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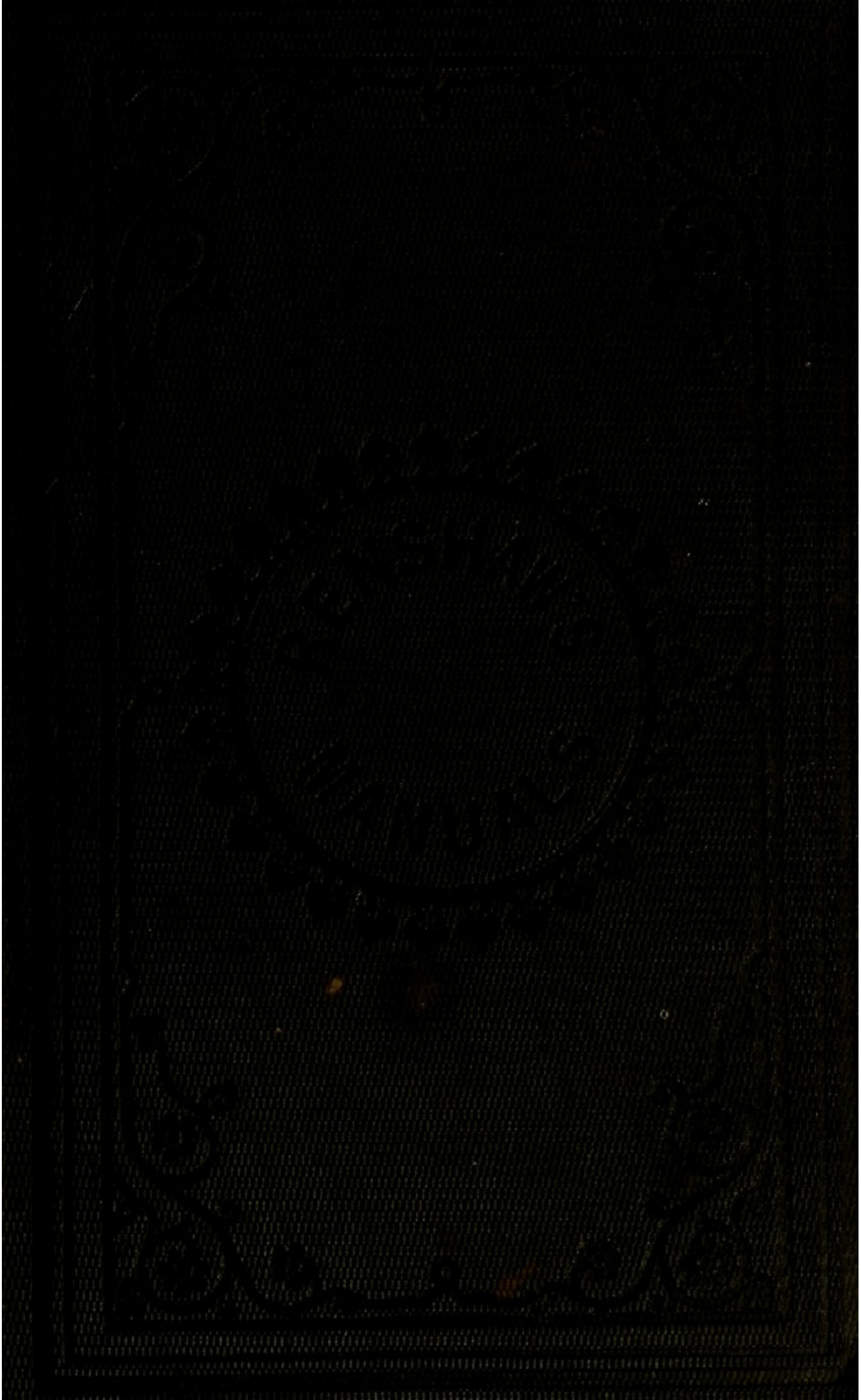

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THE

COMPLETE HANDBOOK

OF

OBSTETRIC SURGERY.

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OBSTETRIC SURGERY:

OR,

Short Rules of Practice in ebery Emergency,

FROM THE

SIMPLEST TO THE MOST FORMIDABLE OPERATIONS CONNECTED WITH THE SCIENCE OF OBSTETRICY.

BY

CHARLES CLAY, M.D.

