, the efficacy of which, in removing these symptoms in other circumstances of disease, is well known."—*Obs. on Purgative Medicines*, 8th edit. p. 112.—Tr.

[1] Alterius testis sinuum unus duntaxat instar majusculæ pilæ protuberabat, croceo humore infarctus. (*Vesale, Anat.* lib. v, cap. 15.) Testes pugno grandiores (*Riolan, Anthropogr.* p. 184). Testes mirum in modum turgentes (*Bonet, sepulchretum*, lib. iii, sect. 33, obs. 4). Magnitudinis excessum et liquorem æruginosum vel croceum in uno vel in utroque teste (*Diemerbroeck, Anat.* lib. i, cap. 23). Testiculus sinister exigui ovi magnitudinem æquans, colore nigricante, etc. (*River., cent.* 1, *obs.* 60). Ovaria scirrhosa (*Morg., ep.* xlv, no. 21). Tumefied ovaria (*Rullier, Thèse inaugurale*). Scarcely any other cases could be found of diseased uterus, after *excessive* hysteria ; it has often been found healthy, or, at most, atrophied. We may add that there have been few recent cases of post-mortem examination of hysterical subjects,—this affection rarely proving fatal.

It might be supposed that the male testes are sometimes the source of hysterical symptoms. There are several remarkable cases of this kind quoted in the work of M. Louyer-Villermay, and another recorded by Dr. Dufilhol in his 'thèse inaugurale.' In this last work a case is given of a young man who experienced suffocations, globus hystericus, and the spasms, so often observed in women,—evidently from such a cause. Some of these symptoms (globus hystericus) may appear by themselves, in the male sex, under other circumstances,—in typhus (*Ann. litt. méd. étrangère*, t. iv, p. 561)—in certain organic affections of the brain (*Tirman, thèse inaugurale*)—in hypochondriasis (*Gardien, Dufilhol*, etc.). These cases do not warrant the conclusion, that hysteria is not exclusively a female affection (*Willis, Freind, &c.*); for these do not constitute real hysteria.

CHAPTER II.

OF HYSTERIA.

REAL hysteria ought to be accurately distinguished from eclampsia,—that transient, acute affection, invariable in its form and causes, peculiar in its indications, and occurring in the puerperal state, in which hysteria is seldom observed to take place.

Neither must hysteria be confounded with those spasmodic symptoms which sometimes accompany dysmenorrhœa, metritis, puerperal peritonitis, and serious uterine hæmorrhagy, and perhaps we may add, cancer of the uterus,—symptoms which constitute, in part, the affection which M. Louyer-Villermay has distinguished by the term *hystericism*.

Causes. Hysteria has been considered, sometimes as the cause, and sometimes as the effect, of amenorrhœa; perhaps both of them, however, have arisen from torpor or atrophy of the uterus. We shall presently give a proof of this fact, and thereby explain the frequent occurrence of hysteria at the period of puberty, in irregularities of the catamenia, and the simultaneous production of amenorrhœa and hysteria, by grief fright, or chills; these two affections are, however, not inseparable. Permanent, though slight, hysteria also occurs at the period of the cessation of the catamenia.

Symptoms. We shall describe, first, the commonest form of hysteria; then certain varieties, or essential differences in the combination of the most important symptoms; and, afterwards, the symptoms which may appear separately and *continuously*;—those, of which we shall first speak, appearing only in *paroxysms*, varying in interval, duration, and degree.

1. *Suffocating paroxysm*[1]. Uterine suffocation, convul-

[1] Erroneously designated epileptiform (*Louyer-Villermay*),—a term applied also to the syncopal and apoplectiform paroxysm, and to eclampsia.

sive (*Georget*) and nervous attacks occur, sometimes suddenly, sometimes after various premonitory signs, as yawning, &c. The patient experiences an internal coldness, which appears often to proceed from the uterus, and spread over the body and limbs, producing an universal trembling. From the uterus also, and sometimes from every other part of the abdomen (*Gardien*), a ball seems to rise and roll in this cavity, and in the thorax, fixing itself in the throat; then there are suffocation, strangulation, extreme anxiety, flushing of the face, swelling of the neck, and efforts on the part of the patient to release herself from an imaginary band. The legs are generally extended, stiff, immoveable, and the rigidity sometimes becomes almost general, invading the lower jaw, the neck, &c., and resembling that of tetanus. These symptoms are generally accompanied with vomitings, agitation, fright, and despondency, with perfect consciousness. The pulse is sometimes very small and quick, sometimes almost natural, at other times irregular and unequal; the abdomen is sometimes very tumid, with borborygmi, colic pains, and, at last, abundant eructations, announcing the termination of the paroxysm, with profuse and limpid discharges of urine, usually at the approach or arrival of the crisis. We have observed icterus to follow after these paroxysms, which are accompanied with acute pains in the region of the liver.

The paroxysm may last for five minutes, a quarter of an hour, several hours, and even half a day; they recur several times in a day, a week, a month, or still less often; they most frequently take place at the approach of the catamenia.

2. *Apoplectiform paroxysm*[1]. Stupor, or coma, sometimes accompanies the preceding symptoms. The face is more red and tumid; the pulse full and strong; there are sometimes wild cries, and violent convulsive motions, especially in the body and legs. The patient is bent backward, sometimes so suddenly as to spring up from the bed. This state, which may be feigned, or, at least, exaggerated, appears to us to have been brought on, in some cases, by the intemperate

[1] See the *Essai sur la nature de la fièvre, etc.*, t. ii, obs. no. 41.

use of fermented liquors. To this form may be referred the cataleptic state in some hysterical persons,—a state accompanied with dilatation of the pupils, immobility of the eyes and eyelids, remarkable alterations in the pulse, &c. The mental faculties are often perfect, or only a little clouded; the eyes remaining firm or fixed, and scarcely indicating, by the slightest significancy, a perception of what is said. Vehement threats have sometimes suddenly terminated this kind of paroxysm; sometimes consolations and encouragements, though apparently useless, have diminished the sufferings and hastened the return of the natural state. Sometimes, however, the stupor is real and obstinate. Headache, especially at the forehead, by which the paroxysm is frequently preceded, sometimes remains after it has subsided.

3. *Syncopal paroxysm.* We hear of persons who have passed whole days, and even several days[1], in a state of apparent death,—of complete stupor: we have seen a young woman[2], who was seized suddenly with syncope five or six times a day, and recovered in a few minutes. We have witnessed the same circumstance in a person at the period of the cessation of the catamenia; this patient was attacked only once or twice in the month; the affection lasted for three or four years. In these two cases, the syncope was so complete as to resemble death; the mental faculties, on the other hand, have been unimpaired in most of these cases of stupor, and even the hearing has continued perfect. The respiration and circulation were, undoubtedly, only incompletely suspended, and with some attention this might have been discovered.

4. *Cardiac paroxysm.* We proceed to give two cases, which one of us has witnessed (D), illustrative of two distinct manifestations of this kind of paroxysm.

First case. Madame Lachapelle was affected with sym-

[1] Eight days, it is said, in the case of Lady Russell, whose history is constantly quoted from the 'Journal des Savants.'

[2] See the work quoted, t. ii, obs. no. 40.

ptoms which had been attributed to aneurysm of the cœliac artery, and spasmodic dysphagia, which, in one of her attacks, almost precluded the use of food or drink for fifteen days. In 1812, the case assumed the form of palpitations, accompanied by dyspnœa, excessive anxiety, and extreme debility, with general trembling and oppressed respiration; this was always attended by a deep sense of coldness, alarm, and apprehension of aneurysm. After continuing for a quarter or half an hour, the paroxysm gradually subsided, and repeated eructations announced its termination.

Second case. A young woman was attacked by anxiety, debility, alarm from continual apprehension of fainting, trembling of the limbs; frequent, difficult, and irregular respiration, sometimes sobbing; irregular, confused, weak, and quivering pulsations of the heart. The pulse, corresponding with these movements of the heart, was small, soft, irregular, unequal, and so frequent as to give the finger an impression of fluttering or vibration. These symptoms continued for two days, and disappeared on the third, and have recurred occasionally, only in a transient form.

5. *Pertussiform paroxysm.* The subjoined case is illustrative of this form of hysteria: a young woman, about twenty years of age, subject to *nervous attacks*, became affected with obstinate torticollis, or wry-neck, then painful contraction of the left arm, and then of the right leg. She was threatened with suffocation, by a dry, short cough, resembling the hooping-cough, and continuing for three quarters of an hour at each paroxysm. This paroxysm subsided under the use of remedies, and returned several times.

This patient was very lately attacked with an apoplectiform paroxysm, with temporary catalepsia of the fingers and arms, immobility of the eyes, dilatation of the pupils; variable pulse, different in the two arms; slow and small respiration, obscured faculties and senses, difficulty of speaking, violent headache, and acute pain at the middle of the hypogastrium. (D.)

6. *Separate symptoms.* These symptoms, generally per-

manent and almost habitual, are sometimes the results or remains of paroxysms; sometimes they are unconnected with every other affection. They consist in *palpitations of the heart, and palpitations at the epigastrium*,—symptoms frequently accompanied by eructations, and other phenomena, resembling those of *hypochondriasis*, as, slight mental derangement, &c.:—in a dry, short, sometimes *croupy* cough, and, sometimes, *aphonia*:—in *dysphagia*:—in *paralysis*, or *contractions* of the limbs, generally with flexion, sometimes accompanied with permanent extension[1]:—in *chorea;* and in various *neuralgiæ*, as headache, known by the name of *clavus hystericus*, and frequently accompanied with an acute sensation of cold in some part,—pains in one side of the thorax, the epigastrium, &c.—fixed pains, confined to a small surface, sometimes appearing to be seated in the muscles, the ribs, the xyphoïd cartilage, or in some glandular body.

Hysteria appears to us to be more frequently *exaggerated* than *feigned*. The most distinct diagnosis of this affection consists in eructations, palpitations, and permanent contractions.

The *prognosis* of hysteria is generally considered as little serious. The transition from frightful suffering to perfect relief is often instant. When, however, this affection becomes constitutional, and has continued, or returned at intervals, for ten, fifteen, or twenty years, it sometimes terminates, not only in marasmus, but also in dangerous organic diseases. We have known persons of advanced age, who have been afflicted, from their youth, with hysteria, which appeared to have passed into hypochondriasis, from the period of the cessation of the catamenia; there are also examples in which these paroxysms have proved fatal, either in themselves, or from some complication; the syncopal or apoplectiform attack has been followed by permanent stupor, or real apoplexy; and persons, who have been erroneously supposed to be dead in one hysterical paroxysm, have actually sunk under a subsequent one. A remarkable case of sudden death in an

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[1] *Journal hebdomadaire de médecine*, t. i, 1828, p. 93, &c.

attack of suffocating and apoplectiform hysteria is given in the dissertation of Dr. Rullier.

We have also observed hysterical symptoms to present a fatal aspect, when they have been secondary, in the last stage of puerperal metro-peritonitis, or after profuse uterine hæmorrhagy. There was probably great debility in these cases; and the smallness of the pulse, the paleness, and the coldness confirmed this opinion.

Treatment. Secondary hysteria ought not to be treated in the same way as the primary form of the affection: in the former case, general and local blood-letting, emollients, and sedatives, have been very successful, whilst they have only aggravated the uncomplicated form. In this latter, however, it will be proper to use antispasmodics, that is, certain stimulants, irritants, and narcotics; the apoplectiform paroxysm has been relieved, as we have ourselves witnessed, by moderate blood-letting from the arm.

The effect of an antispasmodic treatment varies in different persons. The pertussiform paroxysm has been cured by the sulphate of quinine[1]; the dyspnœa, by digitalis; the pains in the side by the cyanuret of mercury; the painful and permanent[2] rigidity of the limbs, by acupuncture.

Blisters, sinapisms, warm baths, immersion of the hands, dry frictions, and foot-baths, have frequently relieved, and even suddenly cured, this affection. Water distilled from laurel berries has cured protracted cardiac paroxysms. The cough has given way to the sirop of morphine. M. Récamier has succeeded with the extract of belladonna, according to the authority of M. Dufilhol. The odour of burnt feathers, volatile alcali, assafœtida, applied to the nostrils, have cured the syncopal, and apoplectiform, paroxysms. The same result has been obtained by the cold bath, and enemata; a glass of cold water, thrown into the face, has been known to check the different forms of hysteria.

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[1] The same has occurred in several other forms of hysteria, when the paroxysms have been periodical. (See Piorry, 'Mémoire sur les névroses,' *Journal universel et hebdomadaire*, t. x, p. 347.

[2] Pelletier, *Archives de Méd.* octobre 1828, and *Revue Méd.* t. iv, p. 328.

Lastly, we may recommend mineral and chalybeate waters, cold water, preparations of iron, sulphurous thermal waters, change of air and scene, exercise, and diversion. A moral treatment ought to be adopted, when the affection is owing to excessive organic excitement. When occasioned by torpor (amenorrhœa), it may be proper to stimulate the organs by electricity, and apply blisters to the hypogastrium and sacrum, with cupping-glasses upon the abdomen and femora, pediluvia, and hip-baths of the same nature, purgative enemata, aloes, &c. Narcotic and stimulating injections, per vaginam, may be proper in cases in which the uterus is tender, and exclusively affected.

CASES.

1. *Hysteria during pregnancy.**

2. *Hysteria with incomplete amenorrhœa.***

3. *Hystericism; amenorrhœa; temporary hydrometra; death.—Serious disease of the appendages of the uterus, and of several other organs.****

CHAPTER III.

OF HYSTERALGIA.

HYSTERALGIA, or *uterine neuralgia*, is probably not always the same affection, if we admit all that Dr. Louyer-Villermay comprehends under that title. The contractions of which we have already spoken when treating of dysmenorrhœa, and the uterine pains which follow after parturition, are undoubtedly spasmodic and *nervous;* but are they sufficiently so, to be properly termed neuralgia? If so, we must

* ** *** Omitted.—TR.

also class under this title the uterine contractions of labour itself, and, more particularly, the colic pains of the intestines.

That affection which we shall designate *acute hysteralgia*, is sometimes the immediate consequence of marriage. The pains, in such cases, sometimes of a burning nature, are more generally attended with a sensation of pinching, and of forcible pressure in the hypogastrium and pelvic cavity, occasionally extending to the groins and loins. Like cramps and colics, they are intermittent,—leaving, however, in the intervals, a tenderness and sensibility of the hypogastrium, which render them liable to be confounded with slight metritis*, which is itself a necessary consequence of protracted hysteralgia.

In *chronic hysteralgia*†,—the real uterine *neuralgia*,—

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* There is no question that this *is* metritis.—Tr.

† Dr. Gooch has described this affection under the name of "Irritable Uterus." He observes:—

"Pain in the lowest part of the abdomen and loins attends various diseases of the unimpregnated uterus. It is the chief symptom in painful menstruation; but here it occurs only during the menstrual period, and is quite absent during the rest of the month. It is the most distressing symptom in descent of the uterus (prolapsus), but here it occurs only in the upright posture and exercise, ceases on lying down and replacing the organ, and is prevented by supporting it in its natural situation. It attends most of the diseases of structure to which the uterus is liable; but the change of structure, which may be ascertained by examination, distinguishes the nature of the pain.

"A patient who is suffering from the irritable uterus, complains of pain in the lowest part of the abdomen, along the brim of the pelvis, and often also in the loins. The pain is worse when she is up and taking exercise, and less when she is at rest in the horizontal posture: in this respect it resembles that of prolapsus uteri; but there is this difference—that, in the latter, if the patient lies down, she soon becomes quite easy; but, in the complaint of which I am speaking, the recumbent posture, although it diminishes, does not remove the pain. It is always present in some degree, and severe paroxysms often occur, although the patient has been recumbent for a long time. If the uterus is examined, it is found to be exquisitely tender; the finger can be introduced into the vagina, and pressed against its sides without causing uneasiness; but as soon as it reaches and is pressed against the uterus, it gives exquisite pain. This tenderness, however, varies at different times, according to the degree of pain which has been latterly experienced. The neck and body of the uterus feel slightly swollen; but this condition also exists in different degrees, sometimes sufficiently manifest, sometimes scarcely or not at all perceptible. Excepting, however, this tenderness, and occasionally this swelling, or rather tension, the uterus feels perfectly natural in structure; there is no evidence of scirrhus in the neck; the orifice is not misshapen; its edges are not indurated. The patient, finding her pain greatly increased

the paroxysms occur without assignable cause, and without any thing of an inflammatory character. It appears in paroxysms, varying in frequency and regularity. M. Duparcque records two cases, and one of us has observed several of this kind (B). This course of the affection may, by itself, furnish a valuable indication, and lead to an easy cure. The sulphate of quinine is found useful in periodical hysteralgia. In the absence of this indication, relief or a cure may be obtained by antispasmodics, narcotics, morphine, &c.

In some cases, we have proved the inefficacy of the most active antispasmodic treatment. We were consulted (D) by a person, who probably indeed suffered less in the uterus than in the vagina and pudenda; the pain often extended to the rectum and anus. The agitation and despondency were such as almost to induce mental derangement. The pains were at once of a burning and of a gnawing kind; yet, the pudenda, vagina, and uterus presented no redness, swelling, or tenderness. Some drops of lacteous fluid were sometimes discharged per vaginam. This disease continued for several years, and was variously treated, without success.

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by rising and walking, soon learns to relieve herself by lying on the sofa, and at length spends nearly her whole time there. Notwithstanding this precaution, there is always a considerable degree of uneasiness; but this frequently increases to severe pain. These paroxysms generally come on either a few days before menstruation, or (as is the case in many instances) a few days afterwards. If the paroxysm is properly treated, it subsides in a few days to the ordinary and more moderate uneasiness. Whilst this uneasiness is felt in the substance of the uterus, the general circulation is but little disturbed. The pulse is soft, and not much quicker than is natural; but it is easily quickened by the slightest emotion. In a few instances, however, there has been a greater and more permanent excitement of the general circulation; the degree in which the health has been reduced, has been different in different cases. A patient who was originally delicate, who has suffered long, and has used much depleting treatment, has been (as might reasonably be expected) the most reduced; she has grown thin, pale, weak, and nervous; menstruation often continues regular, but sometimes diminishes, or ceases altogether; the functions of the stomach and bowels are not more interrupted than might be expected from the loss of air and exercise; the appetite is not good, and the bowels require aperients; yet nothing more surely occasions a paroxysm of pain than an active purgative." *Diseases peculiar to Women*, p. 311—314.—Tr.

CHAPTER IV.

OF NYMPHOMANIA.

DISAPPOINTED affection sometimes leads to mania; but this may not be accompanied by any character of nymphomania; on the other hand, this latter form of mental malady may be secondary and subsequent to the former, as in the following remarkable case, communicated to us by Professor Rech:—a person, of strong constitution, thirty-two years of age, married in her twenty-fourth year, and the mother of four children, three of which she had nursed, became subject to aberration of mind, and soon fell into a state of continued derangement, in consequence of domestic troubles. Her parents had never been affected with insanity, though one of her brothers appeared to have been thus attacked several times. She entered the hospital at Montpellier, where she appeared indifferent to every thing, gave incoherent answers, and became frantic on two or three occasions. Blood-letting was adopted several times, with douches, warm and cold baths, without effect; this state of things lasted for eleven months, except that the disease assumed somewhat of the form of nymphomania. An irregular intermittent fever led us to prescribe a strict diet, and mild remedies, infusion of ipecacuanha, &c. The paroxysms gradually diminished, and the derangement subsided, together with the fever. After eight days, however, there was renewed restlessness, with want of sleep, and incoherence, and the nymphomania became complete.

In some cases of post-mortem examination, the ovaria have been found tumefied; their influence, however, could only have been secondary. Is it possible that some primary disease of these organs may have been sometimes the cause of nymphomania? Such a case is, at all events, very doubtful; and the negative seems to be implied by the absence of similar symptoms in the numerous cases of inflammation

of the ovaria, and of acute or chronic metritis of daily occurrence.

Inflammation or irritation of the pudenda, and especially of the clitoris, in cases, for instance, of cutaneous affection, often occasions acute pruritus, and excited passion, strictly originating in a local cause; yet these are unaccompanied with mental derangement, or indecorum; and we therefore consider true nymphomania, or furor uterinus, only as a complication with a particular state of the intellectual organs.

This local state may indeed *modify* that of the mind, just as a superinduced symptom modifies the original affection; it may perhaps be the occasional, though not the essential, cause of deranged faculties. The following case, published by M. Ozanam[1], is much in point:—"A person, who had had several children, had been subject, during pregnancy, to *mental aberrations*, followed by stupor; in the sixth month she had an abortion, almost without pain, and *without recovering from the stupor*. At the end of twenty-five days she *awoke* in a state of most unrestrained nymphomania." M. Ozanam observing the pudenda to be inflamed and ulcerated, applied the nitrate of silver to the surface; and, after the second day, the redness and swelling had disappeared; it was not, however, until two days afterwards, that there was any improvement in the symptoms; from that time the health was rapidly recovered. It is evident that in this case the inflammation of the pudenda and clitoris only gave the *form* of nymphomania to a cerebral affection of previous existence. It is obvious how useless it would have been to proceed to excision. This operation may cure a vicious habit, but would never cure real nymphomania; and much error has arisen from such mistakes[2].

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[1] *Séances de l'académie royale de médecine*, 12 août 1828.

[2] See the diseases of the pudenda and clitoris, in the sequel of this work.

PART SECOND.

DISEASES

OF THE

UTERINE APPENDAGES.

PRELIMINARY OBSERVATIONS.

We have already observed that the diseases of the uterus frequently extend to its appendages, and to the pudenda. Displacements of the uterus cannot occur without involving, on the one hand, the Fallopian tubes and ovaria, and, on the other, the vagina and pudenda; metritis often extends its sympathetic action to the same organs, or the inflammation is communicated by continuity of tissue, as M. Mélier seems to think is the case in chronic inflammation of the ovaria. We shall, however, confine ourselves to those diseases which are peculiar to the appendages, and independent of all other affections.

The pathology of these diseases, in accordance with our anatomical arrangement, will be divided into four sections, comprising,—1, the ovaria; 2, the Fallopian tubes; 3, the vagina; 4, the pudenda.

In this division we do not include the diseases of the ligaments of the uterus,—these being immediately connected with those of that organ itself. These ligaments are sometimes, indeed, affected independently of the uterus; if, however, their inflammation, suppuration, tuberculous state, their sanguineous and serous infiltrations, are sometimes independent of disease of the uterus, they are, at all events, subordinate to affections of the ovaria, Fallopian tubes, or peritonæum, and therefore require no specific notice. We shall

only add a few words upon two affections attributed to the round, and also to the broad, ligament.

1. The term *hydrocele*, in women, has been applied to a serous tumor formed in the inguinal region, and belonging, more or less directly, to the super-pubic ligament. Some examples of this kind, though little known, have been recorded by Aëtius, Paré, Desault, Lallement; two cases, with full details, have been published by Palletta; another by Scarpa, from his fellow-countryman Cairoli; and, lastly, Professor Regnoli, of Pisa, has added one more fact in a monograph on this subject[1]. If it be in the unobliterated canal of Nuck that the fluid is contained, it may be pushed back into the abdomen, and retained there by a tight bandage; it would be wrong to follow the example of Palletta, and make incisions into the tumor, even though this operation was unattended, in his case, with serious consequences. Incision and suppuration of an isolated cyst would, on the contrary, be the best means of effecting a permanent cure.

2. Encysted dropsy of the broad ligaments has also been considered as of frequent occurrence, and even endemial in some countries *(Van den Bosch)*. An interesting dissertation upon this subject was published at Utrecht in 1819[2]. The cases, however, adduced by the writer,—especially those which he has taken from other sources, seem to us by no means to support his opinion. In all of them a large cyst, containing fluid, is discovered to be formed in the internal appendages of the uterus; the ovarium, however, of the same side was in every case diseased, scirrhous[3], suppurated, still more frequently *multilocular* and filled with serum; it had often entirely disappeared; and, at all events, when it

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[1] *Intorno l'idrocelo delle donne*, Pisa, 1832.

[2] *Specimen medicum inaugurale de hydrope ligamentorum uteri, etc. Autore*, P. J. J. de Fremery, *Traj. ad Rhenum.*

[3] When distension or cancerous disease has reached a certain point, it becomes very often impossible to say whether the disease began in the ovarium or the broad ligament. Nevertheless, the former is always the more probable case. See an example of this kind, taken from the clinical observations of M. Récamier, *Journal complémentaire*, t. xxxvi, p. 300, &c. For tubercles, common to all the appendages of the uterus, see the Atlas, Pl. XVI.

did exist, it was always adhering to the parietes of the cyst; and it was repeatedly declared, by those who witnessed the cases, that the water had accumulated between the external membrane of the ovarium and its proper substance. How then could the cases be considered otherwise than as those of dropsy of the ovarium? The writer himself admits that these were cases to which that designation is generally given.

Encysted dropsies may exist in the peritonæal folds themselves; it is well known, that from the broad ligament,—as from the uterus, or even ovarium,—there are often suspended hydatiform vesicles[1], generally pediculated, and varying in volume from that of a grain of millet to that of a nut, or even an egg; these cysts may, indeed, sometimes increase to an enormous size, although they receive not, like the ovarium, numerous and voluminous vessels. Their diagnosis, prognosis, and treatment, are much the same as those proper for dropsy of the ovarium.

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[1] See the Atlas, Pl. XXIII, fig. 1, *g*; Pl. XXXVII, fig. 1; Pl. XXV, *n*; Pl. XXXIII, fig. 1, *f*.

SECTION FIRST.

DISEASES OF THE OVARIA.

CHAPTER I.

GENERAL OBSERVATIONS.

THE ovarium, composed of different tissues, is accordingly liable to varieties of disease. It frequently happens, however, that disease, even when originating only in one portion of the ovarium, soon invades the rest, owing to the near relation necessarily subsisting between the parts of an organ of little volume and not lobulated, and to their common nerves and vessels. It must, moreover, be acknowledged, that, according to the position of this organ, many partial diseases escape detection during life, or only excite suspicion, and, being seldom fatal, cannot be ascertained by pathological anatomy; this last can, at the most, only furnish us with clearer ideas of the numerous diseases of this organ, than could otherwise be obtained. Perhaps the changes in colour and consistence in the matters contained in the vesicles[1], and their variable degrees of development, constitute as many specific diseases.

The active state of the ovarium, like that of the uterus, takes place from the period of puberty to the term of the cessation of the catamenia; we have, however, already stated

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[1] Morgagni, *De sed. et caus. morb* ep. xxi, art. 29; xxiii, 4; xlvii, 30; lii, 6, 28.

(Introduction, p. 25), that the nutritive life of the ovarium proceeds more slowly than that of the uterus: it may also be supposed that some obscure, though real, diseases might attack this organ before puberty; and most of the cases of *atrophy* of the ovarium may be attributed, not to arrested development, as in the uterus, but to a deeply-seated disease, or chronic inflammation, followed by suppuration, &c. The ovarium may, in fact, and often must, share in those inflammations of the peritonæum, and especially in that of the pelvic peritonæum, which we have remarked to be frequent in early life (p. 93). These inflammations might easily induce obliteration of the vesicles of Degraaf, and thus bring on sterility, which would be effectually confirmed by adhesions similarly produced, and which change the natural and relative situation of the ovarium and Fallopian tube, by fixing the pavilion of the one only upon a point of the other, by attaching both of them immoveably to the surface of the uterus, or, perhaps, by obliterating the tube itself.

Sterility is not, in point of fact, a real disease, but, rather, a consequence, or symptom of different diseases of the uterus (obliteration of an orifice, different morbid changes of structure and tumefactions, excessive leucorrhœa, &c.),—of the Fallopian tubes, or ovaria,—diseases often unmanageable and misunderstood, rendering the sterility incurable, or indicating, by themselves, a treatment which may cure, at once, the disease and its consequence. With regard to the ovarium in particular, sterility is perhaps sometimes owing to a natural torpor and adynamia, extending to, or inherent in, the other organs of generation; more generally, however, to organic and visible disease. In cases in which scirrhous, cancerous, steatomatous, or other disease, or dropsy, destroys or excessively distends, the natural tissues of the ovarium, it is obvious that the organ would lose its functions in the affected part, and the patient become completely barren, if the two ovaria were attacked at the same time, through their whole extent, or in the principal part of their substance[1]. If a state *sui*

[1] In the case of a person, thirty-four years of age, and without children, we discovered that the ovaria were ulcerated,—the right one adhering to a portion of the

generis should change the secretion of the vesicles, rendering them incapable of secreting the ovula and their first nutritive fluid, and allowing them only to secrete an aqueous serum (dropsy of the ovarium) ;—if inflammation occasion, in these vesicles, a sanguineous exudation, a deposit of puriform or albuminous matter ;—if any other cause coagulate[1] the fluid contained in these vesicles :—these may constitute the temporary or permanent causes of sterility ; and in some of these cases, especially those of inflammation, the absorption of the fluid, if complete, could not fail of bringing on atrophy, and, perhaps, an almost entire absorption of the organ (see the Introduction, p. 26). The ovarium in the young, as in the old, may, if frequently excited, become corrugated, cicatrised, hardened, withered, and collapsed, and finally disappear.