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LICENTIATE OF THE ROYAL COLLEGE OF PHYSICIANS, LONDON,
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TO

J. Y. SIMPSON, Esq., M.D., F.R.S.E.

PROFESSOR OF MIDWIFERY IN THE UNIVERSITY OF EDINBURGH,

AND PHYSICIAN-ACCOUCHEUR TO HER MAJESTY IN SCOTLAND,

ETC. ETC.

THIS SMALL VOLUME

OR HANDBOOK OF OBSTETRIC SURGERY,

Is Dedicated,

AS A TOKEN OF RESPECT

FOR HIS HIGH PROFESSIONAL ATTAINMENTS,

AND OF SINCERE GRATITUDE FOR HIS PERSONAL KINDNESS TO

THE AUTHOR.

"Les exemples persuadent bien mieux que les simples raisonnemens, et l'expérience donne la perfection à tous les arts."—(MAURICEAU, tome ii. préface.)

PREFACE.

THE following considerations have induced me to offer this "Handbook" to the profession. A similar work does not yet exist in medical literature, and I believe a work on such a plan to be really required. It is, however, just possible I may be wrong on these points; and if right, perhaps the subject might have been better carried out by other and abler hands. I can only plead an extensive experience on many of the subjects herein treated, an earnest desire to render the work useful, and a hope that it may at least lay the foundation of a more perfect work in future. I am aware of the many excellent manuals that at present engage the attention of the profession, none more than the beautiful work of Dr. Churchill, of Dublin, on "Obstetric Medicine and Surgery;" so extensive in its information, so beautifully illustrated, and so neat in its arrangement; and yet I should do that work a great injustice if I consi-

dered it as a manual, for it is evidently (though printed in very small type, and compressed within a very small volume) a large and very comprehensive treatise of obstetric medicine and surgery, in the fullest sense of the word; and in my opinion, with every deference to the author (whose valuable services have been long known and esteemed by the profession), the work has lost the character of a manual, which I should rather define to be *a short and easy reference to the principal facts on particular points necessary to be known in any emergency*. Then, again, the short aphorismal works of Denman, Reid, and many others, with the extremely small memoranda of Rigby, are all far too limited in their arrangements to be of general utility. I have therefore considered it would be advantageous to treat the operative portion of obstetricy apart from the general system; and carrying out that portion of the subject more fully, and I hope more efficiently, taking into account every known operation, from the simple section of the umbilical cord and passing of the catheter, to the more highly important and formidable operations of the Cæsarian section and gastrotomy. To render the work as extensively useful as possible, I include under the term *operation*, not only those cases where the surgeon's knife, ligature, or caustic, are the

chief agents, but also those which require mechanical and manual aid, as version, and operations with the forceps, vectis, and blunt hook, &c. Lastly, a number of other important operations, indirectly connected with the duties of the obstetric practitioner, will be included, as the removal of embedded pessaries, pelvic abscesses, and ovariotomy, &c. In treating these questions, it is intended to be as brief as possible without doing injustice to the matter; in other words, to keep the term Handbook ever before me; to say all that is really necessary, but no more, in the most simple and plain terms to convey the proper meaning; thus enabling the practitioner, as well as student, to find at a glance the course to be pursued, without having to turn over page after page, and perhaps after all be left in a state of mysterious uncertainty.

I have also substituted for a general index an alphabetically-arranged heading on the top of each page, in order that the subject can be turned to at once. The modern discovery of Chloroform, and its almost general application to modern surgery, renders it necessary that a chapter upon it alone should precede the general contents of this work, which is avowedly a practical *Handbook*, rather than a system; and consequently cannot be intended to supersede more extensive trea-

tises. Lengthy details, contested points, or argumentative disquisitions, are not admitted; its aim and object being purely practical From the conviction that a *Remembrancer* is equally useful with an *Instructor*, it is intended as much for those who require to be *reminded*, as to be *informed*. I have endeavoured to condense within the narrowest limits a vast amount of practical knowledge, rejecting what is useless and ought to be forgotten, and not adding inquiries after new and unsettled propositions. The work describes upwards of one hundred and eighty operations, very many of which have scarcely had any place in the usual general treatises of midwifery. That it may be acceptable to the practitioner and student, and save valuable time in consulting more elaborate treatises, has been my aim; care has also been taken to omit no point of importance, which, if accomplished, will be an ample reward.

It may be asked, why occupy time and space in describing all those simple operations which every one is supposed to be well acquainted with? To this I reply, it is for this very reason I do it: so prone are junior practitioners and students to run after, and interest themselves, with great operations that seldom occur in practice, that they neglect to learn how to

perform neatly those which occur daily and hourly in every one's practice. The simplest of all operations is often performed without any regard to delicacy or neatness, and sometimes very inefficiently. I now leave my little work to the candid consideration of my professional brethren, in the full hope that my intention of being a help and assistant, as well as a faithful remembrancer to the best practical instructions, as settled by time and experience, will be fully realized. Lastly, by avoiding the historical details as much as possible, and abbreviating the practical part, I trust I have reduced the size of the whole work to suit the requirements and economical views of a large number of the profession.

HANDBOOK

OF

OBSTETRIC SURGERY.

CHLOROFORM.

One of the greatest of many boons bestowed on mankind, was the application of chloroform to modern surgery, for which we are indebted (not only for its discovery, but for its present wide application to medicine) to Dr. J. Y. Simpson, the worthy, indefatigable, and energetic Professor of Midwifery and promoter of general science in the northern metropolis. Valuable as this agent is acknowledged to be, as a soother of human pain and misery, it has met with many able, and perhaps conscientious, opponents; it is, however, quite evident its supporters are by far the most numerous. There cannot be a question but that its indiscriminate use has led to frequent abuses which would have been better avoided; but it is wrong to condemn the use of any agent, merely on the ground of its having been diverted from its utility.

There are four principal objections advanced against it:—*First.* That it has a tendency to the development

of immoral practices, both as regards the exhibitor and the recipient. *Second* (which has a similar import). That it leads to indecencies. *Third.* That it is too often used unnecessarily to abrogate a natural physiological phenomenon. *And lastly.* That it is an agent hazardous to life. With the first three I shall be very brief, for to go over all the arguments of both sides would only be a sacrifice of time to no profit, and, after all, the question would be as inconclusive as it was at first. In reference to the *first*—viz., the tendency to immoral practices: this most assuredly must be confined to the exhibitor (if it exists at all), inasmuch as the recipient is an unconscious agent at the time, and cannot be held responsible for any evil practice arising from its use; after all, I believe it to be an imaginary objection (except in very rare instances); at all events, let us hope that such tendencies are few, and that chloroform stands no more prominent in this respect than any other agent used for similar purposes. To the *second*, the same observations are equally applicable. But the *third* is an open question, and admits of strong arguments on both sides. I must confess I do not advocate the indiscriminate use of chloroform in either general or obstetric practice; I do not think it necessary to use it to abrogate purely physiological phenomena, such as the simplest form of natural labour: I would certainly reserve its benefits for the use of such cases as went beyond the point of easy natural parturition. And yet I do not deny but that there are occasionally concomitants and consequences in even natural labour, that it would be wise to

guard against by its exhibition, which might otherwise peril life, or be prejudicial to the enjoyment of after life. Thus, in severe and protracted forms of natural labour, I would hold any practitioner justified in making use of this agent, for we have no other that offers the same immunity from suffering. In the severer forms of labour, where mechanical force or great manual exertions are necessary, it then becomes the positive duty of the attendant to avail himself of its assistance: in such cases it would be difficult to say whether the advantage gained by the relief from pain and suffering, on the part of the patient, or the facilities given to the operator, are greatest; certainly both parties are immensely benefited. *Lastly* (and by far the most important). It is an agent hazardous to life. That fatal results have, and doubtless will, follow its use occasionally, cannot be for a moment denied; but it is a singular and significant fact, that no death has hitherto been recorded from its use in midwifery, which may be attributed to two circumstances:—*First.* That the patient is not (or at least ought not to be) completely thrown over into a state of perfect anæsthesia (or snoring), but kept just within that limit; not quite unconscious, yet not sensible of pain. *Second.* The blood in such cases is less carbonized than in surgical cases requiring large operations, where not only complete insensibility is necessary, which of itself produces a considerable effect on the blood, but where perhaps an extensive carbonizing influence has long previously existed, from extensive organic disease. I am also of opinion that many