Atrophy is not naturally the only result of chronic inflammation of the ovaria ; these organs are liable to induration, congestion, and enlargement, even without remarkable change of structure,—in a word, to *hypertrophy*[2], sometimes perhaps of doubtful character, as in the uterus : we are inclined to think that hypertrophy frequently depends on the same cause as atrophy, from the circumstance that, in the same person, the one ovarium has been observed to be reduced almost to nothing, whilst the other was of twice its natural size : Hooper says that he has observed this peculiarity in three instances ; the atrophied ovarium was hard and rather larger than a grain of linseed. In such cases, it might be said that the healthy ovarium had only increased in volume to supply the annihilation of the other ; but the same cannot be said in this case as in the kidney, or lung, exercising a function of perpetual activity, upon the cessation of which death would infallibly ensue. Besides, we shall presently see that, in most cases of this increase in volume, there was also some other disease indicating a morbid state, and not mere hypertrophy.

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small intestines, the other, consisting of a sanguineous, fungous mass, of the size of a small egg. (B.)

[1] *Ventre aperto, in testibus, vesicularum humor totus concretus deprehenditur, non secùs ac si ad ignem fuissent coctæ : undè veri simile est ejus infœcunditatis causam exstitisse.* Morg. *de sed. et caus. morborum.* Epist. xx, art. 7.

[2] See the Atlas, pl. XXXIII, fig. 1, e, and several others.

CHAPTER II.

OF PHYSICAL LESIONS OF THE OVARIA.

THE position, mobility, consistence, and irregularly rounded form of the ovaria would naturally protect them from external violence, unless some disease previously exist. There are no cases on record of wounds, or even of contusions, of the ovaria. The latter, indeed, might be expected to occur more frequently during delivery, did we not remember that these organs are not situated, at that period, within the pelvis, but are raised into the abdomen, together with the fundus of the uterus, and, consequently, can only be pressed, by that organ and the fœtus, against the soft parietes of the abdomen. Physical injuries have been sometimes voluntarily inflicted upon the ovaria by surgical operations,—in cases of hernia, in which these organs were situated immediately beneath the skin. The diseased ovaria, though still situated in the abdomen, have also been sometimes removed, either in cases of chronic inflammation and suppuration, or in those of dropsy or scirrhus; it is even said that this excision has been designedly performed by unprofessional persons, to effect a castration similar to that performed upon domestic animals. Franck of Frankenau assures us that he knew a person, in whom the ovaria had been removed, in infancy, by an accidental wound of the hypogastrium, by which they had doubtless issued, and that no other inconvenience ensued besides inevitable sterility[1]. The cases, however, which have been collected by this writer, and copied by Dr. Murat into a valuable article in the 'Dictionnaire des Sciences médicales,' are of very little interest[2].

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[1] *Satyræ medicæ*, p. 41.

[2] Little reliance can be placed in the accounts of female castration in certain countries: and even with regard to the anecdote of Wierus,—one party speaks of it as an excision of the two ovaria; the other (*Diemerbroeck*) as a removal of the uterus itself.

The displacements of the ovarium have assumed a new importance, and are much better understood, since M. Deneux collected, in a single essay, the facts recorded by different writers. Among these displacements, we ought to distinguish those which occur within, and those which occur without, the pelvis. Although the former may be considered, to a certain degree, as vaginal herniæ, they have not been usually so denominated, in consequence of tumefaction of the ovarium,—the only important point in the case,—having exclusively designated this affection. The enlarged ovarium has a natural tendency downwards; it may occasion prolapsus uteri, of which we have already quoted an interesting case (page 61); it may also pass between this organ and the bladder, though it is much more frequently on the anterior part of the rectum that it thus descends. Such is the case in many extra-uterine pregnancies, which open, by ulceration, sometimes into the vagina, sometimes and more frequently into the intestine. The vagina is, in this case, contracted and pushed forward, and the same thing occurs when the ovarium, filled with water, or hydatids,—or tumefied by congestion,—has passed into the cavity of the pelvis. Cases of the first kind may be found in our other works[1]; Professor Cruveilhier quotes two cases of the second[2] from M. Roux and M. Barret; and Denman has given one of the third kind from Sir Everard Home[3]. This state is very often of a transient nature, and the inconveniences arising from the compression of the bladder and rectum are removed, when the tumor, considerably increased, can no longer be contained in the pelvis, but ascends into the abdomen, like the uterus in natural pregnancy; sometimes however, while increasing in volume, it continues to be partly contained in the pelvis, as may be seen in the former of the two cases of M. Cruveilhier. Previously to any considerable increase in dimensions, the enlarged ovarium may occasion

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[1] Madame Boivin, *Mém. sur l'Avortement*, p. 125; and M. Dugès, *Pratique des Accouchements*, tome iii, p. 385.

[2] *Dict. de Médecine et de Chirurgie pratiques*, tome i, p. 256, &c.

[3] *Introd. à la Pratique des Accouchements*, t. i, p. 147.

serious symptoms, if complicated with pregnancy; it checks the progress of the fœtus during labour: but the consideration of these difficult emergencies belongs entirely to midwifery[1]. In other cases, there are obstinate constipation, flattening of the fæces, and difficulty of micturition, sometimes requiring the introduction of the catheter (*Denman*, *Barret*, *Roux*). External examinations, and that per vaginam, and per rectum, afford a more distinct diagnosis. A tumor is found seated between the vagina and rectum, whilst the uterus still preserves its natural form and direction; and the case is thus distinguished from retroversion. It may still be a question whether the case be one of tumor originating in the septum which divides these two canals; the mobility of the tumor and the possibility of pushing it beyond the brim, can alone furnish proof of the contrary. Supposing, however, the reduction to be thus accomplished, it would be no security against relapses; nor would it arrest the serious progress of the disease. Perhaps we might avail ourselves of the former position in the treatment; a discharge and suppuration might be safely effected by an incision of the vagina, in cases of dropsy of little volume, compared with the size which is often acquired by a cyst raised into the abdomen. Professor Roux effected a cure, by such an incision, in a case which we have already quoted, and in which there was a cyst filled with acephalocysts,—a cyst, supposed to belong to the ovarium, which had descended upon one of the sides of the vagina.

Might a scirrhous ovarium be thus removed? It would, at least, be more easily removed in this manner than through the abdominal parietes; the decision in all such perplexing cases must be left to the sagacity of the practitioner. In one case, an osseous tumor of the ovarium thus situated had been pushed, during delivery, through the anus, together with the adjoining paries of the rectum; it was removed, and the patient died[2].

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[1] See Moreau et Béclard, *Bulletins de la Fac. de Méd. de Paris*, 1820, no. v; Madame Lachapelle, *Pratique des Acc.* tome iii, p. 311 and 384; Merriman, on *Difficult Parturition*, p. 240, and pl. 1; Denman, *Introd. à la prat. des Acc.* tome ii, p. 110 and 111; Barbaut, *Cours d'Accouchements*, tome ii, p. 86 and 87.

[2] *Annales de litt. méd. étrangère*, tome xi, p. 336.

Would this have happened, independently of labour, and if an incision had been made through the vagina?

We shall not treat in this work of those displacements of the ovarium which are perceived in a wound of the abdomen, or project from the parietes of that cavity during the opening of an abscess (*Ruysch*), or in the cæsarian section (*Stein*, *Lauverjat*),—cases in which it has always been easy to replace these organs. Real hernia takes place by one of the natural openings of the abdominal parietes, and the ovarium then remains under the integuments. We have already observed, in treating of hernia of the uterus, that this organ has, in such circumstances, been frequently accompanied with one, or both, of the ovaria; the facts, which were then adduced[1], shewed that the displacement of these appendages was only of secondary importance, except in regard to the etiology,—hysterocele frequently following hernia of the ovarium in its course through the abdominal parietes. The ovarium,—singly, or accompanied with the adjoining Fallopian tube, sometimes with a portion of intestine (*Soranus*, *Bessière*), sometimes undiseased, though more generally enlarged by congestion, hydatids, or the remains of a false conception,—has passed through the umbilical ring (*Camper*), several times through the ischiatic notch (*Camper*, *Papen*), or the crural arch (*Deneux*), though much more commonly through the inguinal ring (*Pott*, *Balin*, *Lassus*, *Billard*, etc.). This last circumstance is surprising, when it is considered how rarely inguinal hernia occurs in the female; it should, however, be remembered, on the other hand, that these herniæ are, most commonly, according to M. Deneux, congenital; Lassus and Verdier have observed them, generally, in very young persons; the former of these writers saw a case which was decidedly congenital, and M. Billard has described one which he dissected in a newly-born infant[2]. He observes that the super-pubic ligament of the diseased side was short and voluminous, and

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[1] To these cases we might add that of Desault, quoted by M. Deneux in the 'mémoire' from which we here give an extract.

[2] *Traité des Maladies des Enfants nouveau-nés.* Paris, 1833, p. 474.

attributes to its dragging, the inclination of the uterus and the protrusion of the ovarium, which was carried outwards by the canal of Nuck, distinctly marked in very young children,—a theory which had already been proposed by M. Deneux. It is nearly by the same process that the testes descend into the scrotum; and this is the only possible explanation of the case given by Pott, in which there was a similar hernia in each groin.

The diagnosis of this affection will probably be indistinct, particularly in cases of tumefaction, inflammation, morbid structure, and adhesion. The ovarium, retaining its usual form, consistence, volume, and mobility, and situated in front of the inguinal ring, would, on the contrary, be with difficulty mistaken in the present day, especially in thin persons. Congestion of the inguinal glands never occurs in this situation, but rather towards the middle of the groin; and the glands sooner become fixed. Ovarian hernia is characterised and distinguished from enterocele and epiplocele, by draggings in the hypogastrium and loins, when the patient moves; and by the absence of borborygmi, colic pains, and draggings of the stomach. According to Lassus, one of the most distinctive signs is, the correspondence of the movements impressed upon the uterus by the finger introduced into the vagina or rectum, with those which are felt, in the tumor itself, by the patient or the practitioner.

The consequences of this affection have sometimes required an operation; strangulation may ensue, according to Lassus; and even if sterility be not an unavoidable consequence of this hernia, it may, perhaps, *mechanically* expose the patient to ovarian or tubular pregnancies. The case of Balin seems to justify this supposition.

The treatment of this affection will, therefore, depend rather upon its accidental, than its essential, character. Palliatives alone will generally be admissible,—reduction being in this, as in many cases of congenital hernia, impracticable; the patient may live for many years, as is proved by post-mortem examinations. In cases of serious accident, or of very painful effects, excision is the only resource; it was performed, in the case of Pott, without difficulty or

danger: this operation has been also performed after a ligature had been previously applied to the pedicle of each ovarium. A similar case is recorded by Lassus, who nevertheless preferred, in a case of strangulation, to enlarge the ring, and leave the ovarium in its place, by pushing it back a little, in order to close this opening with it, and present an obstacle to the further protrusion of the intestines. M. Deneux proceeded in the same manner, after having removed the larger part of the ovarium distended by hydatids.

CHAPTER III.

OF DISTENSION OF THE OVARIA, AND PARTICULARLY OF DROPSY.

It is not our intention to treat of those extra-uterine pregnancies, termed ovarian, in which the impregnated germ remains in the ovarium, distending that organ until it bursts, generally occasioning the death of the patient, and escaping by some perforation of the rectum, vagina, bladder, or abdominal parietes[1]. In some cases of rarer occurrence, the embryo retains, under a deteriorated form, a sort of obscure existence, for some time, within the ovarium. Some facts of this kind, resembling those of monstrosity, in which one germ is included within another,—the former being often reduced to mere osseous and cutaneous rudiments,—have induced persons to attribute to extra-uterine pregnancies, all the cases in which small bones and hairs have been found in the ovarium*; it ought, however, to be remarked, that these

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[1] See Madame Lachapelle's *Prat. des Acc.* tome iii, p. 86, &c., and the *Dict. de Méd. et de Chirugie pratiques*, t. ix, p. 316, &c.

* "I was consulted by a lady who had not been married, and who was about fifty years of age, for a swelling of the abdomen, which was of a great size. The

bones, which bear very little resemblance in form to real teeth, with which they have been vaguely compared, are, as well as the hairs, only found in the ovarium, together with fatty, suetty, or, as it is said, steatomatous matter[1]. It ought also to be observed that the cellular and almost cutaneous cysts, which contain these productions, are found in many other parts (though most commonly in the ovaria), and that they have been seen in men, or in young unmarried women, even before puberty[2]. It is useless, besides, to dwell upon the theory of a production, the nature of which cannot be ascertained during life, nor its effects (sterility, inconvenience, &c.) removed. Sometimes, indeed, inflammation takes place at the surface[3]; or, other diseases invade the tissue of the

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disease was considered to be ovarian dropsy. It was recommended that the fluid should be drawn off by an operation, when the breathing became oppressed, or she became more uncomfortable. Fearful of the effects of the operation, she did not complain, and at length the belly actually burst: the fluid which escaped was more than a pailful in quantity, and so thick that it was like strong jelly under the feet. When the surgeon was passing a bandage round the body, he heard a rattling noise within; and when he felt the belly and pressed it, the noise was very distinct, and like that which stones make when shook together. He introduced his fingers through the ruptured part, and easily detached and pulled out several portions of bone, of irregular shape, some two inches long, and about one in thickness, others smaller. Still the rattling was occasionally repeated: another surgeon was sent for; and it was determined that the opening should be enlarged, which was done. Several more of larger size were extracted. The wound healed, and the lady lived many years. This was an instance of hygromatous ovarium, or encysted ovarian dropsy, with masses of bone and flesh." Hooper's Morbid Anatomy of the Human Uterus, p. 11.

I must here refer to the admirable work of M. Cruveilheir, who has recently illustrated this subject in his eighteenth fasciculus.—Tr.

[1] Portal, *Anat. médicale*, t. v, p. 548. Murat, *Dict. Sc. méd.*, t. xxxix, p. 28. Meckel, *Journal complém.* t. iv, p. 122 and 217. Cruveilhier, *Essai sur l'Anatomie pathol.* t. ii, p. 181, Logger, *De Ovarior. morb.* p. 29. Andral, *Précis d'Anat. pathol.* t. ii, p. 707, &c.

[2] Baillie, *Anat. Pathol.* p. 329. Cruveilhier, *ouvrage cité*, p. 188. Seymour, *Illustrations of some of the principal Diseases of the Ovaria;* p. 83.

[3] In this manner a cyst of the same kind opened into the bladder, and for a long time allowed the hair to pass with the urine; at last, a body was extracted from the bladder, as large as a hen's egg, presenting, at one of its extremities, a shred of skin, containing hairs and a bone, in which was partly fixed a kind of tooth, resembling a small molar. The communication of the cyst with the bladder was ascertained by the finger, passed into the urethra. The person recovered (Delpech, *Chirurgie*

ovarium; or a serous or other effusion surrounds them: in these cases, the symptoms themselves will suggest the diagnosis and treatment.

Distension of the ovaria is sometimes produced by hydatids,—that is, vesicular bodies detached from the cavity containing them,—real entozoa: this state of things has frequently been ascertained only on post-mortem examination, whether the individual died of some other affection[1], or whether, as in the case given by M. Cruveilhier, from M. Barret, the inflammation of the sac had itself brought on death. In the case of M. Roux, quoted by the same writer, an incision made in the tumor formed by the hydatids near one of the sides of the vagina and pudenda, allowed of their expulsion and cured the patient; there was, however, for that very reason, only a mere probability that the ovarium was diseased.

Accumulations of blood and of pus have been sometimes observed in this organ; the former are rare and never considerable; of the latter we shall have occasion to speak presently, on the subject of the inflammation which occasions them. This inflammation, indeed, is sometimes secondary, and is the result of distension by fluids, originally of a different nature from pus: of this we shall treat under the general title of dropsy of the ovarium.

This dropsy, the most common of all encysted dropsies, is often complicated with some of the diseases which have been already described, so that one part of the cyst containing the fluid sometimes presents a considerable thickness, and appears to be scirrhous, cerebriform, or steatomatous. In such cases only could the empty cyst weigh fourteen and even twenty-seven pounds[2]. The simple cyst is always fibrous, sometimes muscular and reticulated *(Vogel)*; it is of a greyish-

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clinique, tome ii, p. 521). In a similar case, Dr. Paul Marshall observed, on post-mortem examination, that the ovaria were united together into a cerebriform or fatty mass, containing *an extraordinary quantity* of hairs, and five teeth. The cavity which contained them communicated with the bladder. (*Journal complémentaire*, tome xxxv, p. 183).

[1] Of ascites, for instance. See *Journal général de Méd.* juillet 1828.

[2] Morand, *Mem. de l'Ac. de Chir.*, t. ii, p. 456.

white colour, and its thickness varies considerably, in such circumstances, in different persons; the sac, seldom thin and semitransparent[1], more frequently presents one or more lines, and even an inch in thickness; this thickness, however, is not the same throughout. The ovarium, or its remains, which have sometimes entirely disappeared, may form a sort of knot on one of the parietes of the sac. In other cases there are similar knots, or cartilaginous and even osseous deposits[2]. The peritonæum covers, exteriorly, this proper tunic; and, very often, numerous and voluminous vessels, really hypertrophied (*Dehaën*) like the organ itself, which supplied the original elements of the cyst, are found over almost all the superficies, or in one of its regions exclusively: these are principally veins, according to Cruveilhier; Delpech considers them to be arteries, and says he has carefully dissected them, and found them in the parietes of the cyst, of the size of the little finger. The form of the cyst is generally rounded, though they have been seen pyriform (*Atlas*, Pl. XXXIX), multilobular or contracted (*Andral*); and when its volume is so great, that the abdomen is filled by it, and acquires enormous dimensions, its form has generally a tendency to become globular. The abdomen is uneven or lobulated only when there is a complication of scirrhus, or when the two ovaria are simultaneously affected, which is seldom the case, —at least, in an equal degree; or when there are more than one cyst in the same ovarium. This multiplicity is, at least, as common as the opposite state: perhaps it is even more common, though, at the same time, it is liable to much variety; sometimes two or three cysts only constitute the tumor, and assume, by unequal degrees, a considerable volume; sometimes their volume is much less, but their number very great[3]; this form of disease, of which there are

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[1] Hooper, *The morbid anatomy of the human uterus*, London, 1832. 4to. pl. XX.

[2] A cyst, entirely cartilaginous, from five to six lines in thickness, and osseous in some points (Hooper, *op. cit.*). The fluid was puriform, and effused into the abdomen by a rupture.

[3] Monro, *Essai sur l'hydropisie*, p. 222 and 229. Strambio, *Nouvelle Biblio-*

some preparations in wax in the 'École de Médecine de Paris,' has been sometimes erroneously confounded with the presence of hydatids or acephalocysts. Exteriorly, the mass may be smooth, and as moveable as is compatible with its volume, and free from adhesions, even when there is pus in the interior: but more frequently there are adhesions. Sometimes the sac adheres to the uterus, which is, in a manner, lost in its parietes; or, one of the Fallopian tubes, considerably elongated and enlarged, as witnessed by Montaulieu, Dehaën, M. Cruveilhier, and ourselves (*Atlas*, Plate XXXIX), enfolds it in its whole length; sometimes the adhesions are almost general, and attach the tumor to the abdominal parietes, and to all the organs contained in this cavity. The interior of the sac, or principal sacs, is not always the same; though generally smooth, and resembling a serous membrane, it is sometimes uneven, and mammelated (*Morand*, *Burns*), or lined by a false membrane,—of simple form, or composed of laminated elongations, or strictly unilocular; sometimes it is imperfectly closed, with incomplete or perforated partitions (*Baillie*, *Cruveilhier*).

The matter contained in the cysts varies also considerably, as well in quantity—the ovarium being capable of containing a hundred pounds[1], or more—as in quality, and appearance; sometimes it consists of a thin, limpid water; sometimes it is sanguineous, or brownish, owing to the decomposition of the blood dissolved in it[2]. The predominance of this latter fluid

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thèque médicale, t. iii, 1826, p. 287. Cruveilhier, *Anatomie pathologique du corps humain*, 5e livraison, pl. III. Delpech, *Chirurgie clinique*, t. ii, p. 192, etc. etc. M. Andral observes that where there are many cysts, the anterior is often that which is the most developed. (*Anat. pathol.* tome ii.) Perhaps it is more correct to say that the most voluminous is turned forward by its enormous weight.

[1] Monro, *Essai sur l'hydropisie*, p. 228. 100½ pounds, according to Willis; 120, according to Wepfer; 112, according to Samson. Morand, *l. c.* 100 pounds, according to Duret, &c. At first, the quantity of the fluid is, on the contrary, imperceptible.

[2] M. Julia Fontenelle ascertained, by analysis, that, of 8¼ pints of this brown and turbid fluid, there were 6 parts of fibrin, 97 of albumen, 34 of congealed gelatine, a little phosphate, and hydro-chlorate of soda. This matter was contained in a fibrous

may impart the colour of chocolate, and even of coffee grounds; the consistence is then much more considerable; the fluid is glutinous, and sometimes almost pultaceous. The contents of the cyst may be colourless, or semi-transparent, like serum, very viscous, and resembling jelly or thick glue[1], ropy and adhesive; so that particular methods are necessary for its removal in cases of operation. In multilocular dropsy of the ovarium, it often happens that each cyst contains a particular production,—aqueous, or gelatinous, sanguineous, fatty, or even chalky (*Cruveilhier*). These productions are sometimes decomposed, as is first indicated by their putrid odour. Gases then co-exist with the liquid; and, when they escape by the canula of the trochar, may suggest the idea that the tumor is in communication with the intestine, as has been observed by Dehaën[2]. This change particularly occurs when the inflammation has invaded the sac, and altered its secretions; there is then pus mingled with the water,—the proportion of the former being sometimes so considerable, that it is difficult to say, on examining the dead body, or puncturing it for the first time, whether it be abscess, or dropsy. In some cases, there are fatty masses, and a considerable quantity of hairs, sometimes of great length, in the serum of the dropsied ovarium: this, however, is evidently a complication; a steatomatous cyst has been confounded with one of a serous kind, or has afterwards become the seat of dropsy.

Is the original seat of the disease, in simple cases, a cyst, newly formed in the ovarium[3]? Or, is it one of the ovarian vesicles of Degraaf, gradually enlarged by the accumulation of serum in its interior? This latter opinion is supported by the invariable presence of these vesicles, and by the different appearance of the fluid which they may contain in mor

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cyst two lines in thickness and incompletely divided. (*Archives de méd.* tome iv, page 257.)

[1] *Atlas*, pl. XXXVIII, *a*.

[2] *Ratio méd.* tome ii, p. 239.

[3] Delpech, *Chirurgie clinique*, tome ii, p. 214. He thinks that this formation depends almost invariably upon a cancerous state. M. Cruveilhier refers a case of a multilocular cyst to areolar cancer.

bid cases, as yet of short continuance[1]. Logger[2] observes that, when the ovarium is subjected to the boiling temperature, there are vesicles, the fluid of which, unlike that of the others, is incoagulable; it remains, in fact, aqueous, becoming only a little turbid, like that of the hydatid vesicles attached to the ovarium by a pedicle. These may be considered as the vesicles of Degraaf, already diseased and irritated by insufficient impregnation; just as these hydatid vesicles, when pediculated, have been regarded as ovula imperfectly detached from the ovarium, by excitement of the uterine organs[3]. If the former of these opinions appear probable, the latter is without support, when we consider the process of conception in the mammalia. It is sufficient to observe that these hydatiform vesicles are sometimes found in other parts besides the ovarium,—as, the uterus, the broad ligament, and the pavilion of the Fallopian tube: it may, however, be concluded, when their pedicle is short and thick, or when there is none at all, that these cysts, projecting from the surface of the ovarium[4], were, at first, contained in its interior. With respect to the serous vesicles contained in the ovarium itself, it may be maintained that these are incipient cysts, produced by a morbid process, and that, in cases of multilocular dropsy of the ovarium, the number of the cysts far exceeds that of the vesicles naturally existing in the healthy ovarium. Both of these theories, therefore, present some probability, but they afford no direct evidence to determine the mode of treatment, or the *etiology* of the disease. Dropsy of the ovarium only occurs in the middle age, when the generative organs are in full activity; it is more frequent in married persons, though it is sometimes seen in the single, and even in the young, as we

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[1] See the *Atlas*, pl. XXXVII, fig. 1, 5, 6, 7.

[2] *Specimen de Ovariorum morbis*, p. 5. This remark appears to have been taken from Degraaf, *De Mul. organis*, p. 160.

[3] Seymour, *on Diseases of the Ovaria*, pp. 43, 44, 45. This is to a certain degree the opinion of Cruveilhier and others. Seymour remarks that similar changes take place in the ovarian vesicles of domestic birds,—an analogical argument of considerable value.

[4] See the *Atlas*, pl. XIII, fig 3; pl. VIII; pl. XXXVII, fig. 1.

ourselves have observed; lastly, it may have been occasioned by a shock or compression, though it is generally independent of external violence or any assignable cause whatever. The exciting causes of this and other diseases of the ovaria are often concealed by the patient.

The *symptoms* of this affection will be distinctly comprehended in the following comparative diagnosis. *Pregnancy*, natural or extra-uterine, may be confounded with dropsy of the ovarium, and great uncertainty may arise from the complication of these two affections. This complication has sometimes occurred (*Mercklin*); it has even been attended with fatal consequences before confinement[1], or during delivery, if the tumor descend into the pelvis during pregnancy. This complication is very interesting in a pathological point of view, with reference to the diagnosis and treatment. It is well known, what perplexities arise from the coincidence of two tumors, when the one presents the appearances of the gravid uterus, so that an inattentive examination might induce the belief that it was merely a case of ordinary pregnancy, or of twins, in consequence of the bilobular form of the abdomen; or that it was only a multilocular dropsy; or extra-uterine pregnancy. This last conclusion might particularly be adopted by the most skilful, if an ovarian cyst had descended into the pelvis, as we have already shewn to be frequently the case; it is often impossible, in such circumstances, to reach the cervix uteri with the finger; and the clearest diagnostic would be the absence of every part peculiar to the fœtus in the tumor felt by the vagina and rectum, whilst its movements, the pulsations of the heart, &c. might be perceived in the abdomen.

Even in simple and uncomplicated cases of ovarian dropsy, there may be much uncertainty and erroneous opinion. In the case of a young woman of strong constitution, the abdomen gradually enlarged; the patient felt irregular pulsations and frequent borborygmi, which, being recently married, she mistook for signs of pregnancy. At the supposed full period,

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[1] *Ancien Journ. de Méd.* tome xxxvi, p. 48.

there were pains in the abdomen, which however soon ceased. The volume of the abdomen had diminished considerably; some dull pains, which returned several years afterwards in the left iliac region, were removed by leeches; the catamenia were suppressed, and returned in abundance on the following month; from that period, however, the discharge was very slight; shortly after the first suppression, the abdomen began to enlarge and progressively projected; vomitings ensued; in three months and a half after the suppression, there were movements in the abdomen, slight at first, then more violent, producing a sensation of sliding, and afterwards of rolling; these movements varied in their seat, intensity, continuance, and periods of return; they were felt to be more violent after blood-letting at the arm, which was performed three times, in consequence of plethora; the blood was buffed. The appetite became more keen, and relief was experienced by the forward inclination of the abdomen; this part was not tender, or resonant on percussion; there was numbness in the right thigh, and the feet swelled a little at night; there was no fever, suffering, or any inconvenience, excepting lowness of spirits, and a nervous and apparently hysterical cough. The patient considered herself to be in the sixth month of pregnancy.

The following reasons induced me to adopt a different opinion:

1. The catamenia had re-appeared once completely, and returned at each of the other periods in drops, since the first suppression: the enlargement of the abdomen took place entirely, at first, at the umbilicus; there had been subsequently a subsiding, which is generally observed only in the last months of pregnancy. The movements in the abdomen were accompanied with depressions and not with projections; they took place by contraction, and not by expansion; by broad, and not narrow, surfaces; there was on some few occasions a slight shock, preceded and announced by a peculiar sensation, suspended by mental effort, and brought on, exclusively, by continually supporting the hypogastrium with the hands. These symptoms appeared to denote spasms in the intestines,

though there were no borborygmi at the time, and though these latter frequently occurred without these movements[1].

2. The abdomen, though pendulous, was tumid at the epigastrium; it was broad, and distended from side to side; the umbilicus was sunk inward, the fluctuation exceedingly limited, and almost imperceptible; there were hardnesses towards the lower part, though they were not well circumscribed; the whole mass was moved by somewhat forcible percussions; gurglings were heard in different parts, but no fœtal, or placental, pulsations.

3. Lastly, an examination per vaginam enabled me to ascertain that the cervix uteri was low down, small, thin, very little open, with a transverse, narrow, and regular cleft. It was indistinctly felt, and was apparently not tumefied; the entire uterus was moveable, light, and incompressible at the hypogastrium.

Six years have now passed, and the abdomen is still voluminous; the patient is much emaciated and very weak; there is but little suffering, however, in the abdomen (D).

Although this case presents no distinct signs of simple dropsy of the ovarium, and although doubtless there had been numerous cysts, and probably some other disease of one of the ovaria, perhaps of the left, we have thought it right to give all the details; for, although the catamenia are not invariably suppressed in this kind of dropsy[2], as has been too confidently asserted[3], yet they are frequently so; sometimes the mammæ also are enlarged and become tender,—especially, as it is said, that which corresponds to the diseased ovarium; besides, the tumor is frequently formed at first in the hypo-

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[1] Similar movements have been observed in dropsy, and in steatoma of the ovarium; they have been mistaken for pregnancy. Baldinger quoted by Logger, page 51.

[2] According to Logger, they only fail when the disease has made considerable progress.

[3] According to Seymour (p. 49), the catamenia invariably fail when both the ovaria are diseased; when one only is affected, the catamenia are at least irregular, and sometimes absent.

gastrium,—indeed, it must be admitted chiefly on one side; it often draws up the uterus during the progress of its enlargement, though sometimes it pushes it outwards and causes its prolapsus, or even induces atrophy of that organ by continued pressure[1]. The fluctuation is generally distinct, though sometimes dull and obscure, as in pregnancy, owing to the thickness of the parietes of the sac, to the septa which divide it, and to the want of connection of its parietes with those of the abdomen, with which they are not always in close contact.

This last characteristic may serve especially to distinguish the cases in which *ascites* and encysted dropsy co-exist: a space is then perceived between the abdominal parietes and a tumor unattached within the cavity of the peritonæum; this space is fluctuating, filled with water, constituting a layer of variable thickness in different points, and even in the same point, according to the attitude of the patient; a brisk pressure of the hand upon the abdomen easily removes the water and strikes against the cyst, the resistance of which is always perceptible. In this manner an important decision may be obtained in reference to the treatment; for it is of great consequence, in this point of view, to know whether the case be simple dropsy of the ovarium or simple ascites: a mistake may indeed easily occur, unless the most careful examination be made. The age of the person may aid the diagnosis in this case,—childhood and advanced age being never liable to encysted dropsy. This disease is accompanied, more frequently than ascites, with symptoms of general or local excitement, and even of inflammation; and it much less frequently presents those characters of languor and of atony, that excessive paleness and anasarca, or, at least, that œdema of the legs, which are always observed in peritonæal dropsy. In dropsy of the ovarium there is, at the most, infiltration on one side only, attended generally with numbness, in consequence of the pressure of the cyst upon the crural vessels and nerves. The urine is rarely dimi-

[1] See the *Atlas*, pl. XXXIX, and a *Mémoire sur l'une des causes de l'avortement*, par Madame Boivin, p. 123.

nished, unless the enlarged sac compress the kidneys and ureters, as was evidently the case in the patient of Portal[1], the urine flowing freely as soon as the sac was punctured. In other cases this discharge has continued to be regular, although the dropsy was very considerable (*Morand*, from *Duret*); in many persons the expulsion of the urine appears, on the contrary, to be more abundant than usual, though it is, in reality, only more frequent, owing to the uneasiness of the bladder from the compression of the cyst,—a state of things which might proceed even to incontinence of urine. Not only is the fluctuation generally more indistinct in ovarian dropsy, but the form of the abdomen is often irregular, at least in the beginning,—either because the cysts, though globular, are multiplex[2]; or, because the single cyst is detached from the other viscera, and situated first on one side, —generally, it is said, on the left. Whatever may be its origin, M. Cruveilhier observes that it is very soon situated upon the median line. This cyst occupies, at least in its first period, the lower part of the abdomen, and the patient is aware that the tumor was at first circumscribed, and appeared to rise from the pelvis, without the simultaneous increase of the abdomen in all its dimensions. In this ascent the tumor has raised the uterus, dragged by the ligament of the ovarium, whilst, in ascites, it is often low down, and the fluctuation may be sometimes felt (but not a rounded tumor) at the upper part of the vagina: we have already observed that there are exceptions to this remark, of which we have recorded several in another work[3]. We shall conclude this comparison by remarking, from MM. Rostan and Cruveilhier, that the floating intestines, in the supine position, may impart, in ascites, a certain degree of resonance to the abdomen on percussion; this does not occur in dropsy of the

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[1] *Cours d'anatomie médicale*, t. v, p. 549.

[2] Abdomen bilobulated by the tumefaction of the two ovaria (*Burns*); irregular by the contraction of a single cyst (*Andral*).

[3] *Mém. sur l'Avortement*, par Madame Boivin, p. 114, 133, etc.

ovarium, in which the cyst is always situated in front of the abdominal viscera, unconnected with the omentum, which sometimes covers it.

Lastly, the tumefaction of the abdomen and its indistinct fluctuation, the slowness of its enlargement, the deranged digestion, which are also not unfrequent in dropsy of the ovarium, may lead to erroneous conjectures in the cases of *chronic peritonitis;* but the resonance of the abdomen on percussion in many points, its tenderness, the projections which it contains, parallel to portions of adherent intestines, are diagnostic signs which do not belong to dropsy, in which they can only occur, and that partially, when this is complicated with adhesion and chronic inflammation, especially at its peripheral surface. If the pains, for instance, have often occurred at the beginning, and even later, they are usually seated in the part originally occupied by the diseased ovarium,—that is, in one of the iliac fossæ. Symptoms of hysteria* have sometimes assisted the diagnosis of the ovarium *(Baader, Delpech, Hans Sloane, Pulteney).*

The *prognosis* of this disease is considerably modified by the complications. Cancer, complicating distended ovarium, hastens the fatal result; ascites also considerably exasperates the state of the patient; though it might perhaps be more just to say that this is only the manifestation of a state of general cachexia. The same may be said of universal anasarca and hydrothorax[1]. With regard to inflammation of the cyst and the adjacent organs,—this depends more immediately on the ovarian dropsy itself, and may simply depend upon the mechanical effect of the distension occasioned by the presence of the fluid; it often proceeds from the repeated punctures necessarily made for the purpose of evacuating this fluid, in order to relieve the patient from the sufferings of great distension, from the suffocation arising from pressure on the diaphragm, and from the vomitings or dyspepsia brought on

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* Diseases of the ovarium must be distinguished from the intestines distended with flatus, and from obesity.—Tr.

[1] Dehaën, t. ii, p. 76 and 239.

by compression of the stomach: this is an inevitable consequence in many cases; and it explains the fact, that few persons have survived, with this kind of dropsy, to an advanced age, although there are some such cases on record[1]. This distension, without being extreme, may occasion derangements of a more immediate nature, when the cyst is very unequal with regard to the thickness of its parietes, or when some point of its extent is inflamed, ulcerated, or gangrened: the cyst is, in such cases, ruptured, and sometimes the fluid is effused into the abdomen, sometimes it flows into the cavity of an adjoining viscus, perforated simultaneously with itself, —as the intestine[2] or vagina[3],—or it even escapes, externally, by ulceration of the skin[4]. The effusion into the abdomen generally occasions fatal peritonitis[5]: it is still possible that it

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[1] Even to the 88th year; Morand, from Tacheron.

[2] Evacuation, by the rectum, of gelatinous fluid; cure. Denman, *Med. and Phys. Journal*, vol. ii, p. 20. We very recently examined the body of a person who died of disease of the brain, and who had been treated a long time for *chronic enteritis*. The left ovarium, as large as the fœtal head, was situated between the uterus and the rectum; it adhered to both of these viscera, and had caused anteflexion of the former: the latter was perforated, at the point of adhesion, by a small opening, through which the fæces had passed, and filled the ovarian sac, the fluid of which had been long before evacuated. This sac was smooth, and rose-coloured; its parietes were from one to two lines in thickness; it also adhered, without any opening, to a portion of the colon. The flexed uterus was red and soft. (B)

[3] Monro, *Essais d'Edimbourg*, t. vi, p. 397; relapse and death. Madame Boivin, *Recherches sur l'avortement*, p. 103; cure. *Ibidem*, p. 131; relapse.

[4] By the groin; Monro, *Essais d'Edimbourg*, t. vi, p. 409; cure. By the umbilicus: Seymour, *Illustrations, etc.*, pp. 52, 53, from Mead and Locock: cure in the former case; slight relief in the latter.

[5] See page 62. Seymour, p. 54, gives three cases of this kind. M. Dance has published a similar one (*Archives de Méd.* t. xxi, p. 214). Delpech (*Chirurgie clinique*) punctured the abdomen after a similar rupture, and drew off sixty pints of fluid from the peritonæum; he was, however, obliged to repeat the puncture several times, and the patient became rapidly exhausted. In another case, witnessed by the same surgeon, the rupture took place at two different times, and the disease became more supportable. Madame Boivin (*Mém. sur l'avortement*, p. 121) records a case of nearly the same kind. Death ensued at a later period, and after several punctures. Smith's patient, of which we shall treat further on (extirpation), had twice perceived the bursting of the cyst in the abdomen, without experiencing either any serious result, or a cure.

may be absorbed, and a cure effected[1]. This cure will be more easy still, when the fluid escapes externally. This is, indeed, almost the only mode of spontaneous cure, of which this disease is susceptible: sudorifics or diuretics have rarely succeeded; spontaneous salivation appeared, in one case, to check the disease for a time[2]; copious and serous vomitings have, in one instance, also effected a cure[3].

Treatment. The inefficacy of evacuants, acting upon the bowels, kidneys, the digestive or urinary organs, and skin, is generally admitted. With respect to the cures said to be effected by salt-water baths[4], by percussion, and compression of the abdomen[5], and other empirical methods,—they cannot be depended on. Previously, however, to the adoption of surgical operations, a less hazardous treatment should be applied: this will consist in active sudorifics, as guaiacum and vapour baths; hydragogue purgatives, as croton oil, and 'cahinça;' diuretics, as squills and nitre; vegetable acids, &c.; abstinence, mercurial frictions, preparations of gold or of iodine, sea-water baths, thermal waters; moxas and issues applied to the abdomen or loins; these means will be adapted to the particular constitution and symptoms. Although we cannot place much reliance in the efficacy of such treatment, it is recorded that dropsy of the ovarium has been temporarily cured by mercurial frictions (*Clarke*); diuretics have been followed by relief, in cases complicated with ascites, and once, perhaps, even by a cure, as recorded by Willis[6]. The cures, said to have been effected by iodine, are of too recent a date to be relied upon (*Seymour*): it has been observed,

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[1] Seymour, p. 55, from Blundell. The rupture had been occasioned by a fall.

[2] *Journal complém.* tome xxxiv, p. 292.

[3] It is calculated that ten pints of water were thus discharged in five or six days; Seymour, p. 93, from Perceval.

[4] *Revue médicale*, t. iv, 1828, p. 17. Dr. Laënnec of Nantes, the author, considers the case as one of cure of acephalocysts of the ovarium.

[5] Hamilton, quoted by Seymour, p. 122. He there combines the use of the muriate of lime, and says that he has succeeded in the majority of cases.

[6] Haller, *Disputationes morborum*, t. iv, p. 451.

though used internally, to bring on inflammation of the cyst: an abscess was formed, opening by the rectum and vagina; the patient recovered[1]. The same effects have been produced by the use of the *liquor potassæ*[2]. Preparations of this kind may evidently become very dangerous. Seymour accordingly interdicts the use of them when there are signs of acute inflammation in a large cyst; and very properly recommends blood-letting before proceeding to puncture: local bleeding is particularly advised.

When, however, the accumulation of the fluid has rendered the state of the patient insupportable, we must use the trochar. This operation must not, however, be undertaken hastily; we have heard of two cases, in which it was presently followed by death,—in the one, on the same day, from internal hæmorrhagy,—in the other, two days afterwards, from peritonitis. The cyst is, in fact, supplied with numerous and large vessels; it is often very thick, and, though fibrous, very susceptible of inflammation; which, as Delpech observes, is exceedingly apt to extend to the adjacent viscera, already affected by its contact: it is also observed that the matter evacuated by the operation, limpid and thin at first, becomes gradually more turbid and puriform. Even without inflammation, the patients often die in a very few days after the puncture, of gradually increasing debility; this has happened even when the abdomen had been scarcely diminished in size, owing to the matter being too viscous to flow, or being contained in small, numerous, and separate cysts, two or three only having been evacuated, even on piercing into a second, after emptying a first. Another reason for postponing the puncture as long as possible is, the rapid re-accumulation of the fluid, after evacuation; there is frequently only relief for some weeks, or even days, especially when the patient has already undergone numerous punctures. Some practitioners have, therefore, shewn great objection to this operation[3]. Others, on the contrary, have repeatedly

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[1] Seymour, p. 116. [2] Seymour, p. 119, from Warren.

[3] Delpech, Denman, Burns, etc.

asserted its safety[1]: several have even considered it as a means of decisive cure, either by availing themselves of it to inflame the cyst rapidly by injections, as in the cure of hydrocele[2]; or by transforming the wound, by the permanent insertion of a probe or wick, into a fistula, so as to inflame the parietes of the sac, but slowly, when reduced to small dimensions. This method has succeeded with Dehaën in a case in which pregnancy had begun to compress the evacuated sac[3]. Of three patients who were thus treated by Dr. Key, one recovered, the others died of inflammation and suppuration. In the first case, the serous matter was limpid; in the others it was brown and viscous[4]. Portal gives a case in which this operation was successful, after the second puncture.

It was doubtless to effect a continued discharge of fluid that some have proposed to puncture by the vagina. In one case the patient died a few days after the operation; the bladder had been pierced by the trochar[5]. This risk might be avoided by passing the instrument behind the cervix uteri.

The puncture by the abdomen ought to be made at that point of the cyst which is the most smooth and thin, and where the fluctuation is most evident; for, although this operation may have been safely performed at the thicker parts of the parietes, which yielded only blood *(Morand)*, fatal results have, in other cases, rapidly ensued. The puncture ought also to be made on the side corresponding to the diseased ovarium; by a different mode of proceeding, the uterus itself has been seriously and fatally wounded* (*Voisin*).

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[1] Cases of patients are recorded in which the puncture was performed 49 and even 80 times. From one, 2786 pints of fluid were thus discharged (*Ford*); from the other, 6831 pints (*Martineau*) in twenty-five years.

[2] In the case of Martini, of which we shall speak further on, injections produced neither good nor bad effects. In a case of Scudamore's (quoted by *Lizars*), in which injections of port wine were used, the patient died in a few weeks. Another died six days after the operation (*Denman*).

[3] *Ratio medendi*, t. ii, p. 255.

[4] Seymour, p. 103.

[5] *Bibl. méd.* t. xli, p. 231.

* There is the preparation of a uterus in the Museum of the College of Surgeons, in which, an encysted tumor having formed, the organ was twice tapped, under the impression that it was dropsy of the ovarium.—Tr.

The trochar may be insufficient, when the matter accumulated in the ovarium is of a gelatinous consistence, as in the case related by Delaporte[1]. This surgeon extracted, by an incision of from four to five inches in length, about sixty-seven pints of this viscid fluid; the patient died, however, in thirteen days afterwards, and it was then discovered that there were other cysts filled with the same matter, and that a portion had even passed into the abdomen by ulcerations of the principal cyst. Ledran made an incision, of four inches in length, into an ovarian cyst, which began to be inflamed after several punctures; suppuration followed, and the wound remained fistulous; an abscess, formed at the hypogastrium, induced the necessity of a fresh incision, and the patient, after living some years longer in tolerable health, died from scirrhus, with which the dropsy had been complicated. It was ascertained, on examination, that there were numerous and large scirrhi throughout the hypogastrium, the mesentery, &c. The cyst was wrinkled and contracted like a purse, beneath the fistula; it was not, however, entirely obliterated. The same surgeon was more successful in a second case, in which the incision,—followed, at first, by copious and fetid suppuration, and afterwards by suppuration less in quantity, though of two years' continuance, through a fistulous orifice,—eventually induced a complete cicatrisation and cure[2]. There is a case published by Dr. Houston[3], much like that of Delaporte, in reference to the consistence of the matter and mode of operation; the patient was, however, in this instance, cured; on the other hand, Osiander records a case in which the incision remained fistulous for a year, and the patient died of chronic peritonitis. Numerous vesicles, filled with a gelatinous substance, were found in the ovaria.

Although we may, therefore, in some cases, expect a cure by a continued discharge of the fluid through a large incision,

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[1] *Mém. de l'Ac. de Chir.* t. ii, p. 452.

[2] *Mém. de l'Ac. de Chir.* t. ii, p. 431 and 442.

[3] Monro, *Essai sur l'hydropisie*, p. 225, note.

it would be rash to open every cyst which appears in a state of suppuration, as recommended by Morand. It is, indeed, very evident, from the first case of Ledran, and from the testimony of common sense, that neither puncture, followed by the permanent use of the canula, nor incision, can lead to any good effect, when the dropsy is complicated with any serious disease,—as scirrhus: the same may be said of multilocular dropsy; and hence it is, that several practitioners have suggested the *extirpation* of the entire organ. This has been recommended, first[1] by Vanderhaar, and afterwards by Delaporte, Morand, Siebold, and Logger. Dehaën[2] discusses its advantages and disadvantages, and gives the preponderance to the latter[3]. Morgagni[4], Sabatier[5], and M. Murat (*l. c.*) agree in their disapproval of it. Nevertheless, the case inserted by Laumonier, in the 'Mémoires de la Société royale de médecine'[6], relative to the successful extirpation of the indurated and suppurated ovarium, has encouraged some surgeons to attempt this operation in other circumstances. Dr. Smith, of Connecticut, removed, about the year 1822, an ovarian cyst, which had contained eight pints of brown, viscous fluid, previously evacuated by puncture; the incision was only three inches in length; the slight adhesions of the cyst with the omentum and abdominal parietes were destroyed; some arteries were tied; and the patient rapidly recovered[7]. The tumor was pediculated,—a circumstance which renders the operation more easy and less dangerous, and which exists, according to Mr. Lizars[8], in most cases; he has no hesitation in recommending this treatment generally, either in dropsy or disease of the ovarium. This surgeon first records three facts com-

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[1] See Logger, p. 76. [2] *Rat. med.* t. ii, p. 88.

[3] Diemerbroeck, who also speaks of the danger of this operation, appears to allude only to the removal of undiseased ovaria,—to female castration. *Anatomie*, p. 136.

[4] Epist. xxxviii, art. 70.

[5] *Méd. opérat.* nouv. édit. tome ii, p. 503. [6] Année 1782, p. 296.

[7] *London Med. and Phys. Journal*, Oct. and Nov. 1822. See also, for this case, and some following ones, the Memoir of Madame Boivin on Abortion.

[8] *Observ. on the extraction of the diseased ovaria*, Edinb. 1825.

municated by Dr. Mc Dowal of Kentucky, dating from 1809 to 1816, in which the ovarium, partly scirrhous and partly distended by viscous matter, though always of considerable volume, had been removed through an extensive incision of the abdominal parietes. All the three patients recovered. Mr. Lizars has four times undertaken a similar operation, by making a long incision, either from the cartilages of the ribs to the crista ilii, or from the ensiform cartilage to the pubes. On one occasion a multilocular tumor was thus removed, and the patient recovered; but the other ovarium, already tumefied, was left to be removed afterwards: the pedicle of the tumor had been tied previously to its removal. In another case, numerous adhesions were slowly and with difficulty destroyed, and the patient died of peritonitis fifty-four hours after the operation. In a third case, after having opened the abdomen, the operator dared not attempt the extirpation, in consequence of the numerous and large vessels which would otherwise have been injured; the patient nevertheless recovered of this enormous wound. A similar incision was made in a fourth case, of mere obesity, in which, after all, there was no disease. Since this time, Dr. Granville[1] was obliged, after having made an incision of six inches, to leave the operation unfinished, in consequence of the numerous adhesions of the ovarian tumor: the wound cicatrised soon afterwards. More recently still, Dieffenbach was also compelled to relinquish the extirpation of a scirrhous ovarium, in which the external incision had been made, and the wound in this case also cicatrised[2]. If these facts prove that the abdomen may indeed sometimes be opened without the danger usually apprehended from such an operation, they do not prove that it is a safe operation; and they shew, moreover, that it may be often performed without advantage to the patient, owing to error in the diagnosis, or to the numerous adhesions and large vessels preventing the completion of this frightful undertaking. The following case, related with perfect simplicity by Dr. Martini, of Lubeck, further shews

[1] *Archives de méd.* t. xiv, p. 589. [2] *Archives de méd.* t. xx, p. 92.

the necessity of circumspection in such circumstances: in a case of dropsy, which had been already treated with puncture, the continued use of the canula, injection, and seton, without inducing adhesive inflammation at the interior of the sac, extirpation was at length attempted; the exterior adhesions, however, of the cyst, were so numerous, that only a portion of it could be removed; some suspected tumors arising from the scirrhous state of the ovarium were also left behind; the patient died fifty-six hours after the operation[1]. In two cases the operation was also fatal, death following on the third day, although the extirpation had been accomplished by Dr. Chrysmer[2]. On one occasion, however, this surgeon was more successful: he removed a cancerous ovarium; the patient recovered, and has since borne a child.

There are then fifteen cases of this operation, of which six have been attended with, at least, temporary success,—five, with neither good, nor bad, results,—and four, with death: in five cases, the operation could not be completed. Extirpation will therefore be indicated only when the diagnosis is distinct, when the mobility and recent date of the tumor preclude the probability of adhesions, and when the absence of hardness, after examination by puncture, removes all fear of serious complication. Even then we should hesitate: but, if we do decide upon the operation, the incision should be as small as possible, the sac evacuated by puncture, and drawn out in its empty state.

CASES.

1. *Incipient dropsy of the ovarium, with a cyst containing hairs*[3].

The subject of this case had passed her fortieth year, and had died of puerperal peritonitis, accompanied with pleurisy.

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[1] See *Journal hebdomadaire de médecine*, 1829, t. ii, p. 246.

[2] *Archives*, t. xx.

[3] Case by M. Dugès.

The symptoms had been violent, and their progress rapid. On post-mortem examination, the two lungs were gorged with the bloody serum, which was also found in the two pleuræ and in the pericardium. All the abdominal viscera were covered with puriform matter. The great curvature of the stomach was red without and within. Neither the uterus nor its appendages appeared to have been inflamed; there was a small fibrous tumor on the anterior surface of the former organ. In the right ovarium there was a vesicle of irregular form, as large as the extremity of the thumb, and filled with colourless serum. This ovarium, rather more voluminous than usual, contained another cyst, the parietes of which were hardly distinguishable from the proper substance of the viscus. It enclosed a mass of black, thick hairs, of several inches in length, mingled with a small quantity of yellowish, fatty matter, twisted together and adhering to the cyst,—some, by a bulb at the extremity, others by the middle of their length and without a bulb. There was also, near the cyst, an irregular, hard, compact, osseous portion, resembling a small, narrow incisor tooth, without a root, but with a very thick crown.

We have several times observed cysts of this kind, containing much more fatty matter, and sometimes nothing else than fat, which readily melted in warm water. M. Julia Fontanelle has analysed this substance, and found it to consist of real fat combined with a little animal matter[1].

2. *Dropsy of the ovarium; puncture; death; examination*[2].

Mademoiselle Guyard, sixty-three years of age, had been affected for four years with a tumor of the ovarium, which had gradually increased so as to occupy the whole of the abdominal cavity, and to render walking and breathing extremely difficult. The operation of puncture was performed, and the patient died two days afterwards.

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[1] *Archives*, tome iv, p. 257.

[2] Case by Madame Boivin.

On examination, we found a soft, whitish sac, occupying the lower regions of the abdomen; this was the cyst of the left ovarium, which had deviated to the right of the part where the puncture had been made; it was a foot in diameter, and nearly globular. Almost entirely isolated, it was attached at its base only by its ligament and the portion of the peritonæum which naturally surrounds it.

This cyst, a line in thickness, was of a pale rose-colour at its peritonæal surface, where there was a very hard tubercle; its internal surface presented numerous ramifications of vessels with several tubercles. The other ovarium was scirrhous, and knotted at its surface.

The uterus was four inches in length; it contained, at its anterior paries, a fibrous tumor, of the size of an orange, adhering by a very relaxed, laminated tissue, easy to be detached. The os uteri was occupied by four transparent vesicles, as large as peas. The vagina was unaffected; a slight cicatrix was observed in the hymen.

For other cases of dropsy of the ovarium, see Madame Boivin's *Recherches sur une des causes*, etc. *de l'avortement.*

CHAPTER IV.

OF ORGANIC DISEASES OF THE OVARIUM.

SEVERAL of these diseases having been already described, we may confine our present observations more particularly to those which are the most common and the most important. With respect to fibrous changes or productions, we would remark that tumors of this kind are sometimes found attached to the ovarium as well as to the uterus, or formed in its

tissue, like globules[1],—that this name has sometimes been given to enormous enlargements of this organ, which might indeed be more properly considered as scirrhous, than as real fibrous, tumors,—a question the more difficult to decide, as the affection has been observed for the most part in the living, and not in the dead, subject. We are of opinion that the real fibrous tumors of the ovarium are of little volume, and, perhaps, the invariable source of cartilaginous and osseous changes of structure; in proof of which, it may be observed that the fibrous cysts often present osseous or cartilaginous laminæ, and that they may even consist entirely of these substances, as we have already shewn by some examples[2]:—those of extra-uterine pregnancies have sometimes presented a similar change; it is also frequently at the surface of the ovarium that we find those osseous or cartilaginous hardnesses, which are owing to alteration of its proper, sub-peritonæal membrane; it rarely happens that the entire substance partakes of that state of the ovarium which has been termed *calculous*[3], or cretaceous, though consisting, perhaps, only in hardened tubercles, or in simple deposits of phosphate of lime. We are compelled to view as scirrhus that tumor of fifty-six pounds' weight, and *of cartilaginous consistence*, which is mentioned in the 'procès-verbaux' of the 'Académie de Médecine'[4]. In the fact recorded by M. Dupuytren, the cartilaginous substance was blended with the fibrous[5].

We have just alluded to the *tuberculous substance* which

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[1] Andral, *Anat. pathol.* tome ii, p. 706.

[2] See, particularly, Kluiskens, *Ann. de litt. méd. étrang.* tome xi, p. 336.

[3] Saviard, *Obs. chir.* the tumor weighed six pounds; its substance resembled mortar. Schlencker *in Halleri disp. morborum*, tome iv, p. 419: this ovarium weighed three ounces. Logger, *l. c.* p. 13, and Seymour, *l. c.* p. 56, say that ossification is not rare, especially in old age. We are not speaking now of the dentiform productions found in steatomatous cysts.

[4] 13 janvier 1824, according to M. Caillot. This was probably the same case as that of which we shall treat hereafter, taken from Dr. Velter.

[5] *Bull. fac. méd.* Paris, 1806, no. 3.

is sometimes observed in the ovaria, in different states and various quantities, and of which a specimen is given in our Atlas (pl. XVI). There were also tubercles in the adjacent organs, which is indeed usually the case[1]; we may refer to pl. XXXIII (fig. 1, *d.*), and to pl. XXXVII (fig. 8), for *melanosis* of the ovaria,—or, at least, for change of the parenchymatous tissue or of the vesicles, with increased volume, and of a black, or deep brown, colour[2].