accidents have arisen from the use of badly-manufactured chloroform; *this is an important fact.* I have seen no bad consequences from the use of Scotch chloroform, but I have frequently witnessed the inefficiency and bad results from using that of English make. To explain this, perhaps, is not very difficult. The materials from which chloroform is made are so much cheaper in Scotland, that the makers are enabled to extend their distillation much farther, and thus get a good article, whilst the price is still reasonable; but in England, where the materials are dearer, these advantages are lost, thus at the same price the article is much inferior. I invariably use Duncan and Flockhart's make, of Edinburgh, and it is only justice to state I never yet found it ineffective. To discountenance or reject an agent in medicine on the ground of its being hazardous to life, is an absurdity. All our most esteemed and most active preparations in the Materia Medica are hazardous to life, and might with equal propriety be denounced. But these are agents that cannot be dispensed with; they are not only valuable, but really necessary to practical medicine; and the only point to be guarded against *is the abuse*, not the proper and legitimate use, of them. I have no doubt that the use of chloroform has more rapidly advanced from the peculiar nature of the arguments advanced in opposition to it. Admitting, then, that chloroform is absolutely necessary in all important and extensive operations, and that even in the common forms of labour it may be considered legitimate by some (although I cannot myself go so far as to advo-

cate it in such cases), I shall now proceed to lay down some general rules for its employment.

FIRST.—IN CASES OF LABOUR. It may be used in severe, short, but ineffectual pains, which restrain bearing-down efforts. *In these, chloroform renders uterine contractions longer, stronger, and more efficacious; and thus it accelerates the accomplishment of the process.*

SECOND.—WHERE THE PARTS ARE RIGID AND UNYIELDING, *it assists in dilating the parts, relaxes the muscular fibre, and relieves the severity of pain arising from rigidity.*

THIRD.—IN LONG-PROTRACTED CASES, WORN DOWN AND SUFFERING FROM NERVOUS DEBILITY, AND ALSO IRRITABILITY, *it restores the physical powers, relieving both pain and anxiety.*

FOURTH.—IN SOME FORMS OF CONVULSIONS *it has been found useful.*

IT IS NOT TO BE USED—*In convulsions of apoplectic or epileptic type;*

Or when the patient is strongly opposed to it;

And even when the aversion to it is only moderate, it should not be urged.

THE TIME FOR EXHIBITING IT.—*It should not generally be until the second stage of labour is established; unless some unusual severity of pains harassing the patient unnecessarily, when it may be used somewhat earlier.*

MODE OF EXHIBITING.—I have always preferred a cambric or lawn pocket-handkerchief, rolled round the hand so as to have a hollow centre, into which pour a drachm or more of chloroform. And here bear in mind,

the exhibition of this agent must be regulated, *not by the quantity of chloroform* poured into the handkerchief, *but by its effect on the patient.* Dr. Pretty, in his "Aids during Labour," advocates the use of inhalers, particularly Dr. Murphy's oral inhaler, and joins Dr. Snow in condemning the use of the handkerchief as used by Professor Simpson and others. At all events, I think the many thousand applications of this agent with the handkerchief, without a single accident, by Professor Simpson, entitled to some credit: there is, however, too much proneness in the profession to condemn all simple means of application, and write up expensive apparatus, of vast variety, which can effect no more than the most simple means; and yet it is evident, if an accoucheur must be prepared with all the machinery written up, he must have the physical power and willingness of a packhorse, and be generally as well laden. At first it must be held near the nose and mouth, so as to allow a free mixture of atmospheric air, and before commencing its use a deep inspiration should be taken; after it has been used a short time, mixed with atmospheric air, the handkerchief may be placed over the nose, as the small amount of air through the pores of the cambric or lawn will be quite sufficient, still bearing in mind that deep anæsthesia (or snoring) is not requisite in cases of usual labour, but just enough to mitigate the sufferings and retain sensibility (except as to pain) during the whole period of its use. The handkerchief to be applied only whilst the pains are present.

NECESSARY CAUTIONS.—The pulse to be constantly

felt, and if any untoward effects arise, the handkerchief to be removed.

At first admit a free mixture of atmospheric air.

Temperature of the apartment moderate.

Patient not to be placed in deep insensibility (or snoring).

Never commence chloroform in large doses.

Preserve sensibility. Watch narrowly its effects.

Never give chloroform immediately after a full meal, nor yet after long fasting. If a choice can be made as to time, select about two hours from the last food taken.