The most important of all the diseases of the ovarium is *cancer*, in consequence of the enormous volume which it sometimes acquires, the pains it occasions to the patient, and its serious consequences. There are several forms of cancer; but two in particular—the scirrhous, and the cerebriform—which are not however always easily distinguished even in the dead subject, and may indeed be frequently conjoined together, and with other forms of disease. In pl. XXXIX of the Atlas there is a figure of one of the ovaria considerably enlarged, the substance of which was lardaceous, though beset with small granulated cysts, and surrounded with vesicles of larger size and filled with fluid; whilst the other ovarium was of a cartilaginous consistence, resisting the scalpel and presenting numerous roughnesses. A tumor was seen by Dr. Velter[3], weighing fifty-six pounds, and of a consistence almost cartilaginous; in three parts, however, it was softened, and resembled the substance of the brain. The encephaloïd substance was more distinctly characterised in a case of enormous cancer, of seventy-five pounds' weight, which occupied the left ovarium; it contained, within, a fibrous, fleshy mass, and a fatty tissue[4]. These appearances might, however, be only different degrees of one and the same disease, proceeding with more or less rapidity. It is this encephaloïd

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[1] See also Seymour, p. 56. The patient was consumptive. Some tubercles have been found in the ovaria of a girl five years of age; they were adhering to the rectum, which was ulcerated at the point of adhesion. Tonnelé, *Journal hebdomadaire de médecine*, 1829, tome v, p. 149.

[2] See also Morgagni, *De sed. et caus. morb.* Ep. xxxi, art. 47; xxii, art. 22; xlv, 23; xlvii, 12, 28; xxi, 24, 29; xxxix, 37.

[3] *Acad. de méd.* 12 juillet 1825. [4] *Ibidem*, 24 Septembre 1829.

disease, which Hooper has termed *cephaloma*, when it is whitish,—and *hæmatoma*, when very vascular and saturated with blood. He says he has seen this latter form three times, and the former once. This is the same as that which Dr. Seymour has denominated malignant, or fungoïd, tumor of the ovarium. It is, doubtless, to a kind of fungus or cancerous *cauliflower excrescence* of the ovaria that we must refer that remarkable disease which was observed and figured by Prochaska[1]. The two ovaria were changed into a mass, infinitely ramified, and granulous at its surface. The patient died of ascites.

Etiology. The cause of these diseases is generally obscure, uncertain, and unassignable; and, if it be reasonable to suppose that they frequently follow after chronic inflammation, we must often be contented with the mere supposition, though we think it would be unreasonable to say, with some writers[2], that this is never the case. We have at present a case under our care, in which cancer appeared after prolonged attacks of intermittent fever,—attributable, at first, to chill from sleeping on the ground in the open air. Dr. Velter has described an enormous tumor, which was probably occasioned by a blow; it is likely, however, that the patient was affected with incipient cancer, or predisposed to it. If it be true that tubercle is only concrete suppuration, it is still necessary, to produce this, that the patient should be of the scrofulous diathesis. Melanosis may fairly be attributed to the deposit of the colouring matter of the blood; but it is not certain that this deposit takes place in consequence of mere chronic inflammation, however probable this may appear from the black, or slate, colour observed in mucous membranes chronically inflamed.

All that has been directly ascertained, is, that cancer of the ovarium is more common even than that of the mammæ, and as much so as that of the uterus. This affection is said to be particularly observed in single persons, and we have indeed observed this ourselves; we have not, however, found it, according to the general assertion, most common in persons

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[1] *Disq organismi corp. hum.* tab. v. [2] Logger, p. 50.

who have passed the middle period of life, but rather during this period.

Diagnosis and Prognosis. If it were not for the hardness and compactness of the tumor, in cancer of the ovarium, we might confound it with every case of tumefaction of the abdomen, whether it appear in the upper part of that cavity, or occupy the pelvis; this firmness, however, as well as the lobes into which it is generally divided, sufficiently distinguishes it from dropsy of the ovarium, from extra-uterine, and from real, or false, pregnancies. The volume it is capable of acquiring ought also to be noted; for, according to the case of Morand, not one of the abdominal viscera is affected with scirrhus of such magnitude as this organ,—originally so small. Fibrous tumor of the uterus can only be mistaken for it in its beginning, when it is moveable, and situated in the hypogastrium; but there are no lancinating pains in this tumor, which is besides, generally, pediculated. The congested uterus rises to the middle of the hypogastrium; whereas the ovarium is felt, at first, in one of the sides. This is so peculiar a circumstance, as to have occasioned curious mistakes. We have met with a case of a young person, habitually constipated so as to occasion heat and pain in the large intestines; a physician declared that one of the ovaria was enlarged, in consequence of a tumor which was felt on examination; this tumor disappeared, and reappeared alternately, —events probably owing to fæcal masses accumulated in the cæcum[1], and then passed further down in the intestines, or evacuated. In another doubtful case, it appeared to us that there were inflammation and adhesions of the cæcum and right ovarium; the patient was subject to hysteria, to pains and hardness in the right iliac region, and alternations of diarrhœa and constipation; there was a frequent discharge of trichocephalous worms. The patient has since died (D). Cancer, as it increases, may occupy the mesial line, though

[1] M. Mélier apprises us, in a 'mémoire' on the diseases of the cœcal appendix, that the accumulation of fæces in the cæcum and large intestines is much more common than is supposed, especially in women,—and that the consequences occasioned by it are misunderstood and assigned to some other cause.

it attacks one side more generally than the other; and sometimes its prominent and elevated summit has been mistaken for congestion of the spleen. We are, at present, attending a person affected as we have already described, after intermittent fever, and presenting similar uncertainty. Dr. Seymour speaks of a mistake of this kind (p. 67). In order to avoid error, it is sufficient to trace the history of the disease, to trace the surface of the tumor to its lowest part, to examine per vaginam, &c.

We have already observed that it may be important to distinguish between scirrhus and encephalosis; the prognosis of the latter is, in fact, more serious than that of the former; now, it is partly in the realization of this prognosis that we establish the difference between these two diseases. Cerebriform cancer increases rapidly; according to Dr. Seymour, it sometimes becomes enormous in a few months: scirrhus, on the contrary, increases slowly, and may continue for many years without acquiring any considerable size. The former occasions much more suffering and lancinating pains, more tenderness, and fever, and brings on a much more rapid emaciation: scirrhus, on the other hand, may go on increasing for ten years, or more, without remarkable functional derangement, and only causing a mechanical obstruction proportionate to its weight and volume, or, at the most, some irregularities of the catamenia,—and even these not constantly. When cerebriform cancer proceeds to a fatal issue, it becomes lobulated, knotted, considerably tumefied, and softened in some points, occasioning severe pain, and extending itself to the neighbouring parts,—to the uterus, and even to the pudenda. In the case of which we lately treated (D), the patient was unmarried, more than forty years of age, and had been affected with disease for seven or eight years; the complaint, which had been stationary at intervals, at last redoubled its violence, and the abdomen became excessively tender, hard, and swollen, with unevennesses of large size. It was then that it was treated for disease of the spleen. A palliative treatment, which had hitherto been of much service, did not prevent the uterus and adjoining parts from participating in the disease; there were repeated hæmorrhagies,

and ichorous and fetid discharges, with numerous, large, red, granulated, and pediculated cauliflower growths, filling the vagina and springing even from the mucous surface of the pudenda; acute and continued pains for one, two, or three days, in different parts,—in the shoulders, the arms, the knees, the loins, the thorax, though more frequently in the *left thigh*, which was often benumbed: these were signs of cancerous diathesis, and the last of them more particularly indicated that the left ovarium had been the original seat of the disease, this being the side which suffered most. These are symptoms which never appear in real scirrhus; hysteria might be added to both these states; whereas the particular consequences of scirrhus are sometimes peritonitis, sometimes an abscess opening into the intestines, &c. without its being inflamed throughout, unless it pass into the cerebriform state; — and, still more frequently, an abundant exudation of serum in the peritonæum, with active dropsy, which may be diminished by local blood-letting, baths, diuretics, issues, &c. but which speedily return, and eventually bring on chronic peritonitis. In proof of this remark, we might quote the case related by Malaval, in the 'Mémoires de l'Académie de Chirurgie'[1]. The two ovaria were diseased; the one weighed twelve pounds, the other fifteen; the omentum, as well as the mesentery, presented traces of deep-seated disease,—doubtless, secondary to that of the ovaria. We lately attended, with M. Lallemand, a person affected with acute ascites, which was attributed to this cause alone, and had been treated with the most active means, without producing any determinate result; the patient experienced only transient pains in the iliac fossæ, and particularly at the right side, where the ovarium was, in the beginning, considerably enlarged. We might adduce another case, of which we have already treated in a different point of view (p. 14), the subject of which has lately died, after ascites and chronic peritonitis had supervened, with the symptoms of

[1] Tome ii, p. 450. See also Logger, p. 17.

scirrhus of the ovarium. Madame B——, small and thin, yet of general good health, had a return of the uterine discharge in her seventy-second year; this discharge was one day so abundant, as to induce syncope and extreme debility. I was consulted in December, 1831, and discovered, on examination, that the cause of the hæmorrhagies was not, properly speaking, in the uterus, but in its vicinity: between that organ and the bladder there was a very voluminous, hard, indolent tumor, which pushed the uterus backward, compressed, and irritated it: this was, doubtless, the cause of the hæmorrhagies. The uterus was rather tender, and its cervix widely open. The tumor could be felt, and its progress traced above, or rather behind, the pubes. Eighteen months afterwards, the patient complained of pains in the abdomen, dyspepsia, &c. On a second examination, I discovered that the tumor was no longer in the pelvis, but entirely in the abdomen, on a level with the umbilicus and near the right iliac fossa; it appeared to be at least as large as the fœtal head, and of a globular form. I considered these changes favourable, as the uterus was less irritated than before, and the hæmorrhagies were less frequent and in smaller quantities; but in other respects I was disappointed, for the tumor, which had so increased in volume and changed in form as to rise above the brim, caused uneasiness to the other abdominal viscera: the abdomen rapidly became more tender and tumefied, the legs swelled, the strength diminished, &c. Dr. Caisso observed there was ascites, produced by the scirrhous congestion of the right ovarium: I thought it yet possible to check the progress of the chronic peritonitis with which it was evidently complicated, as was proved by fever, thirst, and tenderness of the abdomen. The advanced age of the patient forbad the use of powerful antiphlogistics; we therefore prescribed the hip-bath, cataplasms, enemata, and a reduced diet. This treatment only arrested for a short time the fatal termination of the disease (D).

These details respecting the diagnosis and prognosis of the diseases of the ovarium already treated of will be sufficient. With regard to tubercles, it is perhaps rather in consequence of adhesions and other complications, than of the disease it-

self, that certain symptoms have been presented,—as pain in the sacrum, weakness and suffering in the legs[1], suppression of the catamenia, &c. And with respect to sterility, it can directly result only from complete change of structure of both ovaria: we have shewn, in treating of displacements of that organ, by the very obstacles which it presents to delivery, that pregnancy may co-exist with disease of one of the ovaria.

Treatment. It is said that scirrhus, if not cancer, may be cured by local blood-letting, issues, mercurial frictions, mineral baths; or even by the internal use of sulphurous or mercurial preparations, alkalies, arsenic, aconite, pulsatilla, hemlock, and belladonna[2]. By these means simple induration may indeed have been cured. In this latter point of view, these facts are undoubtedly very valuable; but they are only to be considered as belonging to the preventive treatment: to cure induration, is often to prevent scirrhus.

The treatment for confirmed cancer will principally consist in narcotics. The other kinds of disease require only care and attention adapted to their particular states; excision ought only to be performed in cases of extreme suffering. It has been proposed in certain stages of cancer: but it is evident that this operation ought not to be performed where there is a cancerous diathesis, or a predisposition to cancer manifested in other organs.

CASES.

1. *Ascites, occasioned by scirrhus of the ovarium**.*

2. *Melanosis of the ovaria.*

A young woman, seventeen years of age, was attacked,

[1] Dr. Seymour, page 56. See also, with this view, the case recorded, page 174, and the 'mémoire' of Madame Boivin on abortion, obs. 1 and 3.

[2] Logger, page 72.

* Omitted, as unsatisfactory.—Tr.

during the period of the catamenia, with typhoïd fever, of which she died on the fifth day.

The hymen nearly closed the vagina; the uterus was one third larger than in unmarried persons; its cervix was longer than the depth of the body of the organ; its tissue was pliant and elastic; its internal surface exuded, on compression, innumerable small drops of blood.

The right ovarium was much elongated, broad, white, smooth at its surface, and soft. At its unattached extremity, there was a brown tumor, of eight lines in diameter. The ovarian vessels on this side were much dilated. Beneath this tumor there was, interiorly, a cyst containing black, consistent matter, apparently a coagulum of venous blood. There were two small tumors of the same kind in the parenchyma of this organ, which was in a healthy state, and presented transparent vesicles, covered with extremely minute vessels. At the surface of the left ovarium there was a deep red tumor, furrowed by a recent cicatrix.

CHAPTER V.

OF INFLAMMATION OF THE OVARIUM.

UNDER this term we shall treat of acute, and chronic, inflammation, with their immediate effects, as suppuration, and induration. There are however some very indefinite states, of rare occurrence, and little understood, which are, in some respects, closely connected with inflammation. We have already observed that, at the period of the catamenia, and especially at puberty, the ovarium is the seat of turgescence, similar to that of the uterus, and observable after death; the ovarium is then gorged with fluids, and traversed with capillaries filled with blood, which also fills the arteries and

veins. This state of things has been also observed during pregnancy and labour, and in cases of hysteria and nymphomania; there are, doubtless, degrees intermediate between these congestions and the inflammatory state[1]; the same may be said of those excitements of the ovarium which sometimes lead to the formation of a *corpus luteum*. It is doubtless to similar causes that we may trace several of the diseases of which we have already treated, and others which are figured and explained in the Atlas (pl. XXXVII). Several of these, —as melanosis,— may be fairly attributed to exudation of blood into the tissue of the affected parts,—to a kind of unabsorbed, though organised, ecchymosis, identified with the texture of the organ. There are cases, however, in which more serious consequences result from these sanguineous congestions, which are then more rapid and violent, sustained by a hæmorrhagic effort, and, in short, resembling apoplexy, or other hæmorrhagy from the capillaries which constitute the substance itself of the organ. Thus, all the appearances of internal hæmorrhagy have been observed during labour, and the abdomen has presented an effusion of blood in the peritonæum, the varicose ovarium having rapidly discharged this liquid, in consequence of rupture[2]. In another case, there were violent colic pains, faintings, &c. independently of pregnancy, and irregularities of the catamenia, and the patient died in a very few hours. The abdomen contained nearly three pints of black blood; the left ovarium, as large as a hen's egg, appeared to be infiltrated with blood, and resembled the spleen of a person who had died of scorbutus[3].

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[1] In the case of a woman who died in the third month of pregnancy, of adynamic fever, the ovaria were rounded, as large as a full-sized nut, soft, of a pale livid colour, beset with reddish vesicles; on one of these there was a bright red cicatrix. In another case, a person, seventeen years of age, who died on the twenty-first day after delivery, presented, besides hepatisation of the lung and softening of the uterus, the right ovarium marked with several cicatrices, one of which was recent, red, and two lines in length. The left ovarium was filled with injected vesicles, as red as currants (B).

[2] *Pratique des Accouchements*, tome iii, p. 86.

[3] *Nouv. Bibl. méd.* tome iii, 1826, p. 113, according to Dr. Drecq. Two similar cases were observed by Dance in the puerperal state: in the one, the confinement was at the full term, but the delivery difficult; in the other, there was abortion in the fourth month.

A. *Acute inflammation of the ovarium.* It would be difficult to quote a single well-authenticated instance of acute inflammation of the ovarium, independently of pregnancy or parturition; it can hardly be said that the inflammation which sometimes follows after painful catamenia, is of the acute form; if, however, chronic inflammation is considered to have been sometimes acute in its beginning, this latter form will only be thought rare from its frequently being indistinct. When there are violent, sudden, and transient pains, preceding any chronic affection, accompanied by fever, &c., it is difficult to deny that there has been an acute form of the disease; and we may conclude, by induction, that if this state is seldom perceptible till it has reached a certain degree, it is owing to the little sensibility belonging to the healthy ovarium. There are, indeed, many circumstances in which acute inflammation of the ovarium could not be mistaken, on examining the dead subject, and in which the peculiar symptoms of this form have been almost imperceptible, or entirely disguised by metritis and peritonitis, with which the inflammation was complicated. This is frequently observed in the puerperal state. Puerperal inflammation of the ovarium is then, indeed, the only type from which any general considerations of the disease can be deduced.

The frequency with which this affection is complicated with metro-peritonitis in the puerperal state, varies considerably in the different epidemics: of 686 cases of metro-peritonitis, which we witnessed in two years (1819–1820), 37 presented inflammation of the ovarium; there were doubtless many more of the same kind, and several escaped our detection, owing to the obscurity of the diagnosis; for, of this number, 35 were ascertained after death, and 2 only during life. In such cases, inflammation of the ovarium can only be suspected from the existence of pain extending towards the iliac fossæ, to the loins and femora, and from tenderness felt near these fossæ; and, perhaps, from rather more tumefaction and hardness in the iliac regions, than is found in simple metro-peritonitis. Perhaps this inflammation actually exists only in serious and almost hopeless cases; and it has, indeed, appeared to us to be frequently connected

with inflammation of the ovarian veins, with that of the lumbar, or iliac, cellular tissue, with the presence of pus in the uterine veins,—all circumstances of serious moment, as we have already stated. A complication, perhaps even more common, and sometimes, though very rarely, co-existing with metro-peritonitis, without inflamed ovaria, is inflammation of the Fallopian tubes, of which we shall treat shortly. With regard to the ovarium itself, the violence of the inflammation to which it is subject, appears, after death, by different lesions. In the first degree, it presents hardly any increase in volume, especially in length, and is rather softer than in the natural state; its substance is firm, red, and injected; numerous capillaries traverse it in every direction; the vesicles are larger than in the natural condition. In the second degree, there is enlargement to twice, or four times, its usual dimensions; a volume exceeding that of a hen's egg; a rounded or oval, flattened form; softness, friability, serous infiltration of a yellowish[1] colour; or a livid colour, with the same infiltration, sometimes with slight effusions of blood in numerous points. In the third degree, there is an infiltration of fluid or concrete pus, deposited in small quantities in this softened mass[2], which is then pale and yellowish. In the fourth degree, there is softening, with liquidity at the centre; sometimes even a solution of a part of the surface, or of the entire ovarium, the shreds of which are carried along with the pus and mingled in the peritonæal effusion[3]. Such are the changes which we have observed in these cases. We proceed to add one of the notes which we have compiled in reference to these last degrees of morbid

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[1] Cruveilhier, *Anatomie pathologique du corps humain*, Paris, 1832, fol. figures coloriées, treizième livraison, Pl. III, fig. 4.

[2] According to Dance, it would sometimes be deposited in the veins of the interior of the ovarium. It is to be feared that in this expression there is a little bias towards a preconceived opinion.

[3] See a case of this kind in Dr. Seymour's work, p. 40. M. Cruveilhier has observed the same thing several times. Probably we ought to refer to this kind of change, the pretended case of gangrene quoted by M. Murat (*Dict. Sc. Méd.* tome xxxix, p. 17), from Bautzmann.

appearances: there was a flaky effusion in the two pleuræ, a serous and puriform effusion in the abdomen, and albuminous layers over almost all the abdominal viscera; the uterus was enlarged; the left ovarium was swollen, pale and flabby, containing a puriform matter infiltrated into its tissue; the right ovarium was very broad, soft, and yellowish; at its posterior part it was, in a manner, dissolved, and presented, throughout, the appearance of a sac, open behind, with soft and filamentous parietes, covered with pus, and severed by a broad opening, with irregular, soft, thin, and flocculent borders (D). The two ovaria are frequently, as in this case, affected at the same time, though in different degrees. More rarely, they are affected singly. The presence of pus in the lymphatics and ovarian veins often coincides with inflammation of the ovarium, though we have observed it sometimes to exist separately. It has also been seen to co-exist with inflammation of the ovarium, which had not yet arrived at suppuration; there would be more reason for supposing, in these cases, that the lymphatics themselves[1] were inflamed, if there had not been pus at the same time in the uterine sinuses, as we ourselves have ascertained.

We have just seen that puerperal inflammation of the ovarium may, by itself, produce serious and fatal consequences, independently of the primary disease, which is frequently fatal, and of which it is, most generally, only a complication; we have seen abscesses, most strictly speaking, to succeed to it; but this rare occurrence[2] will be mentioned under the chronic form of this affection. With respect to the treatment to be adopted in the early stages of inflammation of the ovarium, it will be right to employ the evacuating and antiphlogistic means of local blood-letting and emollients.

B. *Chronic inflammation of the ovarium.* Chronic inflam-

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[1] This is the lymphangitis of M. Nonat. *Thèse de Paris*, 1832, no. 98.

[2] Professor Andral has ascertained the communication of one of these abscesses with the bladder, on a post-mortem examination of a person who died on the thirty-seventh day after delivery (*Anat. pathol.* t ii, p. 749).

mation,—though sometimes succeeding to the acute, as is proved by the pains and other symptoms which characterized its origin,—may also be produced and proceed insensibly, whether it originate in the ovarium itself, or appear to be only an extension of inflammation of the uterus. It is thus that it undoubtedly leads to the different diseases of which we have already treated: does not induration, for instance, which is frequently its immediate consequence, lead to scirrhus? and are not the limits which separate these two affections as indefinite in the ovarium as in every other organ? We shall not, therefore, dwell on this form of chronic inflammation of the ovarium, which may be considered to exist when the tumor is tender and painful, but not lancinating, and the seat of an occasional return of new symptoms of acute inflammation, either spontaneously or in consequence of a shock, &c.[1]

Induration may, moreover, during one of these returns, lead, as well as inflammation primarily acute, to suppuration, and to abscess. In the ovarium which was extirpated by Laumonier, there was found, notwithstanding its hardness, an excavation full of pus.

Abscess is sometimes, indeed, only the result of inflammation induced in a steatomatous cyst[2], or in dropsy of the ovarium; there are cases in which these two diseases constitute but one mixed affection, whatever may have been its original character; in consequence of the inflamed dropsical cyst being thickened, and its contents being almost entirely changed into pus; or from a real abscess having gradually increased, and transformed the ovarium into a cyst. Hence, the symptoms of the two affections are very similar, and their terminations often the same. There are, in both, tumor in the hypogastrium, the iliac fossæ, or the pelvis; pain and tenderness in the same regions; and occasional

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[1] The indurated and enlarged ovarium may remain indolent for many years: Dr. Seymour quotes a case in which it was as large as an orange: is it, however, certain that it was a case of induration, and not of fibrous tumor or scirrhus? p. 41.

[2] *Mém. sur l'avortement*, par Madame Boivin, obs. v.

returns, with shiverings and fever: in dropsy,—there is a more evident and uniform fluctuation, more considerable volume[1], higher ascent into the abdomen, pain and tenderness only at a late period: in inflammation of the ovarium, there are partial fluctuation, hardness in several parts, pain and tenderness at the first moments of turgidity, seated in the pelvis or at its circumference. These constitute almost all their distinctive characters. These abscesses, like suppurated dropsy of the ovarium, may find an issue by different ways: like the abscesses of acute inflammation of that organ, they sometimes open into the abdomen, and occasion rapidly fatal peritonitis[2]; this termination is, however, by no means the most common; the most usual is, adhesion of the ovarium to the rectum, and the discharge of the deposit into the latter intestine, which conveys the pus externally. It has been proved that a cure is possible in such circumstances, and we here subjoin two cases of this kind,—the one from the 'Mémoire sur une des causes de l'avortement,' published by one of us (B); the other taken from M. Nauche[3]. At this very moment, one of the authors of this work (D) has the charge of a case which will furnish some interesting details. The patient is about fifty years of age, of full habit, and has always enjoyed good health. For the last eight years the catamenia, which had been previously abundant, and had returned latterly even twice in the month, have entirely ceased,—and have been succeeded, for four or five years, by

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[1] One of the largest abscesses on record, is that which M. Andral has quoted from the American journals; the ovarium contained twenty pints of pus. Portal speaks of suppurated ovaria as large as an infant's head. There is a figure in our Atlas, pl. XXXIV, G, of an encysted abscess, which appears to have been secondary to a kind of dropsy of the ovarium. The same may undoubtedly be said of the case recorded by Vater (Haller, *Disp. méd.* t. iv, p. 401), in which the ovarium was as large as the human head, and contained pus distributed into several capsules. We ought also to refer to suppurated dropsies, those accumulations of twenty (*Callisen*), thirty-six, and thirty-nine pints, quoted by Logger, p. 11 and 12.

[2] Dr. Seymour, p. 40, See also chap. III.

[3] *Maladies de l'Utérus*, p. 270. Another case has been given, besides, in his *Traité de maladies propres aux femmes*, p. 373.

regular returns of lacteous leucorrhœa. It is now three years since her feet slipped, in descending a staircase, and she fell down two steps: the consequences were a violent shock in the abdomen, and an uncomfortable sensation, for two or three days, in the pelvis. Two years and a half after this accident, there were fever and violent pains in the right iliac region, extending to the umbilicus, and depriving the patient of sleep and rest; relief was obtained by pressing on the painful region, and bending the body forwards. These pains were diminished by soothing and emollient remedies, with local blood-letting; but they continued, for a long time, in a milder form; sometimes indeed they recurred, though with less intensity than at first. The patient remarked, at these several times, that the right leg was benumbed, swollen, and bluish, and that the veins were distended; these signs disappeared, however, on the succeeding day. It was soon discovered that the seat of the pains was a hard tumor, situated in the lower part of the abdomen, and projecting especially towards the umbilical region. There was presently a discharge, by the anus, of blood mingled with the fæces, sometimes of coagula, then of puriform and sanguineous matters. The case was then suspected to be carcinoma, or chronic inflammation of the cæcum and colon.

The tumor afterwards descended, and was only to be felt in the hypogastrium; there was also a sense of weight in the rectum, with difficulty in defæcation; the fæces, flattened, or grumous and hard, were expelled with great difficulty, which was not removed by enemata. From time to time, the tumor slightly increases, the abdomen becomes tympanitic, and the patient dares not to eat from fear of augmenting its tension and volume. This frequently occurs after exposure of the feet to cold, or fatigue; and is accompanied with transient chills, followed by feverish heat, especially at the palms of the hands. At those periods there are indistinct pains in the tumor, and, for several days, a discharge of viscous greenish pus, either pure or mixed with the fæces, covering them externally; after which the pains cease, the abdomen shrinks by expulsion of gases, and other matters in the form of long, flattened balls; the fever then disappears,

and the appetite becomes good. For some time there was difficulty in micturition, and sudden interruption; these have now ceased, but it is ascertained that the bladder is displaced, and that, when full, it constitutes a tumor at the left side of the hypogastrium. The patient was much emaciated, and plunged, at intervals, into a state of exhaustion; she is now better, owing to change of air and the use of milk.

Examination confirms the opinion formed from the preceding symptoms. On pressing the abdominal parietes, in order to feel the tumor, which is situated one or two inches above the level of the pubes, it is perceived to descend backward into the pelvic cavity, and to present a volume more considerable than would be supposed on superficially examining the parts projecting at the hypogastrium; it is hard, of a regular spheroïdal form, and indolent in this region. Towards the vagina, it is also felt through the anterior paries of that canal,—equally smooth, hard and globular; it descends more backward than forward. Even the vagina strongly inclines backward, and is only three inches in depth; the deeper portion is flattened, terminated by an angular, irregular cul-de-sac, presenting several small indentations, separated by ligaments, but nothing resembling the os uteri. Examination only leads us to *suspect* the uterus at some distance from this cul-de-sac, forming a sort of relief to the principal tumor at its posterior, inferior, and left side. The vagina has therefore been obliterated by adhesions, occasioned by the pressure of the tumor. On introducing the finger into the rectum, the tumor is felt near the lower part of the sacrum; the anterior paries of that intestine appears to touch the posterior at the distance of four or five inches from the anus; lower down, there is yet some space; it is, doubtless, in that part that coagula are collected. The tumor appears in this region to be more pliable, to fluctuate more indistinctly, to be rather irregular, but not less indolent than in any other part; on raising it, it is found to be moveable, though heavy, and perfectly continuous with the portion felt at the hypogastrium; its entire volume may be compared with that of the two fists joined together.

This case is probably one of chronic and latent inflam-

mation of the right ovarium, which, having been of long continuance, has suddenly become the seat of renewed inflammation and of suppuration. The tumor, as it increased, came down between the bladder and the uterus, displaced the former, pushed the latter backward, flattened and obliterated the vagina, and then opened into the rectum, at a considerable height above the fundus of the uterus, which is perhaps atrophied; this suppuration, however, is far from having reduced the entire induration to a state of abscess; the tumor is indeed diminished, though only a fifth part at the most, when the pus is discharged from it.

These products of chronic inflammation find other issues: the pus is frequently discharged immediately into the vagina, sometimes into the cervix uteri; sometimes it may pass from the ovarium through the Fallopian tube into the cavity of the uterus. A second case of the same kind has just come under our attention (B): there were no other means of explaining the sudden and abundant discharge (two glasses full) of viscid, greenish pus, which flowed unmixed, from the os uteri, to the great relief of the patient. An abscess, formed in a steatomatous cyst, was evacuated by the Fallopian tube and uterus, as appeared on post-mortem examination, in the case of a nun, in whom the catamenia had never appeared[1]. It is only by conjecture that such a state of things could be supposed to exist in two other cases, recorded by Chambon, in both of which there was a tumor yielding pus, on pressure, per vaginam.

This discharge sometimes takes place by the urethra, and we have already spoken of a communication between the ovarium and the bladder *(Andral)*. M. Murat quotes another case of this kind from the 'Académie royale de chirurgie'; the disease had been mistaken for an affection of the kidney[2]. The accumulated pus is said to escape sometimes through the abdominal parietes. In every case the prognosis would obviously correspond with the extent and the nature of the affection; one abscess, having reduced the ovarium to the condition of a cyst, might be cured, or nearly so, by one

[1] *Mém. Ac. Sc.* an. 1700, obs. v.

[2] See one of our subjoined cases.

evacuation; another might remain open; pus might issue continually, and foreign matters might be introduced into it; or a natural fistula, of narrow and long dimensions, might preserve the abscess from atmospheric influence: in this latter case, the affection might be for a long time stationary; in the former, the patient may be debilitated and endangered by serious returns of the symptoms;—an event which will always take place, if the abscess be accompanied with induration of a considerable portion of the organ;—if foreign matters, as fatty, osseous, or hairy productions, which could only escape by some large opening, remain in that organ;—or, lastly, if the inflammation of the ovarium be complicated with some serious disease, as scirrhus or soft cancer.

Treatment. The cases of this affection are so rare, that we can only lay down conjectural rules for its treatment. At the beginning of chronic inflammation of the ovarium, in its various exasperations—in a word, whenever it approaches the acute state, general blood-letting, baths, &c. are proper. Afterwards, before it has made considerable progress, the induration may be treated with leeches at the groins, anus, and pudenda; with issues, &c.: this last remedy should be more particularly applied for induration of long standing and considerable extent. If it be indolent, we would recommend baths of sea-water, or of sulphurous or saline mineral waters, ointments of mercury or iodine, preparations of gold, and the balsams; to these may be added, as internal remedies, soap, calomel, and a little aloes. The extract of a colchicum *(Dr. Seymour)* has been much recommended: this may be tried with narcotic injections, and those made of a solution of the extract of hemlock, per vaginam, if there are pains. We have lately been informed by a physician, that a painful tumor, situated at the right side of the hypogastrium, and accompanied with irregular fever, was entirely removed by the use of leeches, baths, topical narcotics, &c. On examining the patient, we were unable to find such a tumor, but we ascertained that the uterus was enlarged (B).

When suppuration has taken place, it will be right to use emollients; it will generally be necessary to wait for the spontaneous opening of the abscess; but we must proceed to

incision or puncture, if the fluctuation be distinct in any part of the abdominal parietes, or in the course of the vagina. We have treated, elsewhere[1], of a kind of tuberculous abscess, so opened by M. Paul Dubois, though unsuccessfully. The result has been more fortunate in other cases, in which the opening was made externally,—as near the umbilicus[2]. It may sometimes be proper to make the incision at a single operation ; but, where there is occasion to fear incomplete adhesions, it will be better first to open the abdominal parietes, and then the cyst[3].

CASES.

1. *Chronic inflammation of the ovarium ; abscess opening into the rectum.—Continued induration.**

2. *Abscess of the ovarium opening into the bladder and uterus.*

In a case, in which I was consulted in the month of June, 1825, there was a tumor in the right iliac fossa, perceptible through the abdominal muscles, and appreciable by the hand applied externally, and the finger introduced in vaginam : it was rather moveable, and as large as the fœtal head. The uterus was very low down in the pelvis.

After trying various means without advantage, the patient had recourse to magnetism. On the following day there was an abundant purulent discharge, instead of urine, which continued for several days. (! Tr.)

On the 23rd of Febr. 1827, the tumor could no longer be felt by the abdomen ; but, on introducing the finger in

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[1] *Mém. sur l'avortement* (B), p. 20. [2] Logger, p. 70.

[3] David, *Prix de l'Ac. de Chir.* t. iv, première partie, p. 240.

* Omitted.—Tr.

vaginam, I discovered a projection, as large as a hen's egg, the principal diameter of which lay behind the symphysis pubis; the tumor was consequently much reduced in size; for the last eighteen months, there had been violent pains in the pelvic region, and the state of the patient had appeared hopeless. The general health was, however, improved when I saw the patient the second time. There was still a discharge, by the vagina, of a viscid, whitish matter, in greater quantity than before. The os uteri was widely open, its borders thick, the anterior one very tumefied.

On the 14th of March, 1828, I applied the speculum, and had some difficulty in bringing the os uteri within the opening of the instrument, the uterus itself being very low down, and its orifice resting on the perinæum. I then ascertained that this portion of the organ was the seat of severe inflammation; the right side was of a bright red colour; the anterior border of its orifice ulcerated; the posterior thickened and elongated in front, and half an inch below the anterior; the discharge, consisting of a greenish-yellow matter, issued in abundance from the *cavity of the cervix*, which appeared to be the seat of the affection. This discharge was sometimes yellow, sometimes white, and generally extremely fetid. The body of the uterus appeared to have contracted adhesions with the tissues adjoining its posterior paries; for the cervix uteri alone yielded to our attempts at replacement. The tumor was still distinguishable in the form of a flattened egg, and could be felt between two fingers of each hand applied exteriorly and per vaginam. It was still very moveable, and not painful on examination. The uterus was, however, tender, and the application of the instrument produced a discharge of blood.

I recommended dry cupping over the upper regions of the body, with saline enemata: by these and other remedies, the general health improved, but the discharge from the uterus still continued, in greater or less abundance.

(The state of the cervix uteri in 1828, is drawn in the Atlas, pl. XXVIII, fig. 5.)

SECTION SECOND.

DISEASES OF THE FALLOPIAN TUBES.

THE Fallopian tubes are seldom affected, except by participating in disease of the uterus, the ovarium, or the peritonæum; their morbid conditions, concealed during life by more serious affections, are therefore only ascertained after death. Cancer perhaps never attacks these organs primarily,—never destroys their form and structure, until its ravages have been felt, more particularly, in the uterus. We shall therefore confine ourselves to a brief sketch of the special affections to which the Fallopian tubes are liable.

1. The Fallopian tubes are liable to breaches of continuity; but, as this occurs only in cases of extra-uterine pregnancy, we refer our readers, for this affection, to the works on midwifery[1]. There is indeed a case on record of rupture of this organ, independently of pregnancy[2], attributed to a violent effort, quickly followed by an effusion of blood into the abdomen, and death. This hæmorrhagy was excited, in a great measure, by a fit of passion. The Fallopian tube has been sometimes, indeed, the seat and source of a sanguineous exudation, without apparent rupture; this has been

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[1] See particularly the *Pratique des Acc.* par Madame Lachapelle, t. iii, p. 92, and our Atlas, pl. XXXVI, from J. Cloquet, *Thèse sur la pathologie chirurgicale*, Pl. VIII, fig. 8.

[2] *Nouvelle Bibl. méd.* 1823, t. i, p. 261

principally observed in the puerperal state, in abortion, or connected with metro-peritonitis: the following is a case in point: a woman, after a recent abortion at an early period, was affected with inflammation of the uterus and of the peritonæum, of which she died; the ovarian extremity of the left Fallopian tube was of the size of a small hen's egg, adhering to the ovarium, which it almost surrounded; it was red, very vascular, and contained some fluid blood; the parietes of this sac were half a line in thickness; the right Fallopian tube was obliterated at its pavilion, which was as large as the finger, without fimbriæ, and adhering to the ovarium by some cellular adhesions; some fluid blood was found within it; the remains of a small, lacerated, serous cyst were suspended from the ovarium on the same side (B).

2. The case, which we have briefly related, presents a change in form which is not very uncommon, and which, if occurring on both sides, ought to be classed among the causes of sterility; we mean, obliteration of the Fallopian tube, adhering, or not, to the ovarium. We have already spoken of those adhesions which change the form of these organs, and attach them to the uterus, and have attributed them to chronic inflammation; we attribute these obliterations of the pavilion to the same cause. In that case the ovarium is almost always atrophied and adherent, or even annihilated; the fimbriæ have almost, or entirely, disappeared, and the canal terminates in an enlargement of greater of less extent[1]. To this closure may be added that of the internal or uterine orifice of the tubes[2]. According to M. Andral, obliteration may occur about their middle; even the entire tube may lose its cavity: this, however, is not a very common case, and the obliteration is generally only partial; and then there is an accumulation, in the remaining cavity, of sero-mucous matter, which may become more or less abundant. Sometimes the tube, thickened, elongated, and flexuous, gradually enlarges as it approaches the ovarium, though still quite dis-

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[1] See Degraaf, *De mul. org.* tab. XIX, fig. 1 and 3. Morgagni and others.

[2] *Journal hebdomadaire de médecine*, 1829, t. ii, p. 78.

tinguishable; sometimes it enlarges more rapidly in the form of a cucurbite[1], of a pear, or a sphere[2], and may then acquire enormous dimensions. Dehaën speaks of a hypertrophied Fallopian tube which weighed alone seven pounds, and contained twenty-three pints of fluid[3]: cases have been quoted in which even a hundred and twelve pints have been found in these organs; but the Fallopian tube, the ovarium, and the broad ligament, were all blended together in the cyst (*Blancard*). The rationale of these accumulations of fluid, and of dropsy of the ovarium, is the same; their symptoms are also similar; they are sometimes equally relieved by puncture; sometimes this operation has been followed by fatal consequences (*Dehaën*); sometimes it has been entirely useless, owing to the viscous state of the matter preventing its flow along the canula (*Idem*). A similar result may be produced by the presence of hydatids, and Monro observes that it is almost invariably so. This summary assertion is indeed true in some cases, as is proved by one or two examples recorded by Frank[4]. In another case, quoted by the same author, it is remarkable that the serous matter was discharged, until death, by the uterus and vagina, to the extent of a pint a day; the patient died of consumption, and thirty-one pints of aqueous and gelatinous matter were found in the left Fallopian tube: the affection had been occasioned by a fall, in which the hypogastrium had received a violent shock.

These are not the only enlargements incident to the Fallopian tube: the catamenial blood, retained in cases of imperforation, may ultimately dilate the uterus and its appendages, and even rupture them in different points[5],—doubt-

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[1] Atlas, Pl. XXXV, fig. 1 and 2, and Pl. XXXIV. It co-exists with dropsy of the left ovarium of the same side. By a mistake of the engraver, the parts of the left side have been placed on the right, and vice versâ. See also J. Cloquet, *Pathol. chir.* thèse, pl. VIII, fig. 6.

[2] Atlas, pl. XXV, fig. 2; pl. XXXIII, fig. 1.

[3] *Rat. med.* t iii, p. 29. There is another case of the same kind in the same volume, p. 313. See also Monro, *Essai sur l'hydropisie*, p. 175.

[4] *De cur. ret.* lib. vi, pars. i, p. 310.

[5] Dehaën, *Rat. med.* t. iii, p. 32.

less, by ulceration. The same result may take place in extra-uterine[1] pregnancies; it may also be occasioned by an accumulation of pus, though in this latter case there must have been some other disease originally,—as inflammation of the tube, either singly, or accompanied by that of the neighbouring organs.

3. These *inflammations*, in the case which we have just mentioned, are generally *chronic*. It is undoubtedly to affections of this kind that we ought to refer the melanotic[2] and *tuberculous* diseases[3],—or the deposits of these sometimes observed, either in the tissue itself of the Fallopian tube, or at its interior surface. Leucorrhœa also is undoubtedly sometimes occasioned by chronic catarrh of these tubes, as we have elsewhere stated: some uncertainties may however remain on this subject, which do not exist when pus is present. This pus may, nevertheless, proceed partly from the ovarium, as was proved in the case recorded by Laumonier[4], inasmuch as the ovarium was partly excavated, and concurred, with the Fallopian tube, in the formation of an enormous abscess. A case will be given, which may be explained, in part, in this manner.

Abscesses of the Fallopian tube, like those of the ovarium, may point externally, in proof of which we adduce the following case, from Professor Andral[5]. The patient had been affected with constipation, then vomitings, and pains at first in the right side, and afterwards in the left, of the abdomen, and in the right thigh. A tumor was gradually formed in the left side, accompanied with fever, emaciation, purulent diarrhœa, and death. On examination, there were traces of peritonitis and of enteritis. The left Fallopian tube, consider-

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[1] *Prat. des Acc.* t. iii, p. 91.

[2] *Ibid.* pl. XVI. Several persons have also observed the co-existence of the tuberculous matter in the Fallopian tube and in the ovarium, or other adjoining parts, particularly the peritonæum. See, on this subject, several of our cases on the unnatural immobility of the uterus.

[3] See the Atlas, pl. XXXIII.

[4] *Mémoires de la Soc. roy. de méd.* 1782, p. 299.

[5] *Anatomie pathologique*, t. ii, p. 700, and *Journ. hebdomadaire de médecine*, 1828, t. i, p. 114.

ably dilated by the pus, though still tortuous in part, and therefore distinguishable, opened into the rectum by an orifice, capable of admitting only a quill; the corresponding ovarium, as large as a nut, also contained pus, without communication with that of the tube. The right tube was also enlarged, and contained some purulent matter; the ovarium, situated entirely within the pelvis, was of the size of a large hen's egg, and also filled with greenish, viscid pus; the uterus was healthy.

Acute inflammation of the Fallopian tube is less remarkable than the preceding affections, inasmuch as it is always a complication of more serious disease,—as metritis and peritonitis. During life, an acute pain near the groins and iliac regions induces suspicion of this complication, which the absence of tumor alone distinguishes from inflammation of the ovarium. After death[1], it is ascertained by the tumefaction of this tube, especially developed towards its middle and extremities, frequently by its bright redness, and by the numerous and strongly injected vessels which traverse it. The fimbriæ of the pavilion, especially, present a considerable degree of this tumefaction and redness: we have often observed them swollen and infiltrated with serous, and even puriform, matter, imparting to them a yellowish colour. Albuminous flakes have frequently been found adhering to their surface. A purulent, viscous, whitish, and partly mucous, sometimes blackish and putrid (*Boër*), matter is occasionally found, in small quantities, in the interior of the tubes, and, it has been said, even within their veins[2]. Purulent deposits may be seated in their parietes, especially in the sub-peritonæal cellular tissue, which is sometimes infiltrated with serous matter, like the fimbriæ of the pavilion.

The indications for the treatment of this affection will be much the same as in metro-peritonitis; it will be right to apply emollients and other antiphlogistics, leeches, and cupping-glasses to the hypogastrium and groins.

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[1] See Cruveilhier, *Anat. pathol.* troisième livraison, pl. III, and the 'Mémoire' of M. Dugès, inserted in the *Journal hebdomadaire de médecine*, 1830, t. vi, p. 146, etc.

[2] Danyau, *Thèse sur la Métrite gangréneuse*, p. 11.

CASES.

1. *Disease of the Fallopian tubes; incipient dropsy.*

Mademoiselle B——, twenty-three years of age, had been regular from her fourteenth to her twentieth year, when she was attacked several times with inflammation at the lower part of the abdomen, which was removed by leeches. Sharp and frequent pains continued, however, in the hips, on each side, particularly in the region of the sacrum; there was also habitual constipation. This state of things was succeeded by irritation of the thorax, accompanied with heat, hoarseness, and frequent cough; the catamenia became less abundant and irregular in their return; the affection proceeded very rapidly, and the patient died in six months.

Post-mortem examination. The uterus, at first sight, appeared healthy, but, when drawn forwards, it presented numerous adhesions with the rectum. In the substance of these adhesions, on the posterior surface of the uterus, there was a tumor, consisting of several solid tubercles, as large as the extremity of the thumb; and there was a tumor, of the same size and nature, on the anterior paries of the rectum. This latter intestine was also closely connected with the vagina by granular tubercles.

The right Fallopian tube was of a bright red colour, obliterated at its two extremities, the fimbriæ of its pavilion entirely effaced; it contained a viscid, reddish, and puriform fluid. The right ovarium was adherent to the tube, by newly-formed membranes; it was small, soft, opening in different directions, and presented a fleshy tissue, of a bright red colour, uniform, and without the slightest trace of vesicles. On the same side appeared, in the form of the corolla of a convolvulus, the remains of a red, solid cyst, which opened into the cavity of the abdomen, and was probably of the size of a walnut.

The left ovarium, twice as large as the other, was covered by the right Fallopian tube, which was as large as a hen's egg, and of a deep red colour. These organs adhered together by a close and solid membrane[1].

The Fallopian tube, when dissected, presented a cyst without orifice, containing a spoonful of yellow, inodorous fluid, of less consistency than that of the opposite tube. The parietes of the cyst, flattened, elastic, of a red and fibrous tissue, presented, interiorly, a cellular reddish membrane, which was easily removed on scraping the surface. The right ovarium, separated from the Fallopian tube, presented, interiorly, only a mucous tissue divided by very fine membranous septa, disposed like the cells of a honey-comb. The os uteri was of a red-brown colour; the cervix was hard, and resisted the scalpel; its tissue was cartilaginous; the interior surface of the uterus was natural. The whole of the generative system, in fact, bore all the marks of chronic inflammation, which perhaps was only secondary to inflammation of the abdominal and pelvic peritonæum.

2. *Chronic peritonitis; abscess in the right Fallopian tube; ulcerated ovaria, phlebitis, &c.*

Madame Da——, thirty-seven years of age, was mother of several children, the youngest of whom was about ten months old. On the fourth day after delivery, she returned to her fatiguing employment of cook, and became subject to violent colic pains, often accompanied with fever, and attended by deep dejection.

The patient met with an accident and injured her foot, which became much swollen; some longitudinal incisions were made at different parts of the limb. On the tenth day there was the discharge of a large coagulum of blood per va-

[1] See the Atlas, pl. XXV, fig. 2.

ginam. Some days afterwards there were vomitings of greenish matter, which were repeated till the patient died.

Examination, thirty-seven hours after death. *Abdomen.* A purulent deposit occupied all the right side; the external surface of the large lobe of the liver was imbued with this matter to the depth of nearly two lines; false membranes were also observed in different parts of it; the tissue of the liver was pale, and of soft consistence; the spleen was larger than usual, soft, and gorged with black blood; there was a purulent deposit on the left side, in front of the kidney. The two ovaria, floating in the pus, were deeply ulcerated; the right Fallopian tube was filled with yellow pus; the uterus, of more than twice its natural size, was soft and easily depressed in every direction: the os uteri was red and gorged with blood.

Right leg. Pus was infiltrated through the whole length of the vena saphæna, more particularly in its two principal lower divisions; the sub-cutaneous tissue was filled with pus near the articulation of the foot. The astragalus and os calcis were disjointed, and the meshes of their tissue also filled with pus.

Reflections. Might this disease be traced to the period of confinement? The abdominal effusion was evidently the result of chronic peritonitis. Was this latter affection of recent date? Was the inflammation of the veins of the leg primary, or the consequence of absorption of pus? According to the state and dimensions of the uterus, it appeared that this organ had continued larger than natural, or, rather, that it had never re-assumed its proper size, —a circumstance which supports our first idea.

SECTION THIRD.

DISEASES OF THE VAGINA.

CHAPTER I.

ALTERATIONS IN FORM AND SITUATION.

We shall now in some degree deviate from our usual order, and place the breaches of continuity between the changes in form and the diseases of the vagina, the transition from one to the other being more natural, and several repetitions being thus prevented.

A. *Prolapsus* of the vagina is often spoken of as an entirely distinct affection. We have already remarked (pp. 42, 43) that the vagina, relaxed or otherwise, is propelled towards, or beyond, the pudenda by the prolapsed uterus: this displacement must then be considered as secondary and symptomatic. Sometimes, however, it appears that the parietes of this canal are elongated from some intrinsic cause, —as, when the uterus remains in its natural position, while the internal surface of a portion of the vagina descends towards the os externum, and forms, between the labia, a softish, red circle, sometimes protruding externally. In a case recorded by M. Cruveilhier, it might be supposed that the vagina, in thus becoming inverted, had elongated the cervix uteri; at all events, this part was excessively long and really hypertrophied; but was this occasioned by dragging?—was the descent

of the vagina the cause or the effect of the changed form of the uterus? We incline rather to the latter idea. This elongation of the cervix may, moreover, be secondary to the displacement of the uterus, when this latter is of long standing, when it has taken place gradually, and forced a portion of the bladder and of the rectum to descend, as well as the os uteri, towards a point where the resistance was overcome; the fundus of the uterus being retained, like the body of the bladder and of the rectum, at a certain height by its natural ligaments already considerably elongated. This may be seen in some figures, of a case of this kind, given by M. J. Cloquet[1]: we are also of opinion that prolapsus of the vagina can never take place, in an extreme degree, without prolapsus of the uterus; if, however, moderate prolapsus may take place alone, *partial prolapsus* may much more readily do so.

1. After a difficult, or even an easy, labour, it frequently happens, if the patient rises, or exerts herself too early, that a *sense of weight* is felt about the os externum. The anterior paries of the vagina is then swollen, and inverted downwards in the form of a large hood with transverse furrows; this relaxation is generally accompanied with a certain degree of inflammation, requiring, at first, the use of emollients, then of astringents, and especially long-continued rest in the horizontal position. The same kind of treatment will be proper for prolapsus of the whole contour of the vagina; the *pessary* will only be indicated in particular cases when the inconvenience appears to be increasing and becomes very uneasy and obstinate: a sponge will sometimes answer the purpose, especially when the relaxation is partial and inconsiderable; if otherwise, the size and form of the sponge should be suited to the occasion; it should be *supported by a steel or silver wire passed into it.* One of us (D) has indeed thought of substituting this method for every kind of pessary; and it is attended with this advantage, that it may be readily constructed by the surgeon himself and adapted to the individual case.

2. The ball, or bung-shaped, and élytroïdes, pessaries,

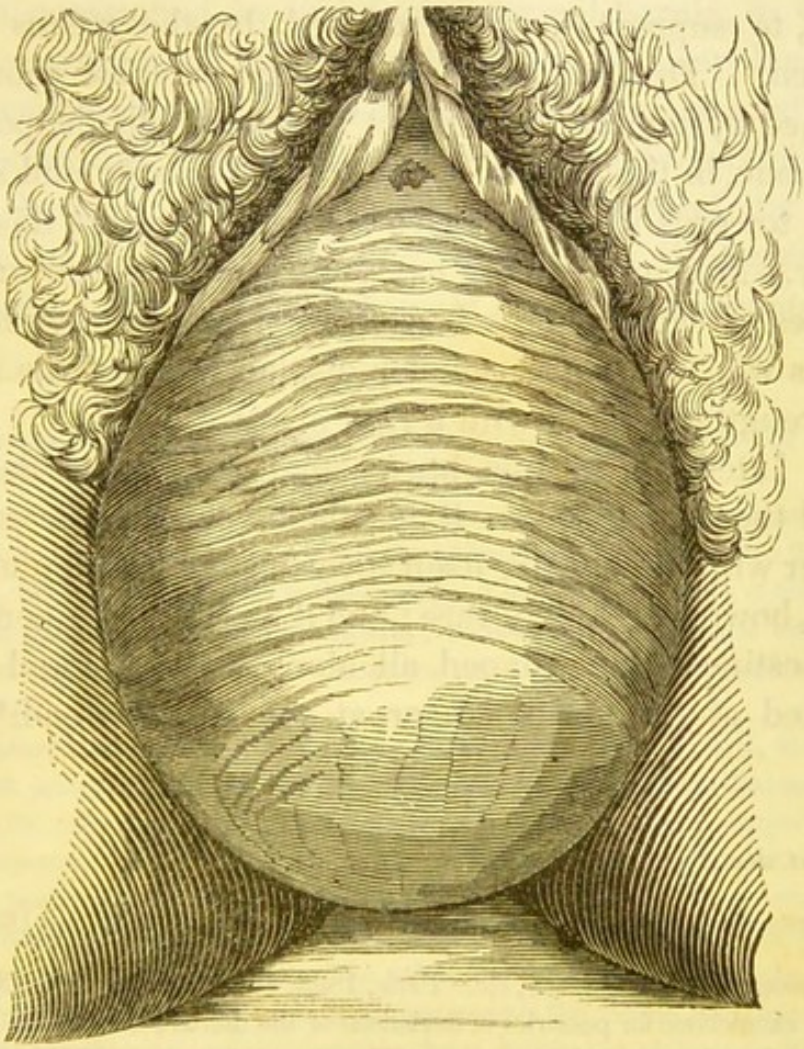
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[1] *Thèse de Pathologie chirurgicale*, pl. viii, fig. 1, 2, 3.

the spherical or cylindrical sponges, supported by a metallic, spiral wire, and, if necessary, by a stem, will be proper only in partial prolapsus occasioned by the pressure of some adjacent organ, or from tumors formed in its parietes or vicinity. This is particularly applicable to *cystocele**, or hernia of the bladder. The lower portion of this organ

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* In the subjoined wood-cut I have supplied a deficiency in the Atlas of the authors: it represents hernia of the bladder, or *cystocele*:—



The operation proposed by Dr. Marshall Hall for the cure of prolapsus uteri, and described, p. 54, would probably prove an effectual remedy for this displacement of the bladder. It will be remembered that cystocele was conjoined with the prolapsus in the case in which the operation was performed, and that both these affections were completely cured.—Tr.

seems to pass sometimes through a separation of the fibrous coat of the vagina, and to be only covered by its mucous membrane; the anterior paries of the vagina is then occupied by a soft, fluctuating, sub-pediculated, indolent tumor, continually varying in volume, disappearing on the discharge of the urine, and reducible by compression when the bladder is not too full; after its reduction, a space, or kind of aperture is perceived at the part. Calculi may form during labour; the bladder may burst, or present obstacles to its progress[1], and require, as well as simple prolapsus, particular attention, and especially reduction, and support of the tumor. Cystocele is, at all times, uneasy to the patient, and the best plan is, to support it, when reduced, by the means already proposed. Dr. Rognetta, in a very valuable monograph published by him on this subject[2], recommends the pessary of caoutchouc, in the form of a bottle with its large end inverted inward towards its neck, which serves to support this kind of pessary. Madame Roudet has contrived spherical and other pessaries of caoutchouc, which she employs for the same purpose, as well as those used for displacement of the uterus[3]. She strengthens them with a ring of steel.

3. Intestinal herniæ have sometimes pushed the vagina beyond the os externum; it has been observed to protrude, together with the bladder itself inverted, through the urethra[4]. This is, however, happily rare; and it has often happened, that the intestines have slipped all along this canal and become herniated at the perinæum or at the labia pudendi*. The

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[1] *Prat. des Acc.* tome iii, p. 387.

[2] *Revue médicale*, année 1832, tome ii, p. 394, and iii, p. 39 and 165.

[3] *Mémoire sur le prolapsus*, etc. Paris, 1833, 8vo. M. Hervez de Chégoin also uses pure caoutchouc for pessaries in deviations of the uterus; he forms it into a kind of cup with its edges much higher on one side than on the other. (*Mém. de l'Acad. royale de Médecine*, Paris, 1833, tome ii.)

[4] Dehaën, *Ratio médendi*, tome i, p. 76.

* "This hernia is readily distinguished from the common inguinal, which also passes into the labium pudendi; because this species of the disease has no communication with the abdominal ring, and the upper part of the labium is free from swelling,

only consequence thence resulting to the vagina, is, a diminution of its capacity, and a projection corresponding with the course of the displaced viscera; we lately ascertained this fact in the case of a young person, supposed to be affected with prolapsus uteri. A hard tumor had been felt at the right side of the uterus. It appears to us that an erroneous conclusion was drawn from an accumulation of fæces in the rectum and colon,—causing also pains in the left iliac fossa; the patient herself perceived that the accumulation, situated at first in this region, passed lower down into the pelvis; it was the sigmoïd flexure of the colon which had thus descended. The partial obstruction to the course of the fæces appeared to us to be occasioned by incipient perinæal hernia, in which a portion, perhaps, of the large intestine was involved: the vagina was contracted throughout its length, especially near the os externum, by a softish, indolent, voluminous projection, situated between this canal and the right side of the pelvis; it allowed of being *softened and flattened by the finger*. We particularly advised that the bowels should be evacuated, and

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whilst the tumor in this case occupies nearly the centre, and extends on the inner side of the branch of the ischium into the cavity of the pelvis.

"This tumor is felt as a ball in the labium, and, if the finger is passed into the vagina, it is found to extend upwards into the cavity of the pelvis, between the ischium and vagina, till it ceases to be felt at the os uteri. The lower extremity of this swelling occupies the doubling of the external labium; its middle part is situated between the ischium and vagina, and its orifice in the cavity of the pelvis is placed near the os uteri.