In the severer operations.—*Where great manual exertion, mechanical aid, or cutting instruments are required,* a complete state of anæsthesia is often necessary. The mode of giving chloroform, and the necessary precautions, will be as above stated. It may be advisable to add that, in formidable operations that can be deferred a day or two without compromising the patient, it will always be wise to do so, *if the patient is a long time in coming under its influence;* otherwise the case may be placed in a condition not very favourable to after-treatment and recovery. Irritability of the stomach and bilious vomitings may be constant for two or three days, very difficult to allay, and prostrate the energies of the patient very considerably, independent of the state of the blood, which is greatly depreciated by the carbonizing influence of the chloroform. Lastly, let me remind the reader not to use chloroform except where it is strictly and legitimately necessary. I have always objected to its indiscriminate use; and I

believe, in all commonplace cases of small amount of pain and suffering, it will be wise not to use it. This, however, is only my individual opinion, and therefore I do not intend to censure those who may entertain different views.

I shall now proceed to treat of the subject-matter of this work in alphabetical order; and request the reader to bear in mind that the aim of my intentions is to confine myself to the operative portion of Obstetrics, practically and briefly.

The work will therefore not be of great extent.

ABORTION, INDUCTION OF.

Is it ever necessary to induce the expulsion of the non-viable fœtus as a matter of duty, and under justifiable circumstances? In answer to this very important question it may be stated, that as a moderately deformed pelvis may justify the induction of premature labour for the expulsion of a viable fœtus, so may a still greater deformity render necessary, and even justifiable, the induction of abortion for the ejection of a non-viable fœtus. This conclusion, however, must be received with some degree of limitation; the difference in value of the life of the mother compared with that of the child in this country, and in nations under the rule of the Catholic religion, necessarily points to opposite conclusions. In England, the practice is to sacrifice all to the safety of the mother; whilst in Catholic

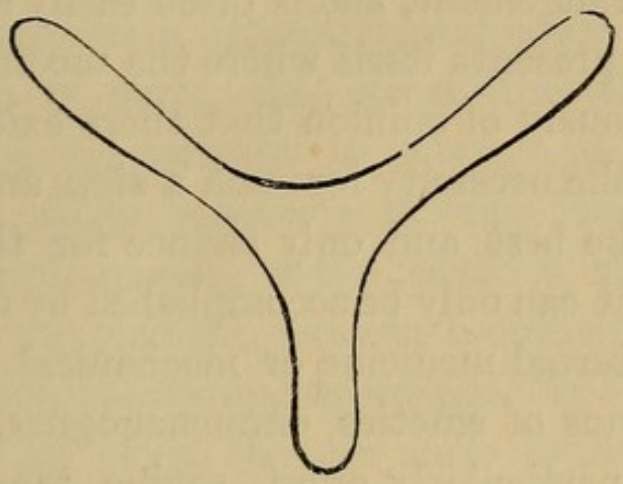
states, the child *to be born* is the principal object of solicitude, even to the sacrifice of the mother.

It is not my intention to treat this question on other than professional bearings. Is the operation necessary, and, under certain circumstances, justifiable? If so, what are the circumstances requiring it? and how is it to be accomplished?

It is evident that pregnancy may, and does frequently exist, where the upper aperture, canal, and outlet of the pelvis, have been so much contracted in their dimensions, or the passage through the pelvis has been so impeded or blocked up by tumours of the softer parts, or of the bones themselves, as to render the delivery of a viable fœtus altogether impossible. Under such circumstances it is not only necessary, but really advisable, to induce abortion, or a still more formidable operation by the crotchet may be called for. And even the amount of obstruction or deformity may be so great, as to render even that formidable instrument inefficient, when the last and only resource will be the Cæsarian section, unless the patient be left to die undelivered—it being the misfortune of obstetric science (or surgery, rather), that as each operation fails, one of greater severity must necessarily follow. It has been ably argued by Dr. Radford, of Manchester, that abortion may be induced with great propriety and justice *once*, but it is questionable if such justification could be extended to a second or third time in the same individual, although it has often been known to have been many times repeated in the same female. It is evident such a person, if aware (and certainly she ought to be

made fully aware) of the difficulty calling for such a step—a duty every practitioner owes to himself, to society, and to his patient; and therefore, after such caution, if similar means are again required, it amounts to neither more nor less than a premeditated destruction of human life, subversive of all moral law, involving with her, her husband and medical adviser. A female under such circumstances knowingly placing herself in such position, as in a second or subsequent pregnancy she does, is bound, according to Dr. Radford's views, to submit to means to save the child in preference to herself. The following case is given in illustration of his views:—Mrs. Sankey, a patient of Dr. Radford's and Mr. Goodman's, was, from extreme deformity of pelvis, compelled to submit to the Cæsarian section, from which formidable operation both mother and child recovered; but, though impressively warned against subsequent pregnancies, notwithstanding, she was again placed in a similar condition. Not applying to Dr. Radford in this second instance, Mr. Goodman adopted means to induce abortion, which subsequently took place; but whether in consequence of the means used, or previously existing morbid causes, is uncertain, at all events, death was the penalty. Dr. Radford maintained, that from the state she was in after the Cæsarian section, the uterus could not have proceeded to the full term of gestation, and that it was probable she would have aborted very early without interference. But, even supposing her capable of attaining the full period of gestation, it was morally wrong to induce abortion intentionally, after the warning given; and

more so as, having submitted to the Cæsarian section once, and recovered, she had a right to give the second child the same chance of life as the first, even at the risk of her own. The following is an outline of the upper aperture of Mrs. Sankey's pelvis. Admits of a



circle three-fourths of an inch in diameter at its widest part (the centre).

The reader is referred to some valuable papers on the Value of Fœtal and Embryonic Life, by Dr. Radford, in the "British Record of Obstetric Medicine and Surgery," edited by myself in 1842-3, for further information on this interesting medico-legal subject. The question, as to the propriety of inducing abortion, then, resolves itself into a very small compass. It is justifiable and requisite where the pelvic apertures, canal, or outlet are extremely contracted, by deformity or obstruction, so as to render it impossible for a viable fœtus to pass. Too much caution, however, cannot be exercised in obtaining correct information before the practitioner risks his professional reputation on so vital and important a question, since it is a well-known fact, that induced abortion is generally attended with symp-

toms far more aggravated, and more frequently fatal, than such as occur spontaneously. Where the constitution is healthy, it is often difficult to effect abortion, however great the necessity; on the other hand, if the general health is bad, the embryo partakes of the maternal derangement, and is often easily removed. If, then, a case presents itself where the medical attendant is conscientiously of opinion that there exists sufficient evidence of the necessity for such a step, and that abortion offers the best and only chance for the safety of his patient, it can only be accomplished by two modes—either by internal medicine or mechanical interference. Thus all forms of emetics, emmenagogues, and strong stimulants, particularly ergot, savine, tansy, bleeding, and opium, have all been often used, and frequently with success, but by no means as a general rule; for all these agents have as frequently failed, although some of them have been pushed to an enormous extent without effecting the object. Thus in Mrs. Sankey's case, before alluded to, drachm doses of ergot, two or three times a day for many days, and subsequently half-drachm doses, with half-drachms of pulv. sabinæ, three or four times a day for many days more, and yet a month elapsed without abortion occurring. Some time afterwards it did occur spontaneously, and probably would have done, had not the medicine been taken. I have, then, no confidence in medicines to procure abortion, and should never rely upon them for its accomplishment. The only certain means is by mechanically rupturing the membranes, and thus directly destroying the vitality of the embryo in utero, when it

must subsequently be expelled; without vitality, it becomes a foreign body, and will sooner or later be treated as such. This mechanical destruction can be easily effected, and, if care be taken, with the least probable amount of mischief to the parent. But in some cases where this proceeding is called for, there is such an extreme amount of deformity, and consequently such a malposition of parts, that great difficulties present themselves in the attempt to reach and find the os uteri, as well as to penetrate it when found: in such cases, the simple passing of the catheter, to empty the contents of the bladder, becomes a difficulty often not got over without additional assistance. If the deformity is equal on all sides, though more extreme, it often presents less difficulty than where the pelvis is unequal, or where pelvic tumours exist, as they frequently spring from some lateral portion: in either of the latter cases there is an obliquity given to the contents of the pelvis; and without considering these facts, the os uteri or urethra will be very difficult to find. The best position to effect this object is to place the patient on her back, the hips raised, the knees bent and raised, bringing the heels as near as may be to the nates. The best instrument is the male catheter (the female catheter being too short); the former can be held with greater steadiness, and the rupture of the membranes effected more easily. The escape of waters down the tube, with a tinge of blood, is pretty certain evidence of the success of the operation, which need not be repeated. This operation must not on any account be undertaken without the sanction, and in the presence, of another