"It appeared astonishing to me, when I first considered this subject, that the disease did not occur more frequently; for the same intestines always descend into the pelvis, and the reflection of the peritoneum is too feeble to be able to support any considerable pressure. But I believe the reason of its being comparatively rare, is, that the oblique position of the pelvis is unfavourable to its production. In the erect as well as in the sitting posture the intestines fall rather upon the symphysis pubis and the bladder, than on the posterior part of the pelvis; and, when thus gravitating into the anterior part of the pelvis, they push the uterus against the rectum, and close the space which would be otherwise existing between them, but for the oblique position of the pelvis. This must be a very frequent disease; for, upon passing my fingers in the dead body from behind the uterus within the cavity of the pelvis in women who have died a few weeks after delivery, I have found that I could thrust the reflection of the peritoneum between the uterus and rectum readily down to the perineum."—*Sir A. Cooper on Hernia*, part ii, pp. 62, 65.—Tr.

the tumefaction, which we supposed to be incipient hernia, reduced and supported (D).

4. Lastly, the vagina has frequently been contracted and flattened by tumors of a much greater size, which have thrust its posterior paries against its anterior. We have already quoted examples of this sort in the present work[1], and elsewhere[2]; we have adduced others, when treating of the diseases of the displaced ovarium. These tumors would naturally occasion various inconveniences, and, in certain circumstances, even danger (pregnancy); it has been necessary to perform operations (puncture, incision, extirpation), in reference to these circumstances, rather than to the nature of the tumors*.

B. The capacity of the vagina may be diminished by

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[1] Page 77, &c. several cases taken from different sources, and page 221, a case by Madame Boivin.

[2] *Journal complementaire*, tome xxxvi, p. 434, case by Madame Boivin. See also the *Pratique des Acc.* tome iii, p. 389. M. Murat (*Dict. Sc. med.* tome lvi, p. 469, &c.) has recorded numerous cases of serous, fatty, purulent, and fibrous tumors, formed near the vagina, projecting into this canal,—several of which have been opened, and even successfully removed.

* I think it may be of some practical advantage that I should introduce, in this place, some observations on tumors in the vagina, which I published in the Edinb. Med. and Surg. Journal, vol. xxxv, p. 82:—

Sir Astley Cooper has, in a very interesting paper, shown that some encysted tumors consist in enlargement of cutaneous follicles; and, in the course of his work upon hernia, that gentleman has described a similar tumor originating in enlargement of a mucous follicle, situated just below the meatus urinarius in women. It has not, I believe, been hitherto conjectured that some of those tumors, which are known occasionally to occupy the pelvis and obstruct parturition, have a similar origin. This fact appears, however, to be distinctly established by cases which have fallen under my observation; and it is the more important, because it immediately suggests the propriety and safety of the treatment by free incision. I have carefully examined the bodies of two women in whom I found tumors of this description projecting into the vagina; in one there were two of these tumors, in the other there was a single one as large as an egg. On a minute examination of their internal structure, it was evident that they consisted of obstructed lacunæ, which had thereby become dilated into a cyst, and distended by a gelatinous fluid. I was enabled to trace distinctly in the smallest tumor a continuation of the mucous membrane of the vagina into the tumor, and a reflection of this membrane forming the lining to the latter. I have no doubt that the tumor in Mrs. Hollingsworth, the particulars of which I am am about to detail, was of the same nature. Mr. Vincent as well as myself was convinced of this fact, and it is probable that the greater number of those tumors which obstruct parturition, and which have

many other causes, and we have already seen that it may be congenitally closed by the hymen, or be even wholly, or

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been described by the authors who have written on this subject, were of similar origin. If this be the case, I think no one could doubt that when they existed in labour, so as to obstruct the descent of the child, the best practice is to evacuate, and thereby diminish them by a *very free opening*. This view of the subject is further confirmed, if that were necessary, by the history of the cases of this kind which are recorded. Perfect, Denman, Park, Merriman, Davis, and Drew, have each described cases in which tumors were found between the vagina and the rectum at the commencement of labour, which, from their bulk, afforded greater or less impediment to the passage of the child. Some of these tumors were proved, by examination after death, to have been diseased ovaries; others were concluded to have been ovaries, although sufficient proof of this fact was wanting. But in others the histories of the cases show that they could not have been ovaries; but they leave the nature of the tumor in complete obscurity.

Some, which were not opened, disappeared spontaneously after delivery, leaving the practitioner to conjecture what they could have been. Others, which were opened through the vagina, or through the rectum, discharged a bloody serum with membranous flakes, and thereby became collapsed; others, during an attempt to lift them above the brim of the pelvis, disappeared with a sensation of bursting; and one, an account of which is given by Mr. Drew, in the first volume of the Edin. Med. and Surg. Journal, was extirpated by an incision in the perinæum. In this doubtful state of our knowledge concerning the nature of tumors which are not of unfrequent occurrence, which, when they do occur, occasion so material an impediment in the process of parturition, and about the nature of which the minds of practitioners are so very unsettled, it is important to establish the fact of the follicular origin, and safe treatment of some of them by incision. Besides the proof of the first of these facts already given from dissections, I am enabled to add that of the second by a case which fell under my care some time ago:—

Mrs. Hollingsworth came to me in April 1822, with a tumor in the vagina, which a surgeon whom she had previously consulted told her was prolapsus uteri. I found an oval tumor situated between the vagina and the rectum; its attachments to either of these parts were so loose that I could, by putting my finger beyond it, hook nearly the whole of it out of the vagina. It could not be prolapsus, for the neck of the uterus could be felt above it in its natural situation; and the same circumstance, together with the absence of the symptoms of pregnancy, proved that it could not be retroversion of the uterus. As the tumor, from its situation and bulk, was very inconvenient, the patient wished to have it removed; but, before doing it, I advised her to consult Mr. Vincent, who agreed with me in thinking that this might be done with safety. I therefore proceeded to perform the operation. On cutting into the tumor, I found that it consisted of a cyst, containing a considerable quantity of glairy fluid. This was evacuated, the cyst was left in its situation, and the patient was well in a few days. Three months elapsed, at the end of which time the patient came to me again, stating that the tumor had returned; that it was considerably larger than when she first applied to me; and that she wished I could remove it entirely. This I did by simply dissecting

partly, wanting [1]; sometimes it has been thus obliterated by accidental [2] adhesions, which, at other times, only alter its form, by contraction [3]. Some years ago, we published a case, in which these adhesions gradually relaxed and eventually admitted of natural parturition [4] *.

The same results have been observed in cases in which cancerous growths have filled the vagina, or scirrhus has so considerably contracted its cavity as to leave it only as large

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it out. The operation was attended with very considerable hæmorrhagy, which however was stopped by plugging the vagina with lint, and in three weeks she was quite well.

The great point is the diagnosis. This may be distinctly established by carefully tracing the origin of the tumor. The conduct of the practitioner may then be both prompt and confident. A free incision at the period of parturition, and excision at any other time, will safely relieve or cure the patient.—Tr.

[1] Pp. 29, 147, 151.

[2] See pp. 147, 148. The following is a consultation of Madame Lachapelle. "The vagina was of very little depth; and its upper extremity, far from presenting the regular projection of the os uteri, was filled with projecting, hard, and variously interlaced adhesions; one of these disclosed at the left side a narrow sinus, into which the finger could not be passed far, inasmuch as it became progressively narrower. I could not discover, by the hypogastrium, any thing resembling the body of the uterus; this, however, was probably owing to the thickness of the abdominal parietes. This examination enabled me to ascertain that there were several hard and painful tumors in the lower part of the abdomen, and especially near the right iliac fossa. In consequence of the thickness of the abdominal parietes, and the tenderness of the parts contained in them, it was difficult to determine whether these tumors belonged to the uterus or to the ovaria." An example of complete obliteration of the vagina, which prevented delivery in the case of a person, who was mother of four children, has been related by Dr. Lombard, in the '*Gazette médicale*', 1831, tome ii, no. 14. The state of the organs was ascertained after death.

[3] *Prat. des Acc.* tome iii, p. 309, 396.

[4] *Révue Médicale*, 1830, tome ii, p. 367.

* A case is given by Mr. Norman of a first labour, in which, after several hours of severe pains, the form of the head could be felt, though not the os uteri, a substance intervening which terminated in the vagina. A small aperture was made in the centre of this substance; and, a probe-pointed bistoury having been introduced, an incision of two inches was made, behind which the os uteri was felt, considerably dilated. The labour then proceeded, but was not finished without the forceps. The patient did well, and has been confined again without difficulty.—*Med-Chirurg. Trans.* vol. 13, page 351.—Tr.

as a quill. Chronic inflammation appears to have sometimes induced a similar contraction[1]. The same cause might perhaps occasion the shortening of the canal, or of one of its parietes only; the cases, however, with which we are acquainted, of this condition[2], appear rather to belong to a congenital state.

Inflammation, sometimes having a venereal origin, may contract the os externum; this has been termed phymosis. The same effect has been produced by difficult labour[3]. It is well known that this narrowness exists in the virgin state, without, however, impeding the generative functions; the case only assumes a morbid character, when this orifice cannot be sufficiently dilated, when it is exceedingly rigid, or when the perinæum approaches too near the pubes[4]. The pains which are then induced by marriage are sometimes insupportable, and are confounded with those of hysteralgia; it is necessary to make incisions, if relaxing and emollient methods and gradual dilatation be found useless. In the case of a young woman, who experienced these pains for more than a year after marriage, we discovered, on examination, that the vagina also participated in the narrowness and rigidity of the os externum; we recommended her to use pieces of prepared sponge, of the size of the little finger, covered with opiate cerate; they were supported in their place by a T bandage, and their dimensions were successively increased for a month. After that time, the patient conceived and was delivered (B).

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[1] A pupil of Madame Lachapelle's requested her advice in the following case. A person of sanguineous temperament, thirty-one years of age, and without children, experienced a severe mental shock during the catamenial period: the blood ceased to flow; after some irregularities, it began to reappear periodically; at the intervals, there was abundant and exhausting leucorrhœa. In the thirty-fourth year, this state was accompanied with acute inflammation, increasing at intervals, and sometimes so violently that the swelling obstructed the cavity of the vagina; even a needle could not be introduced. The labia pudendi participated in the swelling. To prevent complete obstruction, a canula of elastic gum was habitually worn, which caused pain only on its first introduction.

[2] Pages 58 and 86.

[3] Lisfranc, quoted by Buet, *Journal complementaire*, tome xxxix, p. 254.

[4] Buet, *l. c.* p. 249.

Similar cases have been collected by different persons, as may be seen in the valuable article of Dr. Murat, in the 'Dictionnaire des Sciences médicales'[1].

C. There are changes of form quite different from those we have already described, and which ought to be considered as entirely secondary: these consist in distensions occasioned by the presence of voluminous bodies in the vagina. This effect may be produced, to a considerable degree, by the descent of polypi from the uterus, by the inverted body of this latter organ, by its prolapsus, or descent. Foreign bodies, accidentally or designedly introduced, though much less voluminous than those we have just mentioned, sometimes lead to more serious results, from not being, like them, soft and gradually augmented in size; other bodies, descending from the uterus, are particularly active, from the rapidity of their descent, and by the violence with which they distend or compress the parietes which contain them,—as the head of the fœtus. One of the most common results of these distensions, is, the slow or sudden establishment of those lacerations of which we are about to treat in the following chapter.

CHAPTER II.

SOLUTIONS OF CONTINUITY OF THE VAGINA.

A. Cases of *instantaneous or primary lacerations of the vagina*[2] will be found in treatises on midwifery. These ruptures, less frequent and serious than those of the uterus, have

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[1] Tome lvi, p. 454.

[2] *Prat. des Acc.* tome iii, p. 128, &c. p. 158, 172, 187, 192. *Dict. des Sc. méd.* tome lvi, p. 462.

sometimes admitted the fœtus into the abdomen; and, notwithstanding the importance of such lesions, they have often been healed, when every obstacle to cicatrisation, as well as every collateral cause of injury, have been carefully, and skilfully, removed, by effecting a prompt delivery with the least possible violence. These ruptures principally take place at the upper extremity, near the uterus, and generally behind: this is also the part most commonly injured by bodies introduced by the os externum,—as, the forceps in difficult labour; to this part, in fact, every foreign body propelled in the axis of the pudenda is directed; in this part, too, the vagina is bounded by its junction with the cervix uteri, at which part it is only covered with the peritonæum: a wound penetrates directly into the abdomen; hence, the risk of severe peritonitis, and, more immediately, of the protrusion of the intestines[1]; in every other part, a wound would only extend into the cellular tissue of the pelvis, or at most into the bladder (*Saucerotte*, *Champion*), or the rectum[2]. The recto-vaginal partition has been thus perforated by acts of violence, and other ruptures have been said to induce fatal hæmorrhagy[3]. Lacerations, however, equally considerable, have occurred, without hæmorrhagy, from the action of foreign bodies, which were much more likely to produce such injuries[4], whilst,

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[1] *Bibliothèque médicale*, tome lxxv, p. 403.

[2] We have seen this occur in one instance after the use of the forceps, although the perinæum was uninjured; the patient was affected for several months with incontinence of the fæces, and then entirely recovered (D).

[3] *Dict. des Sc. méd.* tome lvi, page 462.

[4] *Dict. des Sc. méd.* page 461. The following interesting case was communicated to us by M. Rey, of Montpellier. A young woman, twenty-two years of age, slipping along a hay stack, fell upon the blunt point of the wooden handle of an implement of husbandry; this was about an inch in diameter, and, at the distance of five inches and a half, supported a sharp iron hook, which pointed in the opposite direction. The whole of this passed into the vagina and abdomen, and, on the first attempt to extract it, the hook caught the rectum. After many ineffectual efforts, M. Rey with difficulty extracted the instrument, without incision or much violence: he began by extricating the point of the hook, by turning it towards the pubes, at the same time powerfully pressing on the wound of the vagina; the extraction was then immediately accomplished. The peritonitis which ensued was stopped, and the cicatrisation was completed in a few weeks.

at other times, trifling ruptures, excoriations, and separations of the mucous membrane have caused alarming losses of blood. In such circumstances, this membrane presents a varicose state, which renders it, at once, less resistent and more dangerous to wound; and the varices have even been broken during labour, without the vagina being, apparently, injured. Hence, thrombus, with, or without, perforation of this canal, which invades the cellular tissue of the pelvis, and of the labia pudendi;—sometimes enormous, occasionally very dangerous, and even fatal. The attention of accoucheurs has been particularly called to this affection by Boër[1], Madame Lachapelle[2], and M. Deneux[3*].

B. *Gradual or secondary solutions of continuity occur in the case of fistulæ*, for we are not treating now of mere superficial ulcerations of the mucous membrane. The destruction of the whole substance of the parietes of the vagina is but rarely the consequence of ulcerations, properly so called, though it has sometimes been induced by eroding syphilitic chancres, and still more frequently accompanies the progress of ulcerated cancer†. In this latter case, it furnishes no particular practical information; but it is far otherwise, when it succeeds to laceration, or, what is more common, to

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[1] *Mat. med. obst.* libri vii, page 24.

[2] *Prat. des Acc.* tome iii, page 130, 197, 199.

[3] *Mémoire sur les tumeurs sanguines de la vulve et du vagin;* in 8vo. Paris 1830.

* Dr. Macbride mentions two cases of enormous swelling of the labia and perinæum, from rupture of blood vessels during labour: in one, the tumor was as large as a child's head, exceedingly painful and hard, extending itself to the perinæum; the swelling burst, and a large quantity of coagulated blood was discharged. The patients got well.—*Med. Obs. and Inquiries;* vol. 5, p. 89.—Tr.

† In a case of this kind, which I recently attended, with Dr. Prout, the retention of urine which came on a short time previous to the perforation, produced great distress. The retention appeared to have been caused by coagula in the bladder.

It is remarkable that, in this case, although there had been a purulent discharge daily, amounting to some spoonfuls, immediately after the perforation into the bladder had taken place, the discharge from the vagina became transparent, and there was no appearance of pus in it.—Tr.

pressure, to protracted distension during labour, or to the presence of a foreign body within the vagina.

1. During labour, it is generally against the pubes that the parietes of the vagina are pressed, bruised, and disorganised, by the head of the fœtus: and most of the cases of fistula, which occur after the separation of a gangrenous eschar formed during protracted labour[1], are *vesico-vaginal*, or *urethro-vaginal*, and their direction is usually transverse. The individual is not aware of the case until several days after delivery; on the second, fourth, eighth, or even eleventh day, she is conscious of being unable to retain the urine, and of its passage into the vagina. A mistake on this point might arise in the case of paralysis of the bladder accompanied with incontinence of urine; but the bladder would not be found empty, in such a case, on passing the catheter: a still more decisive proof can be obtained by passing a sound into the urethra, whilst the finger, introduced in vaginam, follows it all along through the urethro-vaginal septum, as far as the region which corresponds with the lower portion of the bladder; ascertaining the form, situation, and extent of the solution of continuity, with or without loss of substance. It is in this way that we may ascertain the existence even of *utero-vesical* fistulæ, which resemble in their symptoms those of which we are treating[2]. There are two means of examination by which a more exact diagnosis may be formed; the more common and available of these, is, the use of the speculum with the two valves and the window, constructed by one of us (B)[3], or that of Dubois and Lallemand, or that of Deyber. For this purpose, the patient should lie upon her back, with the shoulders lower than the nates, the latter resting on the edge of a high bed. The other means, the utility of which has been proved

[1] In some cases, five or six hours' pressure has been sufficient to produce this melancholy effect; there are others, on the contrary, in which the vagina was dilated for several days without this consequence; this may, however, depend on the direction and position of the head of the fœtus, on the form of the pelvis, on the fulness or emptiness of the bladder, &c.

[2] *Prat. des Acc.* tome iii, page 105.

[3] See the figure of the speculum in the Atlas, pl. XLI.

several times by M. Lallemand, is, the application of soft wax over the anterior paries of the vagina, to receive the impression of the fistula and adjoining parts.

It is only from a correct diagnosis that we can properly determine the prognosis and indications. It is well known that small fistulæ may heal spontaneously or by proper treatment, especially those of the urethra or at the neck of the bladder; and that large perforations, especially at the lower part of this latter organ, are incurable*: we have witnessed this melancholy fact in more cases than one; unhappily, as Puzos observes, it is generally at this part that the solutions of continuity take place. Mauriceau has seen two small fistulæ healed; other cases of this kind might be quoted from Hildanus and others[1]: but it has been more frequently observed that the bladder has contracted so as to lose almost its entire cavity, that it has even been inverted through the fistulous opening (*Mauriceau*, *Schmitt*), that the urethra has been at length obliterated (*Saucerotte*, *Percy*, and *one of us*), and thus all possibility of cure precluded. The patients must also bestow extreme care, if they would avoid uncleanliness and offensive odour; and, in spite of every attention (and still more so, if this be neglected), they suffer acute pains, arising from inflammation and ulceration of the vagina, the pudenda, and femora, which are constantly covered with a pungent fluid, so that we have known a physician to be deceived, and to attribute to syphilis those elevations, pustules, and ulcers, which might have been removed by the hip-bath.

These affections have however been relieved, and even cured. Cups made of elastic gum adapted to receive the urine, while they are adjusted to the form of the pudenda, obviate these inconveniences only in a slight degree; plugs introduced into the vagina are insufficient or insupportable; and the only really useful means consists in sponges frequently

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* In a case which occurred to me some time ago, of recent vesico-vaginal fistula, the patient was completely cured by keeping in the prone and recumbent posture, with a catheter constantly in the urethra.—Tr.

[1] Gravis, *Thèse de Paris*, 1832; p. 18.

renewed, thick cloths, repeated lotions, and the daily use of the hip-bath.

Fistulæ of moderate extent have been completely cured by cauterization, especially by the actual cautery (*Dupuytren*, *Speranza*, *Delpech*). Cases of more importance have been successfully treated by other methods; thus, the permanent insertion of the catheter in the urethra, though generally inefficacious, has succeeded in the hands of Desault, by combining with it the use of the bung-pessary, to compress the fistula. M. Lallemand succeeded by exciting the borders of the ulcerated opening with the nitrate of silver, and by keeping these borders in contact with each other. Partial, and complete, success have been obtained by the suture (*Fatio*, *Schreger*, *Walter*, *Malagodi*, *Erhman*[1]); these methods, however, have failed more frequently than they have succeeded. The same remark applies to the probe, the plug, the cautery, and the suture. This last operation indeed had nearly proved fatal in our hands, after presenting the most flattering appearances. On the third day, the threads having cut the vagina, a dangerous hæmorrhagy ensued, which made us despair of effecting the union[2]. In a case, in which M. Roux[3] was the operator, the patient died shortly afterwards; the operation, however, was only the accidental cause of this melancholy result. We may nevertheless observe that, in the successful cases, the threads of the suture have always cut through the flesh; would it be possible to obviate this result by using the uninterrupted suture, as proposed by Roonhuysen, instead of the interrupted? This method certainly appears likely to succeed, and is not more difficult than the other. The difficulty of this procedure does not consist merely in inserting the needles, whether it be performed with a curved probe pierced at the extremity, according to the

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[1] See, in the *Répertoire d'Anatomie pathologique*, tome v, the 'mémoires' of Nægelé and of Deyber. See also Velpeau, *Médecine opératoire*; Paris 1832, tome iii, page 647, &c.

[2] *Gazette méd.* 1831, 29 octobre. (D)

[3] *Journal hebdomadaire de médecine*, t. iv, p. 241.

suggestion of Lewziski and Lallemand, in order to pass them through the urethra; or, whether they are introduced by the fistula, guided by the 'porte-aiguille' of Roux, and by needles of considerable curvature, according to the plan of Nægelé and others. This may always be effected with a little patience, and we ought not to be misled by the extreme facility with which the hooks, or clasps, of Nægelé and Langier are used, by being conveyed per vaginam to the borders of the solution of continuity; these clasps only roll up the mucous membrane, and can neither continue in their place nor keep the lips of the wound in contact. M. Lallemand has often ascertained this, even on modifying these instruments, in the most advantageous and ingenious manner. The real difficulty consists in properly exciting the edges of the wound: the actual cautery or the caustics leave wounds little apt to unite; the scalpel is the means by which the desired effect must be produced. Much has been written of a speculative kind, and experiments made on dead subjects, under the supposition that the fistula was longitudinal, with adjacent edges; this may indeed happen sometimes, as in the case recorded by Malagodi; but the contrary is much more commonly observed. When the division is transverse or oblique, and especially if deeply situated, paring the edges with the bistoury or scissors is so difficult, that we have known an experienced practitioner give up the operation; and Professor Erhmann was satisfied with scarifying and scratching the lips of the fistula; and we ourselves never succeeded so effectually as in a case in which the fistula was situated at a moderate depth, and in which we merely devoted time and attention.

2. Foreign bodies[1], which ultimately pierce the vagina

[1] These foreign bodies do not always lead to such serious results; a sponge, for instance, saturated with putrid matters, could only occasion inflammation, or ulceration, of the vagina; Dr. Rognetta has recorded a case of this kind; but to this irritation, a pessary, composed of any substance whatever, may add a mechanical action which becomes more injurious when it is encrusted with calcareous salts, as is seen in a case given in the 'mémoire' of that surgeon. One of us very lately extracted, with some difficulty, an oval pessary of four inches in its principal diameter, the presence of which occasioned pain, constipation, and an increasing debility which was particularly owing to a continued discharge of mu-

by ulceration or gangrene, may also occasion urinary fistulæ; their action is, however, frequently determined particularly *towards the rectum:* the *recto-vaginal* fistulæ, as we have already noticed, are either congenital (p. 29), or induced by venereal or cancerous ulcers, or by lacerations at the moment of delivery, or, still more frequently, by gangrene, resembling that which occasions most of the urinary fistulæ. With regard to lacerations which extend from the recto-vaginal septum to the perinæum, and vice versâ, we shall treat of them in the following section. Recto-vaginal fistulæ are still more serious, in consequence of the diarrhœa which they almost always induce, and the consequent derangement of digestion. This latter result would be more marked, if, instead of a simple communication established between the rectum and vagina, a portion of intestine more remote from the anus were to open into this canal and form in that part an artificial anus. M. Roux has seen a case of this

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cus, pus, and blood. The vagina was tender in every part, swollen, and fungous; the uterus was of its natural height, so that there had either been an error in the diagnosis, or the descent of the uterus had been remedied during the seven months that the pessary had been used (D). A similar case was communicated to the 'Académie de Médecine' by M. Jules Cloquet (29 juin 1826). Chronic inflammation, accompanied with growths, supposed at first to be cancerous, had resulted from the presence of the foreign body. A considerable tumefaction had partly concealed a pomatum pot which had been introduced into the vagina, and which was extracted by M. Dupuytren. A calculus, which had occasioned a urinary fistula, having been extracted from the vagina by M. Champion, its nucleus was found to be composed of the remains of a cork pessary *(Dict. Sc. méd.*, t. lvi, p. 473). Even pessaries made of metal have been corroded or encrusted so as to occasion serious consequences *(Sabatier);* but it is especially the pessaries formed of ivory, in the form of a cup-and-ball, which have destroyed the parietes of the vagina and the septa which separate it from the bladder, and especially from the rectum *(Sabatier, Méd. opér.*, 2e éd., tome iv, p. 95). M. Dupuytren was obliged, in one case, to break the instrument before he could extract it. M. Lisfranc extracted one by an incision of the anus *(Journal universel et hebdomadaire de médecine,* tome i, p. 263). M. Amussat extracted by the pudenda, and entire, a similar pessary which had also perforated the rectum *(Gazette médicale).* The patient of M. Dupuytren recovered spontaneously of the fistulæ after the operation. In the case of M. Amussat, there was some improvement. With regard to the case observed by MM. Bérard and Lisfranc, the urine continued to flow by the rectum, febrile symptoms supervened, and the patient died some weeks after the operation *(Rév. méd.*, 1831, t. i, p. 371).

kind, and M. Casamayor another.[1] In the former, attempts were made to invaginate the two extremities of intestine previously brought to the exterior after sufficient incisions, and the patient died; in the latter, a method was tried similar to that of M. Dupuytren for artificial anus; the patient died, owing to some imprudence, at the very moment that every thing was promising a complete cure.

With regard to recto-vaginal fistulæ, properly so called, when they are only of moderate extent, they may heal spontaneously, as we have already said, if they have been occasioned by laceration; Ruysch has given an example of this kind, even in a case in which the perforation had been produced by gangrene (*Case* 59): small fistulæ have been healed by compression; and the late M. Cullerier proposed, for this purpose, an instrument consisting of two blades, one of which was introduced by the anus, the other by the vagina; others, situated near the os externum, may, according to M. Velpeau, be treated like fistulæ ani, by incision; perhaps it may be sometimes right to follow this up by the suture, of which we shall presently treat, when on the subject of lesions of the perinæum.

CHAPTER III.

OF DISEASES OF THE VAGINA.

A. We have already described, in the preceding chapters, those tumors which are formed in the parietes of the vagina or in its vicinity, and change the form of that canal;—and scirrhus, and cancer, which almost obliterate it by distension of its parietes, by fungous and other growths[2]; or, which perforate

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[1] *Journal hebdomadaire de médecine*, tome iv, p. 163.

[2] Sometimes there is only one, similar to those which we have designated as cauliflower growths of the os uteri; Levret has seen one of this kind; we shall describe a case of the same sort.

it and form communications with the bladder or rectum, whether the disease commence in the vagina, or in the adjoining viscus. We have not dwelt much upon the subject, nor shall we do so at present, inasmuch as cancer of the vagina is generally secondary, and occasioned by the extension of disease of the uterus to that organ. It appears, however, that cancer may be originally idiopathic in the vagina, as elsewhere, and removed by excision; M. Lisfranc has performed this operation, though its details have not been made known[1]. With regard to excrescences of the vagina, they are not always cancerous. Syphilis sometimes excites in this part, especially near the os externum, enormous and innumerable growths, only distinguishable from the former by the history. Polypi are also formed in the tissue of the vagina, and have been known to acquire a considerable size[2]: we have observed them several times ourselves, and one of these cases will be annexed to the present chapter. It will be very easy to apply our previous observations on polypi of the uterus to those in question, and to distinguish them from each other, merely by the point of their insertion, unless they are of enormous volume. Care should be taken, however, not to mistake for polypi, or for syphilitic or cancerous growths, the carunculæ myrtiformes which are sometimes four or five lines in length; these are entire, smooth, pale or rose-coloured, completely resembling the rest of the adjoining mucous membrane, and always situated at the circumference of the os externum, especially at its sides.