practitioner. The expulsion of the embryo before the sixth month and a half, is strictly an abortion, the fœtus up to that period being non-viable; after that, all expulsions previous to the ninth month are termed premature labour—the product being a viable fœtus. Dr. Barrows, in the "American Journal of Medical Science," gives a case of a fœtus, ten inches long, and fourteen ounces weight, evincing respiration, pulse, voluntary motion, and uttering sound for some time after birth. Dr. Radford, of Manchester, had a case of a six months' child living to ten years of age. I had one case well-defined of six months and a fortnight, in 1825, that is now living, and is married, and has had a family since. Cases like these tend to prove the viability of a fœtus at an earlier period than is generally allowed; which in medico-legal questions is of considerable importance. It is necessary, however, to bear in mind, that a fœtus may move from muscular irritability, and yet not be viable. I believe viability to commence with the sixth month. In all cases of induction of abortion, it should ever be the rule of practice to have another practitioner present, to sanction the proceeding, as there are dangers to be feared arising from the operation, of a highly responsible and not unfrequently fatal character,—such as hæmorrhage, metritis, and peritonitis: in fact, the probable dangers from induction have been far too lightly estimated, though many deaths have been recorded by high authorities. A fatal termination does not necessarily occur immediately, except from hæmorrhage; it is most frequently from secondary causes, as metritis and peritonitis.

The selection of time for inducing abortion must entirely depend on the amount of deformity, or pressing nature of the circumstances requiring the operation. I believe the case should be allowed to proceed to the fourth or fifth month, if possible, as the earlier months not only present more difficulties in the way of accomplishment, but the result on the whole is not so favourable. This work being professedly on operations only, the general question of abortion is not entered into.

ABSCESS, MAMMARY.

This abscess usually occurs early after confinement, the primaparæ are most liable to it, particularly during the first three months, though it sometimes arises from congestion much later.

Causes.—Congestion, followed by inflammation, resulting in abscess; soreness of nipples, preventing the breasts being regularly relieved of milk; intentionally neglecting nursing, from the fear of pain, or determination not to be confined by the duties of a mother; exposure to wet or cold; undue compression; injury from blows; and after once occurring, liable to form again in future pregnancies.

Symptoms vary with the extent of parts involved. If in the skin and areolar tissue only, the pain is less severe, the blush, hardness, heat, and tenderness more circumscribed, and the pulse not so much disturbed. If the glands are affected, the pain is more severe, pulse quick and full, skin hot, headache, thirst, want of sleep, breast dusky-red colour and shining, and a feeling

of lumps internally, very painful to touch; sometimes all the structures are implicated when there is an aggravation of symptoms. The progress is generally rapid, if confined to the covering tissues, and not unfrequently matured by the third day.

Prognosis.—In scrofulous habits, abscesses are sometimes protracted, and have occasionally been fatal. In such cases there is a gradual loss of strength, appetite, and flesh, with rigors, restlessness, night sweats, diarrhœa. In other cases, seldom fatal, but often tedious, and difficult of cure.

Treatment is by Resolution or Suppuration.—The former is effected generally by saline purgatives (in cases of simple congestion), gentle application of the liniment. saponis c. opio, in the proportion of f℥ij. to f℥j. Cover the part with oiled silk, and support by a broad bandage. The most effectual in checking the secretion of milk, and assisting resolution, is the following mixture:—

℞ Sodæ sulphatis, ℥iss.
Infus. gentianæ,
Aquæ anisi, ana f℥iv. M.
Sumat coch. magn. duo ter die.