B. *Chronic or sub-acute inflammation* has already engaged our attention in reference to the induration and contraction which it sometimes occasions;—and in reference to prolapsus, which is generally owing to turgidity of the mucous membrane, especially of the anterior paries, the consequence of which is a projection varying in form and extent; just as the pain and uneasiness, resulting from it, are rather proportionable to the degree of inflammation connected with

[1] *Journ. complém.* tome xxxviii, p. 306.

[2] *Dict. Sc. méd.* tome lvi, p. 467.

it, than to that of the relaxation and change in form. Lastly, in treating of leucorrhœa, we observed that there were numerous cases of this discharge, and especially of the lacteous form, the source of which appeared to be in the mucous follicles of the vagina, when affected with chronic inflammation or atony. These different effects of one and the same cause, which may be mutually complicated with each other, are accompanied with some others, which may also exist separately,—as ulcerations and granulations.

Chronic inflammation of the vagina, like that of the uterus, is obstinate, readily inclining to repetitions and relapses; its prognosis, however, is less serious than that of several affections which resemble it; the diagnosis is therefore very important. Care must indeed be taken not to confound with cancer or syphilis, every ulceration or granulation of the interior of the vagina. Cancerous ulcers are, no doubt, easily distinguishable from all others, by their depth, by their uneven, fungous, greyish appearance, etc.; but superficial ulcers, and erosions with prominent surface, which are sometimes observed on the os uteri and in the vagina after impure intercourse, may be confounded with other ulcers. We hear of scrofulous *(Hooper)* and other ulcers, and their existence is not impossible; we must, however, admit that the yellowish ulcerations of the vagina, with abrupt edges and a deep red colour, are indeed suspicious, and ought to lead us to suspect syphilis.

With regard to granulations only, there is less liability to mistake: we have frequently observed them in pregnant persons; they appear with a lacteous discharge and an itching, which is sometimes insupportable; the vagina appears, on examination, to be granulated in every part; the granulations are sometimes hard, prominent, almost sharp-pointed, so as to look like warts or miliary vesicles: the whole disappear spontaneously after delivery, and the local irritation can only be allayed, during pregnancy, by baths, injections, &c. Cullerier has clearly ascertained this state of things, and its mild character; we shall see, in the subjoined cases, that it may exist independently of pregnancy.

C. *Acute inflammation* of the vagina is often only an extension of that of the uterus; it may, however, be also primary. We have known it to co-exist with acute inflammation of the mucous membrane of the pudenda: this latter was covered with an albuminous exudation, resembling that of the confluent aphthæ (D). This inflammation is also frequently the result of contagion. It is not our intention to treat, in this place, of gonorrhœa or syphilis; we shall merely sum up the valuable observations lately published by Dr. Ricord[1].

1. In acute inflammation of the female generative organs, arising from syphilitic contagion, and designated as gonorrhœal, it is observed that the vagina is more particularly inflamed at its anterior paries; the mucous membrane is tender, red, and swollen,—sometimes uniformly, sometimes in patches,—sometimes beset with miliary elevations, or excoriated in different points; there are mucous, serous, and sanguineous, or purulent, discharges from the mucous membrane, and sometimes from the os uteri. More commonly, however,—eight times out of twelve[2],—the urethra is the part inflamed, together with the vagina; the symptoms are, pain in passing the urine, tenderness, swelling of the canal of the urethra, felt through the anterior paries of the vagina; pressure upon this point causes some pus to flow by the meatus urinarius. This co-existence of inflammation of the urethra with that of the vagina is, according to Dr. Ricord, a certain proof of contagious affection. Twice he has observed inflammation of the former organ without that of the latter.

2. In the chronic state, the mucous membrane of the vagina presents, more frequently, a bright redness at the posterior paries; it is swollen, red, velvet-like, excoriated, apt to bleed, and frequently contains ulcerations or excrescences. The secreted matter is almost always puriform, and of a greenish yellow colour.

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[1] *Gazette médicale*, 12 janvier 1833.

[2] M. Eugène Delmas says, once out of five times only. *Gazette méd.* 13 avril 1833.

D. We will conclude this subject with a few words on the sanguineous exudations to which the mucous membrane of the vagina is liable. When the numerous capillaries are considered, upon injecting the arteries, together with the venous plexuses which surround it, these congestions and exudations of blood are little surprising. These vessels have been considered as the source of those discharges which take place during pregnancy. These hæmorrhagies are rare, and are so little important in reference to practice, that we refer our readers to our previous observations on uterine hæmorrhagy.

CASES.

1. *Excrescences and disease of the mucous membrane of the vagina.*

1 and 3*.

2. Mademoiselle Des——, thirty years of age, and without children, had been affected, three years before, with abundant leucorrhœa, rather serous than puriform; this discharge had continually increased, and the catamenia had proportionally decreased; there was also constipation.

I ascertained, on examination, that there was, at the distance of an inch from the entrance of the vagina, a pyriform polypus, about ten lines in length, and from four to five lines in diameter at its base. At a further distance, on the posterior paries of the vagina, I discovered a granulated surface, which yielded blood on pressure; beyond this part, and as it were in a hollow, I observed the os uteri, rather softer than usual, with a smooth surface, and of its natural size.

On examination per rectum, I discovered a voluminous tumor, with an uneven surface, which appeared to consist of an agglutination of the appendages of the uterus.

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* Omitted.—Tr.

On applying the speculum, we found that the polypus was of a pale rose-colour, and that the posterior paries of the vagina was beset with granulations, resembling the eggs of a carp in arrangement, volume, and colour.

2. *Chronic inflammation, tumefaction, and granulations*.*

3. *Chronic inflammation. Suspicion of syphilis.*

Madame B——, widow, twenty-eight years of age, had been afflicted for nearly three years with several symptoms, which had been attributed by some physicians to a herpetic affection of long standing, and by herself to venereal disease.

The patient complained principally of pains in the left iliac fossa. On examination with the speculum, the cervix uteri was observed to be swollen, and its orifice covered with reddish-brown patches, injected with numerous small vessels, of a bright red colour. The period of the catamenia was then approaching.

Eight days after this discharge had ceased, the brown patches had disappeared, and the cervix was no longer painful; but the entrance of the vagina was still surrounded with small deep-brown tubercles, of pyramidal form; their surface presented a tissue of minute vessels of a vermilion colour. These small tumors were independent of the carunculæ myrtiformes, which were also inflamed, and excessively tender.

The nymphæ formed two kinds of thick cristæ with deep fissures, of a bright red colour. The meatus urinarius was encircled with a thick hood at its inferior border, intensely red and exquisitely tender. The introduction of the catheter into the urethra caused acute pain. There was nothing to lead to the suspicion of calculus in the bladder.

After temporary relief from the use of medicinal waters, the symptoms re-appeared, though with less intensity; the

* These cases are omitted.—Tr.

tubercles of the vagina were entirely effaced; the pains in the iliac fossa continued. I then recommended an emollient treatment. This was followed by the use of medicated baths, bleeding at the arm, &c. with improvement; the local irritation was relieved. Nevertheless the follicles at the entrance of the vagina were considerably dilated (nearly two lines in diameter), tumefied, and surrounded by a bright red areola. It was from these two points, which might have been mistaken for fistulous ulcers, that the patient had observed gushes of serous fluid issue, which she had previously considered as the result of dropsy. Beneath each of these vaginal lacunæ, two small, soft tumors had appeared and disappeared several times.

4. *Hæmorrhagies of the vagina**.

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* Omitted.—Tr.

SECTION FOURTH.

DISEASES OF THE PUDENDA.

CHAPTER I.

OF PHYSICAL INJURIES.

THE pudenda are exposed to contusions, and lacerations, in the case of a fall. Sometimes a deep wound has occasioned hæmorrhagy, requiring surgical treatment (*Trioen*); and contusions have, still more frequently, brought on ecchymoses, and sometimes thrombus, sufficiently extensive to call for incision, or occasion inflammation and abscess. These latter affections are sometimes brought on by local violence, as will be seen in the two following cases.

First report. "We, the undersigned, doctors of medicine, professors and associates of the faculty of Montpellier, proceeded, at the request of the "juge d'instruction," to an examination of Mademoiselle A. M——, twenty-one years of age, supposed to have been the subject of rape. Six days after the alleged violence, we discovered, at the interior and upper part of the femora, ecchymoses, which had been evidently occasioned by the use of leeches, applied, as we were told, in consequence of suppression of the catamenia, which were present at the period of the violence.

"The generative organs presented their natural appearance; the internal surface of the labia, as well as that of the nymphæ, was covered with slightly red spots, and pain was

felt in this part on the slightest contact. There was a secretion of white mucus, which might be attributed to habitual and slight leucorrhœa. The circumference of the os externum easily admitted the finger, without being considerably relaxed: it presented numerous projecting reddish carunculæ, with a smooth surface and rounded contour, without any trace of ecchymoses or of suppuration; there was, accordingly, nothing to indicate so recent an injury.

"We accordingly conclude—1, that there are no local proofs of violence having been attempted at the date alleged; 2, that the inflammation, which was very superficial, existing at the os externum may, nevertheless, have been occasioned by severe local excitation, or exertion, the effects of which have abated in the interval which has elapsed since its production."

(Signed) ANT. DUGES and EUGENE DELMAS.

Second report. "We, the undersigned Ant. Dugès, professor of medicine at Montpellier, and Joseph Roubieu, professor of medicine, in the presence, and at the request of the Deputy of the King's Attorney, proceeded to the examination of M——, *four years of age*, supposed to have been also the subject of rape. We observed—1, at the upper and left lateral part of the mons veneris, a trace of erosion already dried up; the whole of this region appeared to be painful on pressure: 2, the labia were red and swollen, and, at the external part of the right nymphæ, there was a superficial, longitudinal laceration, red and rather inflamed: 3, above the fourchette, which was entire, there was a bright redness, with erosion, occupying the whole of the fossa navicularis, and extending to the interior orifice of the vagina, which appeared to be enlarged, and its parietes tumefied: all these parts were extremely tender; there was also difficulty and acute pain during micturition.

"We accordingly think that these injuries can only be the effect of repeated attempts at the violent introduction of a voluminous body."

During the last periods of labour, the pudenda are often so distended as to become ruptured. These ruptures occur

in the sub-cutaneous and sub-mucous cellular tissue, or rather in the veins, which are sometimes varicose; hence thrombus, like those of the vagina already mentioned, and generally more considerable than any of those produced by simple contusion, even impeding labour, and, either primarily or secondarily, endangering the life of the patient. For these internal hæmorrhagies, which are sometimes accompanied with a discharge of blood externally[1], we refer our readers to the works of Madame Lachapelle and of M. Deneux; as well as for laceration of the mucous membrane of the os externum, and of a portion of the nymphæ[2], and of the perinæum[3].

There are three kinds of laceration, with reference to the part affected, and the extent of the injury,—the anterior, the central or posterior, and the total.

1. There is scarcely ever a first labour without separation of the fibres of the fourchette, or slight laceration of the anterior border of the perinæum, unless considerable care has been taken to support this part during the passage of the head of the fœtus, and to check the efforts of the patient in the last moments of delivery. With these precautions, however, these injuries have been spared, even when the os externum has been excessively narrrow, and, already dilated by the head of the fœtus, has formed round the occiput a kind of longitudinal opening, of an inch, or an inch and a half, in its large diameter. When the laceration, however, does not extend to the circumference of the anus, it is not of a serious nature; the os externum, it is true, remains enlarged, and prolapsus of the uterus is sometimes less opposed, though it cannot be produced, by this condition. After some degree of inflammation, the borders of the wound cicatrise, without uniting, though sometimes they even partly unite, without inducing any inconvenience. The same may be said of larger lacerations, when they extend laterally on one of the sides of the anus, as we have sometimes observed,

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[1] *Prat. des Acc.* t. iii, p. 133, 197.

[2] *Ibid.* p. 139.

[3] *Ibid.* p. 139, etc. 202, 205.

either after natural, though speedy, delivery, especially when the vertex has presented in one of the occipito-posterior positions; or, in consequence of an imprudent and awkward use of the forceps.

2. This last cause may indeed occasion total laceration; but the first alone, combined with considerable narrowness of the os externum, or remarkable forwardness of the fourchette, may lead to *perforation* of the perinæum. This part, when excessively distended, becomes very thin, and, in case of any separation of the fibres of the mucous membrane of the os externum, the solution of continuity is extended from the interior to the exterior[1], and, in spite of every effort to support the perinæum, as far as the skin of the space between the anus and the pudenda. We have *seen and felt under the hand* [2], this central laceration, sometimes at the middle of the perinæum, sometimes close to the anus, even involving the lower part of the rectum, in cases in which the fœtus has already passed through the os externum, the fourchette being exceedingly resistent. It has been supposed that the fœtus had, in such circumstances, sometimes passed by the anus or through the perinæum; mistakes of this kind[3] are indeed excusable; and the more so, because, in other cases the very thing has certainly occurred, since the umbilical cord has passed through the wound[4], the fœtus being entirely expelled, and the placenta still within the uterus. The preservation of the fourchette is equally surprising in either

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[1] We might rank, among the lacerations incident to the perinæum, a partial rupture proceeding, on the contrary, from the exterior to the interior: we have, indeed, observed merely the skin of the perinæum to be separated through its entire length, and without affecting the subjacent tissues; but we have only observed this once, and have never read of a similar instance. (*Prat. des Acc.* t. iii, p. 209.)

[2] *Prat. des Acc.* t. iii, p. 205.

[3] This was the opinion to which Madame Lachapelle inclined; it has also been very lately supported by M. Capuron against M. Moreau. *Académie royale de médecine*, 24 juin 1830, et 16 octobre 1832.

[4] Moreau. *Académie royale de médecine*, 2 et 29 juin 1830, and *Révue médicale*, 1830, t. ii, p. 373; this would occur particularly in the occipito-posterior positions.

case, but it is not invariable, for we have seen a laceration commence near the anus, and extend all along the perinæal space. The total laceration may therefore take place by two different processes,—from before to behind, and vice versâ. With regard to the central laceration, it appears sometimes inclined to heal completely, and without operation, when it is small, and situated very backward[1] : we have even effected a complete closure by slight cauterizations, in a case in which the elbow, advancing with the head of the fœtus, had caused a perforation of the perinæum (B). This perforation has, still more frequently, left a fistula with cicatrized edges, communicating from the exterior into the vagina: in such a case it has been thought proper to cut the fourchette to prevent accidents in a subsequent labour ; perhaps it would be better to attempt immediate union, or to pare the edges of the wound, and unite them by suture.

3. This operation is more distinctly indicated when a complete laceration has destroyed the continuity of the sphincter ani, occasioning incontinence of the fæces ; it is then, unhappily, much more difficult of performance. This incontinence, in fact, only occurs together with a very extensive lesion ; a simple slight laceration of the anus will not produce it[2] : the internal sphincter would replace the external, as we have seen after operations in serious cases of fistula of the anus in the male sex ; there would be debility, though not entire want of power in this part ; and the lips of the wound might, by its mere situation, and by keeping the femora together, coalesce sufficiently to secure the patient from all inconvenience (*Puzos*). After an extensive separation, however, the sides of the division contract, and eventually gape, so that it appears, at first, impossible to bring them together after paring their surfaces: in a case, in which the last of several confinements had occasioned this state of things, we observed only a large chasm, containing the vagina and rectum, and surrounded with soft fungous flesh, which was unable to bear the threads of the suture. It is, therefore, when the laceration is recent, that its edges should be joined,

[1] *Prat. des Accouch.* t. iii, p. 210. [2] *Prat. des Accouch.* t. iii, p. 142.

if possible : the parts are then lax, detached, and easily brought together ; they are, however, bruised and moistened with the lochia, so that the operation will often fail[1]. At a more remote period, there would still remain a resource, of which Dr. Dieffenbach[2] availed himself with advantage : by making incisions at the right and left hand, he imparted to the skin that laxity which we have just mentioned, and brought together the edges of a separation, which could not be primarily united without the fear of laceration at each point at which the threads of the suture had been inserted.

This affection may perhaps be relieved, when it cannot be cured, by supporting a bottle of elastic gum in the vagina by a T bandage, or by a spring similar to that used in some trusses.

CHAPTER II.

OF CHANGES IN FORM AND IN SITUATION OF SOME PARTS OF THE PUDENDA.

For the principal congenital malformations, to which the pudenda are liable, we refer our readers to the Introduction ; and for the accidental union of the labia of the os externum, to several treatises on surgery[3] or midwifery[4], and to va-

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[1] Succès, *Forestus de Morb. mul.* p. 759 ; Delamotte, obs. 405 ; Trainel and Noël, *Soc. roy. méd.* t. vii, p. 187 ; Saucerotte, *ibidem*, t iv, p. 117 ; Asdrubali, t ii, p. 248 ; Montain, *Révue méd.* 1821, t. v, p. 204. The last of these employed the uninterrupted suture ; the interrupted suture is, however, the most frequently adopted

[2] *Journal complém.* t. xxxviii, p. 193.

[3] Boyer, *Traité des Maladies chirurgicales*, t. x, p. 379. In one of the cases which he relates, variola had caused the union of the labia pudendi.

[4] Madame Lachapelle, *Prat. des Acc.* t. iii, p. 309, 396, &c.

rious cases[1]. We shall not add any thing on the adhesion of the nymphæ[2], or their natural[3] or accidental elongation, which sometimes requires excision[4], in consequence of the uneasiness and inconveniences occasioned by their swelling and excoriation, either in walking or at the period of marriage. We have seen this operation performed twice with the curved scissors; there was a profuse hæmorrhagy at first, but cicatrization soon followed.

The nymphæ and the clitoris have sometimes been removed by excision, in case of enlargement, and of supposed hermaphrodism. It has been performed, either in these circumstances[5], or in cases in which there was less of increase in volume than of excessive tenderness. This excision, made with the bistoury, and followed by the actual cautery, has been known to cure vicious habits[6], and even the idiotcy which has been connected with them[7]. Such an operation, proposed by Levret, will however generally fail in cases of real nymphomania. We have known this mutilation to fail in two cases of mere vicious habit. On examination, we observed in different parts of the pudenda, and especially near the nymphæ and clitoris, numerous ascarides, an abundance of which was also found in the rectum, causing pruritus and excitement of these organs (B). The same results often occur in any other kind of irritation,—as cutaneous affections, and want of cleanliness: in such cases the cause of the irrita-

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[1] See the Atlas, pl. XL, fig. 6. A cutaneous disease had caused this unnatural adhesion of the parietes of the pudenda. In the case published by Montain, *Révue méd.* 1821, t. v, p. 208, the contraction appeared to be congenital; it had not prevented impregnation.

[2] See our case in the Introduction, pp. 30, 31, and another by Dr. Buet, *Journal complém.* t. xxxix, p. 253.

[3] Flourens, *Journal Complémentaire*, t. iv, p. 145.

[4] Boyer. *Loc. cit.*, t. x, p. 402.

[5] Dr. Seymour, *Med. and phys Journ.* vol. v.

[6] Richerand, *Nosogr. chirurgicale*, t. iv.

[7] Græfé, *Nouvelle Bibliothèque médicale*, 1825, t. ix, p. 256.

tion should be carefully sought for, and, if possible, removed before we proceed to an operation.

Alterations in form are always accompanied with displacement of the part unduly developed; a more decided displacement has been sometimes observed through the meatus urinarius. In the case of hernia complicated with prolapsus vaginæ, published by Dehaën, and of which we have already spoken, the bladder was also inverted through the urethra; independently, however, of these serious affections, the mucous membrane of this canal has been observed to descend, relaxed and swollen, through the meatus urinarius: the small red tumor, formed by this prolapsus, was distinguished from the fungus of the urethra, of which we shall speak presently, by the orifice which was observed at its centre, by its reducibility, and by its regular form. In a case of this kind[1], the finger might be easily introduced into the relaxed urethra: astringents having proved unsuccessful, a silver catheter has been introduced into the canal, and a ligature applied round the tumor which surrounded this instrument: the patient recovered in eight days.

Intestinal hernia may also deform the labia when it descends into their tissue, whether it proceed through the inguinal ring, which rarely happens, or along the vagina, which occurs more frequently. The labia are also deformed by inflammation and abscesses, œdema, and varicose and encysted tumors, of which these folds of the skin may be the seat. We shall treat, hereafter, of inflammation and suppuration. With regard to œdema, it sometimes accompanies local inflammation, and erysipelas; it is, more frequently, but a small part of general anasarca, which is produced by ascites, pregnancy, &c. It may then occasion enormous tumefaction of the labia, which are of a pale rose-colour, glossy, and semi-transparent; slight scarifications are sometimes sufficient; this precaution may be necessary to facilitate delivery, and, still more so, to admit of convenient ex-

[1] Seguin, *Bibl. méd.* tom lxviii, p. 86.

amination with the finger. With regard to varices, they admit of little consideration in a practical point of view, independently of what we have already said respecting their rupture, and the subsequent thrombus. When these varices are considerable, compression might be adopted without inconvenience; we have seen an enormous varix, situated above the pubes, cured by the compression of a bandage. (B)

Lastly, encysted tumors* are not uncommon in these parts; we have given a figure of them in the Atlas (pl. XL, fig. 1): it will be observed that there is no change in the colour of the skin; the enlargement is, however, circumscribed, and indistinctly fluctuating, and not pasty, semi-transparent and diffused like œdema. Mauriceau has seen one as large as the fist; it was inflamed and filled with altered blood when opened. An incision would be sufficient in such a case; but if there were no inflammation, suppuration must be induced, or the cyst removed, wholly or in part, by dissection or excision. The tumor, drawn in the Atlas, was observed by M. Jules Cloquet in a patient fifty years of age; the cyst was two inches and a half in length, and one in breadth; it was filled with brown, viscid matter; its parietes were smooth and white; the cervix of the uterus was entirely destroyed by ulcerous cancer, which had also attacked and perforated the vagina.

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* Sir Astley Cooper, in his work on Hernia, part ii, page 62, describes a tumor, "which does not unfrequently occur on the inner side of the labium, and which distends the labium; it is elastic to the touch, and often becomes of considerable magnitude. It arises from an obstruction of the lacunæ, situated near the orifice of the meatus urinarius and vagina, in consequence of which an accumulation of fluid takes place, which either proceeds to the production of a large tumor, containing fluid like the white of an egg, or sometimes occasions inflammation, terminating in abscess. These swellings, though they resemble each other somewhat in their seat, are found by attentive inspection to differ so much as to be capable of being distinguished from each other. The tumor which I have first mentioned does not dilate on coughing; fluctuates; cannot be traced entirely into the cavity of the pelvis, by the side of the vagina, and the pubis ischium can be felt behind it; it does not descend in the erect, or disappear in the recumbent, posture."—Tr.

CASE.

Elongation of a portion of the hymen adhering to one of the nymphæ; excision; alarming hæmorrhagy[1].

Madame X——, twenty-four years of age, and of the nervous temperament, experienced some obstacle in the flow of the catamenia; this was preceded and accompanied with acute pains in the loins and uterus, and sometimes with fever. The patient had been married in her twentieth year, and became pregnant in a few months. She was then fearful that the same obstacle might impede delivery. On examination, the hymen was observed to have been only perforated by a small opening. The labour was protracted and difficult. When the patient left her bed, she perceived a fleshy excrescence at the posterior part of the os externum; this tumor gradually increased, and, at the end of a year, was about two inches in length. It was pyriform, moveable at its lowest part, but adherent, above and by its summit, to the interior and posterior portion of the right nympha. This latter was divided at its middle part. The tumor was reddish, soft, and covered by its base the carunculæ myrtiformes and the posterior part of the os externum.

I detached the tumor from the nympha with the bistoury, and then removed it with the scissors; there was a very small flow of blood at first, but, four hours afterwards, the patient was bathed in blood, and affected with dangerous syncope. I then cauterised the bleeding surface with the nitrate of silver, and arrested the hæmorrhagy by the use of the plug[2].

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[1] This case was communicated by M. Dubreuil, of Montpellier.

[2] "When there are adhesions and cicatrices, the hymen is often ruptured in labour; we have observed a portion of the interior membrane of the vagina or labia pudendi dragged exteriorly, and remain pendent, so that we could have removed it by excision or the ligature. We have seen this operation performed for complete rupture of one of the nymphæ, which adhered to the other parts only by a narrow pedicle." *Madame Lachapelle, Pratique des Acc.* tome iii, page 138.

CHAPTER III.

OF EXCRESCENCES AND DISEASES OF THE PUDENDA.

SEVERAL of the changes in form, of which we have been briefly treating, consist of organic disease; and some of the excrescences and morbid changes of structure, of which we are going to treat, consist only of partial hypertrophy of some of the tissues of the pudenda. Thus the common wart, termed *molluscum*, the venereal growths which sometimes appear in great numbers on the mons veneris, the labia pudendi, and the perinæum, are only protuberances, or growths of the cutis or of the rete mucosum of Malpighi. They cause little inconvenience, and may be removed, at least temporarily, by excision. We shall say a few words respecting those *cellular* tumors, filled with serous fluid, which are often found at the labia pudendi, becoming pediculated as they increase. We do not find them described by writers among the tumors of the pudenda, though we have seen them, on two occasions, of considerable size (D). The following are some details of one of these cases, in which the affection was the most advanced and the most inconvenient. On the 17th of January, 1831, we removed, by one cut of the bistoury, a large tumor, rather hard though pasty, heavy, and causing draggings in the groin, yet little tender in itself, of an oval form, rather knotty, covered with an adherent skin, but not changed in colour,—that is, rather brownish and beset with some hairs,—presenting three inches in diameter in one direction, and two inches and a half in the other, suspended to the middle of the right labium pudendi by a pedicle of an inch in length, from five to six lines in thickness, and enlarged towards the os externum. This tumor had existed for nine years; it had rapidly increased in a very little time, and was inflamed and suppurated in two points. The pus, it is true, was contained in small cysts with thick and red parietes; each of them was of the size of a small olive. The rest of the tumor consisted of a thick, whitish, cellular tissue, infiltrated

with serous fluid, which flowed from it in great abundance. Here and there were deposits of fat. After excision, it was necessary to tie four arteries, one of which was as large as a pigeon's quill; cicatrization presently followed.

In the other case, the tumor, containing only filamentous tissue, was soft and sometimes wrinkled; at other times it acquired greater firmness and volume,—an effect, doubtless, owing to infiltration similar to that in the case we have already related, and originating in dull, and slow, inflammation.

The same kind of tissue may be observed in certain *polypi*, which spring from the mucous surface of the labia, or from some interior part. We have twice seen this kind of polypus, with a small pedicle, easily separated by the scissors (B). We have also seen small pediculated tumors, easy to be confounded with syphilitic or cancerous growths, if only considered with reference to their form: simple excision was sufficient to cure them. Hooper calls them *caruncul*æ, and remarks upon their frequent existence on the nymphæ, the clitoris, and its prepuce.

The *meatus urinarius* is frequently the seat of extremely tender, *fungoïd tumors**, occasioning great inconvenience in micturition. The borders of this orifice concur irregularly to the formation of this tumor, the form and appearance of which

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* Sir Charles Clarke was the first, at least in this country, to call the attention of medical practitioners to this affection, which he has called "the vascular tumor of the orifice of the meatus urinarius;" he observes, "this disease is attended by a mucous discharge," and adds—

"There is in most women a degree of projection round the orifice of the meatus urinarius; and from this part sometimes the tumor arises, to which the above name of the vascular tumor of the meatus urinarius has been applied.

"The texture of this tumor is seldom firm: it is of a florid scarlet colour, resembling arterial blood; and if violence is offered to it, blood of the same colour is effused: its surface is somewhat granulated. It is exquisitely tender to the touch; and if an accurate examination is made, it appears to shoot from the inside of the urethra. It seldom acquires a large size. Upon separating the labia and the nymphæ, the excrescence is immediately exposed. Its attachment is so slight, and it is so moveable, that it appears almost like a detached body lying upon the parts.

"The disease is common to the single and married woman. In all the instances which the author has met with, the patients have been under the middle age, and they have been chiefly in young women."

"An exquisite degree of tenderness of the part is a constant symptom of the dis-

is given in the Atlas (pl. XL, fig. 3 and 4). This tumor, rounded, though often granulous, varies in volume from that of a pea to that of a large cherry. Madame Lachapelle has frequently seen such cases, and Cullerier and Professor Dubois have treated them with cauterization. In the case of an aged person, however, in which M. Dubois performed this operation, the affection returned, and we have since completely removed it by repeated lotions with solution of the sulphate of zinc (D). Removal with the scissors, followed by the application of a little powdered alum to check the flow of blood, has perfectly succeeded in our hands (B), in a case in which the tumor was as large as a kidney bean; we left a catheter in the urethra for several days.

This kind of cellulo-vascular disease may doubtless become cancerous: there are other excrescences which are originally of this nature; there is a figure of the clitoris thus affected, in the Atlas[1]; and we shall presently give some details of two cases of this kind; they usually arise from cancer of the uterus. We have also drawn some excrescences which attack this organ and the nymphæ simultaneously, and are, interiorly, cerebriform (pl. XL, fig. 5).

Steatomatous tumors are not uncommon in the substance of the labia; this latter part presents sometimes fibrous[2] or

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ease. This tenderness is confined to the tumor itself, and does not extend to the neighbouring parts.

"Instances sometimes occur of great pain and tenderness to the touch in the region of the meatus urinarius, accompanied by a thickening of the part; so that if the finger is passed into the vagina, considerable uneasiness is produced: but upon exposing the parts, no disease is visible. This also is attended by a mucous discharge. How far such a symptom may render it probable that this disease is going on in the cavity of the urethra, it may be difficult to determine. In a patient under the care of Sir James Earle, in St. Bartholomew's Hospital, this symptom was present; and upon exposing the parts, a tumor of a scarlet colour, nearly filling up the orifice of the urethra, was brought into view. In such cases, relief is obtained by the introduction of a large bougie, and suffering it to remain in the urethra for some time."—*On the Diseases of Females*, part i, page 289 to 292.—Tr.

[1] Pl. XLI, fig. 1. Hooper speaks of the *cauliflower excrescence*, which generally springs from the prepuce of the clitoris, by a pedicle as large as a goose's quill, and of cartilaginous consistence: it spreads, he observes, and divides itself into branches, with flat and broken extremities.

[2] Boyer, *loc. cit*, tome x, p. 397, 394.

cancerous[1]* tumors of little or no difference from those formed in other parts of the body, and, like them, removeable by excision, if there be no serious complication†.

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[1] *Journal complém.* tome xli, p. 439. *Bibl. méd.* t. xiii, p. 114.

* Cancer of the labium pudendi is sometimes, in its early stage, distinguished with difficulty from a venereal sore; the chief diagnostic symptom perhaps may be found in the general affection of the surrounding sebaceous glands, giving the skin an appearance as if studded with tubercles, about the size of split peas. A woman died at the Infirmary with this affection, aged fifty. The carcinomatous affection had extended up the vagina to about two thirds of its length; the uterus and ovaria were not at all affected; the liver had in its substance, principally towards its surface, about twenty small tumors of a carcinomatous appearance, and both kidneys were affected with the same disease.—Tr.

† Sir Charles Clarke has described a disease which he calls "the oozing tumor of the labium:" he observes—"The discharge arises from the surface of the tumor, or rather from interstices in the tumor.

"The fluid which escapes is of a watery character, and it is sometimes very abundant in quantity, being renewed almost immediately after the surface has been made dry by a napkin.

"The author has never known blood to escape from this tumor, even when roughly handled, so that the complaint is not by any means analogous to the cauliflower excrescence. Moreover, when removed from the body, the oozing tumor retains its form and firmness, which the cauliflower excrescence does not.

"The tumor sometimes is so large as to leave scarcely any part of the labia free from it, and to extend to the mons veneris. It seldom projects far above the plane of the surrounding skin, often not more than a line or two, and rarely above one third of an inch.

"The colour of the tumor varies little from that of the cuticle of the neighbouring parts; and a projection, very much resembling it, might be made by the firm application of a piece of fine netting to an œdematous part, during a few seconds, the surface being unequal, consisting of irregular depressions and eminences, from the former of which the fluid oozes. In the immediate neighbourhood of the tumor, œdema is occasionally met with, but the tumor itself is not œdematous; soon after the surface of the tumor has been wiped quite dry, a watery fluid begins to ooze from it, and to form drops, which, having become large, at length run off, and keep the surrounding parts in a state of constant humidity; sometimes soreness and excoriation take place, as upon the upper lip, when the secretion from the nostrils is increased, but the tumor itself is seldom rendered more sensible.

"The disease, having once begun, continues to enlarge, and insulated patches of it appear in the neighbouring parts, so that at length they will be found to run into each other.

"Within the author's knowledge, the complaint does not attack young women; indeed he has never met with it, unless in that bulky state of the labia more common after middle life." *Observations on the Diseases of Females*, p. 127 to 131.—Tr.

CASES.

1. *Fungous tumor of the meatus urinarius.*

Madame G——, forty years of age, had been subject, from three to four years, to a sero-sanguineous discharge by the vagina, accompanied by a painful sensation upon the discharge of urine.

On examination, I discovered, at the entrance of the vagina, a small, soft tumor, of a deep red colour, and exquisitely tender. The uterus was in its natural position, and of its usual volume. The tumor sprung from the right border of the meatus urinarius, and resembled, in form, colour, and consistence, the comb of a young cock; an abundance of reddish serous fluid issued from it. The acute pain it occasioned had brought on a sympathetic excitation of all the generative organs; the catamenia had become copious, and were followed by a white and abundant discharge, which was blended with the sero-sanguineous fluid of the tumor.

I applied two leeches to the nymphæ, with a cataplasm of linseed meal and laudanum; then eight leeches to the labia pudendi. The tumor diminished, but the pain in passing the urine continued.

I recommended the continued use of an elastic catheter*, in the form of a cone, three inches in length, the extremity of which was about two lines in diameter, while its base was eight lines. This part was pierced with several small holes, and fixed, by means of threads, to a small sponge, about two inches in thickness. This was kept in its place by a T bandage.

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* Dr. D. D. Davis describes a case in which the fungoid excrescence occupied the whole length of the urethra, and formed a circular ridge, of about half an inch in breadth, which could be felt, by the introduction of the finger, attached around the inner surface of the neck of the bladder. This disease was completely removed by pressure, by the means of bougies, &c. *Principles and Practice of Obstetric Medicine*, p. 86.—Tr.

It caused acute pain, which, however, gradually became less. In fifteen days the tumor had lost its solidity and a part of its volume, so that we were enabled to use a larger tube. On the twenty-second day I removed the remainder of the tumor with the curved scissors : some blood flowed ; the tube was again introduced, and used for fifteen days, since which time the urine has been passed without pain.

We have since heard that this patient, who had been subject to indigestion, died of cancer of the stomach. (See pl. XL, fig. 3.)

2. *Scirrhus of the clitoris ; ulcerated cancer of the uterus and vagina, &c. ; death.*

Madame P——, thirty-four years of age, had been confined twice at the full period. She had been afterwards deserted by her husband, and had fallen into a profound melancholy.

During six years, which she passed alone, she was subject to great irritation of the generative organs, leucorrhœa, pains in the loins, and obstinate constipation. The suspension of the catamenia, for several months, occasioned distension of the hæmorrhoïdal vessels. This discharge was restored by leeches and baths.

In the month of February, there was excessive uterine hæmorrhagy, which recurred several times in that month, and always with equal violence. Pains were felt in the groins and vagina, and especially in the left hip. The clitoris enlarged, became hardened and very painful.

The entrance of the vagina was surrounded with whitish and hard growths ; the cervix uteri, about eighteen lines in diameter, was excavated at the borders of its orifice, and very tender.

On the 10th of June there were frequent vomitings of greenish matters, with acute pain in the left hip, lancinating pains in the upper part of the vagina, and slight hæmorrhagy. These symptoms continued until the 14th, when the patient fell into a state of complete insensibility, and died on the 21st.

Post-mortem examination. Thorax. Considerable serous effusion; adhesions of the pleura; the heart voluminous, flabby, and empty.

Abdomen. The stomach and intestines natural; the liver, spleen, and especially the kidneys, very pale; the last, soft, and of a pale rose-colour. The ureters, much dilated, presented eight lines in diameter through their whole length. The urine was colourless and inodorous.

The uterus was of the form of a pear; its fundus corresponded with the superior border of the pubes; it inclined to the left, and was three times its natural size. The Fallopian tubes were of a bright red colour. The ovaria, very small and flattened, were hard and scirrhous; the ovarian vessels, particularly the veins, were much dilated; on the right ovarium there was a serous cyst, as large as a pigeon's egg.

The clitoris, of the size of the little finger, had acquired this volume from the serous infiltration of its exterior envelopes; its proper tissue was scirrhous.

The vagina presented, at its posterior surface, a cancerous ulcer, extending as far as the cervix uteri. This latter part was entirely destroyed by the ulceration, which had even attacked the bladder; its borders presented granulations mingled with membranous, dark grey shreds. The parietes of the uterus were five lines in thickness; its cavity was of its natural capacity, and contained some half-putrid blood. There was nothing in the iliac fossa to explain the pains.

3. *Fungous cancer of the clitoris; scirrhus of the uterus, &c.; death.*

Madame Cab——, forty-five years of age, entered the Maison de Santé for dropsy and tumor of the uterine organs. There had been a violent hæmorrhagy for six months, when it ceased spontaneously. Shortly afterwards, the femora and legs became anasarcous, and the abdomen progressively enlarged. In the forty-third year of her age, there had been a tumor at the os externum, which had been treated as pro-

lapsus uteri, by a T bandage. The abdomen and lower limbs were now of an enormous size, while the face, thorax, and arms were extremely emaciated; the tumor consisted of a white, softish mass, in the form of a cluster, as large as the fist, suspended by a common pedicle, of the length and size of the little finger, to the clitoris and the nymphæ.

Post-mortem examination. The lungs were pushed to the upper part of the thorax; the left one was filled with pus. The abdomen contained twelve pints of yellow serum, mingled with albuminous flakes.

The liver, deeply yellow, was very hard, and beset with tuberculous concretions in different states; it was twice its usual size, and occupied nearly all the right side of the thorax and abdomen.

The uterus was elevated three inches above the pubes; it was six inches in length, three and a half in breadth, and two and a half in thickness at its middle part; the o- uteri, eighteen lines in thickness, was whitish and smooth at its surface.

At each side of the cavity of the fundus, there was a white, fatty, and solid tumor. These two bodies were easily detached, and removed with the cellular membranes which enveloped them. The places which they had occupied, towards the internal orifice of the Fallopian tubes, presented the layers of the circular fibres of that part. At these two points of the organ, the softness of its tissue contrasted remarkably with the hardness of the cervix, which was, in a manner, cartilaginous.

Most of the lobules composing the tumor were of a white tissue, and of a cerebriform appearance and consistence; this consistence was more firm in some than in others, and was similar to that of soap. (See pl. XL, fig. 5.)

The Fallopian tubes and ovaria were very small, and participated in the general state of the uterus.

CHAPTER IV.

OF ACUTE AND CHRONIC INFLAMMATION OF THE PUDENDA.

A. *Superficial inflammation.* 1. The muco-cutaneous surface of the os externum, like every other part of the skin, or of the mucous membranes, cannot be *locally irritated* without causing inflammation; thus, in newly-born infants, the contact of the urine and fæcal matters soon occasion an erythema and excoriation, which may become, as we have observed, serious, gangrenous, and fatal erysipelas, where there is a want of cleanliness, and the season is warm. To state the causes of these affections, is to point out the mode of prevention; and, with regard to the cure, nature alone would be sufficient, aided by the application of cloths steeped in the water of marshmallow, or water mixed with the oil of olives or sweet almonds; by emollient baths, &c. The want of cleanliness may bring on inconveniences, even in more advanced childhood. The pudenda, and especially the circumference of the clitoris and nymphæ, secrete, in early age, a sebaceous, concrete, and white matter, which becomes changed, and may produce acute inflammation. Hence arise pruritus and smarting pain, constituting a morbid state[1].

One or the other of these kinds of irritation may also be produced by the presence of parasitic animalcules, either upon

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[1] "The cause of the sufferings of Mademoiselle —— appears to be entirely exterior; at all events, she describes them as such, and they may be thus explained. The perfect state of the hymen has prevented me from ascertaining, by examination, the state of the uterus; but I observed that the interior of the labia, with the whole surface of the nymphæ and the adjoining parts of the meatus urinarius were red, granulous, and covered with a mucous, viscous and whitish matter; there is a slight mucous and whitish discharge by the vagina. All the inflamed parts are excessively painful, and this has prevented the patient from observing a proper degree of cleanliness." (*Consultation of Madame Lachapelle.*)

the mons veneris, or the labia; or within the os externum. The former (pediculi pubis) have, on one occasion within our own knowledge, brought on erysipelas, which extended into the vagina; the latter (ascarides), found in the large intestine, spread sometimes in abundance over the generative organs, and even into the urethra*; we have already mentioned two cases in which the clitoris was, in consequence, amputated. These effects may in all cases be removed, with their causes, by attention to cleanliness, with mercurial frictions in the former, and vermifuge medicines (tansy, &c.) in the latter cases.

Inflammations of the mucous membrane, excited by any cause, are generally diffused: but we have seen them circumscribed, and have been at a loss to explain their cause; the orifice of the mucous lacunæ, or of the larger follicles of the nymphæ, of the labia, or of the entrance of the vagina, has appeared to us enlarged to a line in breadth, surrounded with a red areola, and affected by acute and constant itching. Such was the case with two hysterical persons, in whom the vagina was easily excited to discharge a large quantity of serous fluid; leeches over the anus, and gelatinous baths, effected a complete cure, which had been in vain attempted by simple baths, by those of Barèges, and by mercurial frictions, which had even brought on temporary inflammation. (B)

2. *An internal cause*, a state of universal catarrh, or a condition of indefinite nature, though sometimes determined by its epidemic character, may also occasion superficial inflammation of the pudenda. These inflammations sometimes present the appearance of *erythema* or *erysipelas*, sometimes of *aphthæ*, whether there be, or not, aphthæ at the same time

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* Mr. Lawrence describes a case of vesical worms: from 800 to 1000 were discharged with the urine, through a catheter, at different times. After some time, an abscess formed and broke into the vagina, and through the sore one worm was discharged. They were unlike any of the intestinal worms. The large ones were mostly from four to six inches in length; they were slender in the middle, where they appeared uniformly almost as if broken, increased gradually in both directions from this middle point, and then decreased again to the two extremities. The account of them is accompanied by a plate. *Med. Chir. Trans.* vol. ii, p. 332.—Tr.

in the alimentary canal; they are sometimes also *ulcerous*. There are some forms which may be termed *exanthematous*, and are owing to the eruption of a general exanthema, in which the generative organs participate,—as, rubeola, or variola. The mucous surface is, however, rarely affected in such cases: the pustules are generally confined to the cutaneous surface; this has been observed in an interesting case, published in the 'Gazette médicale, 13 décembre 1832,' in which the formation of the pustules appeared to be owing to the absorption of tartrate of antimony applied to the back.

In most of these secondary inflammations, the principal attention should be paid to the primary affection; we shall however speak rather more fully of those ulcerations to which we just now alluded. We have observed ulcerations to prevail, like an epidemic, at certain periods, in the 'Hôpital des Enfans malades'[1]: there were two kinds,—the one attacked the weak, cachectic, and exhausted, and followed after encrusted pustules, or rather superficial gangrene of the skin; —the other affected the robust and stout, accompanied with swelling, redness, pain, and fever, and beginning directly by an ulcerous point. Both presented a yellowish-grey aspect, and edges abrupt, like those of chancres; they occupied, however, the exterior rather than the interior of the pudenda; they increased in the same way as phagedenic ulcers or wounds affected with hospital gangrene, of which they presented all the characters; the fever increased with their surface, and emaciation and death frequently ensued in the first form. In the second, real gangrene sometimes took place; though, most frequently, the inflammation subsided easily, and was entirely cured by cleanliness, emollient lotions, moderate diet, and change of air.

Lastly, among superficial inflammations of the pudenda, we ought to class those eruptions which sometimes appear on the mucous membrane, as well as the skin, and penetrate even into the vagina and urethra. The general treatment of

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[1] Ant. Dugès, *Essai physiologico-pathol. sur la fièvre*, etc. tome ii, page 95 et 132.

these affections consists in escharotics, and sulphurous applications in different forms. There is also an affection, which, without any distinct character of herpetic disease, appears to be connected with it by the insupportable itching which constitutes its chief symptom. Some persons are tormented with *pruritus pudendi;* it is generally, though not always, indicative of some affection of the vagina or uterus. In the latter case, the inconvenience may sometimes be removed by cold lotions containing a very weak solution of the acetate of lead, alum, or the sulphate of zinc, or oxycrate; but they have sometimes induced inflammation, requiring the use of lotions with gelatine, bran-water, &c. In cases of obstinate pruritus, in which even narcotics have proved useless, Dr. Ruan has succeeded with the balsam of copaiva; in one case, with lotions containing solution of the sub-borate of soda; and in another, with the powdered carbonate of zinc: the internal use of the carbonate of soda, and cataplasms of bread and milk with laudanum, have also caused great relief and even a cure[1].

B. *Deeply-seated Inflammation.* 1. *Phlegmonous.* Phlegmon of the labia pudendi is by no means rare, owing to the contusions and other shocks to which these parts are liable, especially during labour. They are, however, less common in labour than might be supposed; and, in every case, they differ from other phlegmons only in the readiness with which they pass into abscesses, and the difficulty with which some of these latter are cured. Repellants and leeches may subdue a recent phlegmon; a slight incision may cure a recent abscess; but, when considerable and neglected, the abscess of the labia may greatly increase, extend to the sides of the vagina, detach its parietes, and form tortuous sinuses or a large cavity. It opens, at last, spontaneously by a narrow perforation, and remains fistulous; its cavity becomes smooth, like that of a cyst (*Boyer*), and then is sometimes

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[1] *North American Medical and Surgical Journal*, 1828; and *Révue méd.* 1829, tome i, page 305.

incurable. Boyer has attempted to cure it in vain in such circumstances; large incisions, compression, blisters, &c. were all useless. Success has however been often obtained, and we have already related a case of this kind (p. 70). It is the more necessary to remove these abscesses and fistulæ, as the patient is otherwise frequently tormented with accessions of inflammation, especially at each return of the catamenia; this was remarkably exemplified in the case which we have already related, and in which the abscess originated near the inguinal ring, and perhaps in the super-pubic ligament. In another case, represented in the Atlas (pl. XL, fig. 2), the abscess communicated with the rectum by a perforation, which was discovered on post-mortem examination. Another similar fistula of the labium was cured by incision, as will be seen in the annexed cases.

2. *Gangrenous inflammation.* The external organs of generation may, like the vagina, present gangrenous eschars, in consequence of violent pressure by the head of the fœtus during labour: sometimes a form of gangrene more serious, with reference to its extent and particularly to its cause, has prevailed, as an epidemic, in the lying-in hospitals; and sphacelus of the pudenda has then constituted only a symptom of typhoïd fever or of gangrenous metritis, almost inevitably fatal. There are but few cases of cure on record after considerable loss of substance, and these have left serious changes in form, inconvenient on the occasion of subsequent deliveries. To the treatment already required for the principal affection, this complication would further indicate attention to cleanliness, lotions, injections, either emollient, tonic (sweet wine, &c.), or antiseptic (chloride of lime). We have nothing more to say of this form, even when it constitutes the primary affection; we have, in fact, known young children to die, notwithstanding the use of every means, of *carbuncle of the generative organs*[1] *. This affection, which is happily rare,

[1] Dugès, *op. cit.* tome ii, page 422. See an example of this kind in the case of an infant two months old; *Nouvelle Biblioth. méd.* 1826, tome iii, page 69.

* Mr. Kinder Wood has described this disease in the 7th vol. of the *Med. Chirurg. Transactions*, as beginning "with chilliness, succeeded by heat; slight

sometimes begins by phagedenic ulcerations, sometimes by œdematous, though hard, congestion, but more frequently by phlegmons. There are then tumefaction of the mons veneris, indistinct redness, heat, hardness without pliability, and a smooth and glossy appearance of the skin; then a violet spot, becoming presently black and depressed, denotes the presence of sphacelus; congestion rapidly invades the entire pudenda, and even the higher part of these organs, the hypogastrium, and a portion of the femora, whilst the gangrene increases in the same manner, varying in its extent according to the con-

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pain in the head; dulness; nausea; loss of appetite and thirst; the tongue has a clay-coloured deposit; the bowels are torpid; and the patient is languid, inert, and listless. These symptoms precede the affection of the pudendum about three days. When the genital organs are examined, one or both labia are found inflamed and enlarged; the inflammation is of a dark tint and soon extends internally over the clitoris, nymphæ, and hymen; and a thin secretion, which at this period may be observed coming from these parts, renders it not improbable that the lower part of the vagina may be affected." In the cases given by this gentleman, the discharge was exceedingly offensive, and copious, irritating the adjacent parts, and contributing to extend the disease along the perinæum to the anus, and to the inner part of the top of the thigh, contiguous to the labia. The inflammation has sometimes spread over the mons veneris, and been succeeded by deep ulcerations progressively extending. "The pulse is quick and irritable after the inflammation commences; and as the ulceration extends, the face becomes of a peculiar pallid hue, the skin having a very singular whiteness, which I have never seen absent after the ulcerations had formed. The stools are slimy and offensive; and, in two or three cases, I have seen aphthæ spread extensively around the anus, and over the perinæum. The ulcerations in this affection are not of an equal depth, or appearance, but various in this respect, as well as in the state of the bottom, which, in some places, is foul as well as deep, in others superficial, and sprinkled with small red granulations. From the time that the ulcerative action is completely established, the enlarged labia diminish, and the redness disappears, the ulcer successively extending over the parts which had been inflamed. The character of the disease at this time is that of a deep, foul, and spreading ulcer, upon parts weakened by a peculiar inflammation, and a constitution injured and weakened by previous febrile symptoms. The external organs of generation are now progressively destroyed; the peculiar pallor of the countenance increases; the pulse becomes quick and weak; the appetite fails; the bowels become loose; the skin of the thighs hangs loose and flabby as in marasmus: the discharge from the parts increases, and becomes more and more offensive, till the patient is worn out and expires.

"In one case, the patient got better in twenty-three days; in another in seventeen days: but it is not possible to say what may be the duration of a fatal disease, this depending on many circumstances of violence, constitution, &c. When the ulceration is deep and extensive, I have never seen the patient recover."—Tr.

tinuance of the disease. More attention ought, doubtless, to have been paid at the hospital to these differences. The phlegmonous carbuncle might have been perhaps checked by local blood-letting, refrigerants, and active repellants or emollients; the œdematous form might be beneficially treated by blisters and escharotics; but the attempts hitherto made to cure this affection have been very unsuccessful, especially in carbuncle of the face, which perfectly resembles that disease of the pudenda.

CASES.

1. *Inflammation of the canal of the urethra and of the bladder.*

1. The subject of this case, twenty-four years of age and without children, experienced pains in the vagina, and suspected that there was ulceration of the uterus, of which her mother had died. The patient was of a scrofulous constitution, and had been subject, during the first year of her marriage, to leucorrhœa. She complained of painful spasms, accompanied with palpitations in the region of the stomach, which increased after meals. There was also constipation, with frequent desire to pass the urine, which flowed in very small quantities. A painful sensation extended from the bladder on each side, in the track of the ureters, to the loins.

The uterus had descended into the vagina; its cervix was soft, the vaginal orifice partly open, but not at all painful; the vagina was large and very moist,—a serious symptom, invariably preceding scirrhus or cancer.

The canal of the urethra was much tumefied, and the introduction of the catheter very painful. The mere contact of the instrument with the interior surface of the bladder occasioned acute pain; there was, however, no foreign body within that organ, nor had any particular appearance been observed in the urine.

2*.

2. *Fæcal fistula opening at one of the labia pudendi.*

The subject of this case, thirty-four years of age (1831), was affected with retroversio uteri, brought on by morbid adhesions of the fundus of this organ to the rectum and other parts of the posterior paries of the pelvis. The rectum was considerably contracted in its diameter, at about two inches above the sphincter ani. A fæcal fluid, as well as gaseous exhalations, sometimes passed by the ulcerated opening of the labium pudendi.

The patient had very lately been affected with hæmorrhoïds, and, in her tenth year, had undergone an operation for that complaint.

During the efforts induced by obstinate constipation, the patient suddenly experienced a sense of laceration in the rectum, accompanied by the discharge, per vaginam, of a large quantity of hard and black fæcal matters.

At that period there was a rupture of the recto-vaginal tissue. From this time the excretion took place, sometimes by the anus, sometimes by the vagina. The pains in the region of the sacrum and the lower part of the pelvis frequently recurred; at last, the right labium pudendi became tumefied; a small opening appeared near the inferior commissure, and a yellowish fluid was discharged. The fistulous orifice closed, and another opened beneath it.

This was at first considered as a case of *simple fistula.* On a careful examination, however, we found that the fundus of the uterus, which had descended backward, was maintained in this position by morbid adhesions to the surrounding parts. We were thus satisfied that the uterine organs were involved in the affection of the rectum; that this latter was ulcerated at the part where it was in contact with the fundus of the

* Omitted.—Tr.

uterus, and perhaps with its appendages (it was seventeen years since the patient had borne children); that the thinner portion of the fæces passed through the meshes of the cellular tissue which joined the ulceration; that this matter descended by its own weight along the posterior and right lateral paries of the vagina, where it accumulated for some time, until slight inflammation had induced an abscess which opened at the exterior of the labium pudendi.

An incision was made into the border of the orifice of the vagina, penetrating into the rectum and involving the anus. The wound perfectly cicatrised, October 6th, 1831.

About six weeks afterwards, we heard that the patient still complained of pains in the loins. A bougie has been kept in the rectum, and the evacuations pass more freely; but, as the contraction of this intestine is very high up, and is occasioned by affection of all the internal generative system, it is more than probable that the effusion of the fæcal fluid will re-occur in a short time.

There is at this moment in the hospital, a young woman, nineteen years of age, in whom the catamenia have never appeared, and who is the subject of a similar contraction of the rectum; the fundus of the uterus is also involved in the affection of the intestine, with which it is in contact.

3. *Fæcal fistula at one of the labia pudendi; retroversion; contraction of the rectum; post-mortem examination.*

Madame Reg——, fifty years of age, entered the Maison de Santé in July 1819, for tumefaction of the right labium pudendi, with fistulous perforation of that part. The catamenia had commenced in her eleventh year, and had been irregular in their periods in her thirtieth; she was also the mother of three children. The efforts induced by obstinate constipation had caused a sanguineous discharge by the anus, which the patient attributed to the rupture of hæmorrhoïds. The use of violent purgatives had occasioned constant pains in the lower parts of the abdomen.

For the last two months there had been a tumefaction of the labium pudendi, with a discharge, sometimes purulent, sometimes yellowish, of the same odour as the fæces. The right labium was of the size and form of a pear; its base was near the perinæum; it discharged, on pressure, a reddish inodorous serum.

On examination per vaginam, I discovered that the uterus was retroverted, with its orifice directed towards the pubes. I was unable to bring this part to the centre; the body appeared to be detained by strong adhesions.

On examination per rectum, I detected a contraction of this canal, formed by a thick hood of unequal, rugged, hard tissue, which it was impossible to penetrate with the finger.

On the 15th of September there were violent pains in the abdomen, with fever and slight tympanitis. To these were added greenish vomitings, loss of sleep and appetite, difficulty of breathing, spasms, evacuation of pure blood, and of greyish matter. The tumor increased and decreased alternately, and the patient remarked that it was more voluminous when fæcal matter had not been evacuated for some time: she died on the 5th of December, 1819.

Post-mortem examination. About a pint of reddish serum was effused into the abdomen; the small intestines were glued together by adhesions and false membranes, covered with minute granulations; the stomach was healthy; the liver contained several tumors of different volume, and of different degrees of consistence. The bladder was in its natural state; the uterus, *retroverted*, was retained in that position by numerous adhesions, which fastened it upon the rectum. This intestine was much reduced in its diameter at the part where the uterus rested on it; above and below this contraction, there was an uneven hood, like cartilage; the rectum, opened longitudinally, presented two contractions, which corresponded with the exterior hoods; they were separated by a space which was itself contracted, though in a less degree, and of two inches and a half in length; a blackish point was observed in it, corresponding with the vagina: this canal was traversed by a fistulous passage, opening into

the cellular tissue of the right labium, where the abscess had been observed during life.

Since that period, we have met with three other cases of tumefaction of the right labium pudendi with fistula. (See pl. XL, fig. 2.)

In another case of acute inflammation of the vagina, the interior and right side of that canal presented a small, hollow, pediculated tumor, sometimes soft, sometimes solid, according as the corresponding labium was tumefied, or not, by the presence or absence of pus, which communicated from the interior cyst to the external tumor. Baths and leeches gave only slight relief; an incision was made in the vaginal tumor, and the other disappeared. Since that period there has been alarming inflammation of the os uteri. The antiphlogistic treatment has been resumed with success.

THE END.

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