If there is much heat, pain, and excitement, resolution is not easily effected, and may require a few leeches, with cloths moistened in vinegar and water, constantly applied and covered with oiled silk, or a linseed poultice; still adhering to the saline medicines as above, with the addition of the antim. tart., with an occasional dose of hydr. chloridi: a non-stimulating

diet, drawing the breasts, and supporting them well with bandages. If these means fail, emollient poultices as warm as can be borne; purge less, and prepare for suppuration; when matured, it is preferable to use the lancet to waiting for the discharge by natural means; let the skin covering the pus be well thinned, and be careful not to open too soon, but when the operation is determined upon, open boldly and freely, otherwise the sloughs will block up the outlet, and do mischief. It is advisable not to use the lancet within the areolar ring, if it can possibly be avoided. Opening abscesses too early renders them apt to re-form, or, what is even worse, gives rise to troublesome sinuses. When the pus is well discharged, improve the diet, and give tonics. The child may draw the breast before pus is formed, but it is better to draw it by other means. But if any pus be formed, even though inclined to disappear by resolution, on no account should the child draw the breast.

ABSCESS OF THE LABIA PUDENDI.

It occasionally happens that abscesses form in the labia pudendi. From their situation, and the part they have to perform in the time of labour, it is highly necessary to try every means favourable to the resolving such abscesses, in preference to the suppurative process, as the latter mode might be followed by an alteration of form or density of structure that would materially interfere with the advancement of the head in time of labour. The peculiarities of these abscesses are, the excessive pain accompanying them, their very rapid

progress, and almost generally pointing on the inner surface. Although preferable to resolve labial abscess, it most frequently happens (from its rapid progress, and the disinclination to submit to have the part examined) that the time for resolving is gone past; hence the most frequent termination is suppurative. Taking these points into consideration, it is necessary to adopt means for the resolutive treatment with greater energy; in this case leeches may be applied more freely, and even bleeding in the arm may be necessary, if the constitution is not too much interfered with. In all other respects the *treatment*, *resolutive* and *suppurative*, will be as in other abscesses.

In using the lancet, follow the indications of nature. Prefer opening on the inner surface, *where it can be done*, and open freely. I do not approve the suggestion of some, to let the pus out slowly (drop by drop), and can see no advantage arising from it. Care must be taken to keep the inner surfaces of the labia asunder by greasy pledgets of lint. Do not use the lancet at all, unless the pain is excessive, and there appears a disinclination to discharge the pus, with a constitution suffering in consequence. If general health is bad, advise bark bitters, tonics, chalybeates; and if means will allow, remove the patient into the country for a change of air.

ABSCESS OF THE OVARY.

The result of acute or chronic ovaritis is often an abscess, acute inflammation producing the largest abscess, as being more generally diffused throughout its sub-

stance; one case mentioned by Andral having twenty pints of pus. I have seen two of nearly that amount.

Symptoms, generally analogous to ovarian dropsy; the fluctuation, however, is less distinct, and seldom grows so large as in the dropsical affection, the latter often reaching from sixty to eighty pounds of fluid. Pus is generally seated lower abdominally, often in the pelvis; has more pain, tenderness, and general disturbance, and always accompanied by rigors.

Result.—May burst in the peritoneum, and give rise to peritonitis, often fatal, or extensive adhesions; most frequently points to one of the iliac regions, and discharges outwards; sometimes it communicates with the uterus, bladder, or rectum, and escapes through their cavities. It has opened into the Fallopian tube, and from thence into the uterus. The termination has been in a few cases by gangrene.

Treatment, preventive.—Antiphlogistic treatment, active, to the iliacs, groins, anus, and labia; aperients, rest, and spare diet. If suppuration is certain, evacuate at the apex of the tumour pointing outwardly; some say wait for adhesions to form; if so, it may give way elsewhere, and fatal peritonitis result. If required, puncture through vagina by the trocar. *Against gangrene:* antiseptics, and chlorides, internally. *Chronic form:* less dependence on antiphlogistic treatment, and more on counter irritation, setons, moxas; iodine and mercury never to be resorted to if there is any intention of submitting to extirpation subsequently, as their effect on the system is depressing in the extreme, and lessens the chance of recovery. Diet moderate, and

drinks simple; exercise limited, not to fatigue. *All failing*, extirpation only remains. (*Vide* OVARIOTOMY.)

ABSCESS, PELVIC.

Although no doubt pelvic abscesses occurred to ancient as well as modern practitioners, yet it is only in the writings of the latter that they are especially spoken of.

Character.—They may occur in unmarried as well as married women, and at different periods of life.

Causes.—Local irritation, from the use of uterine sounds, pessaries, the result of hysteritis, puerperal fever, and other inflammations of the contents of the pelvis; they have also followed abortion and severe labour.

Situation.—Sometimes show above the brim of the pelvis, at the pubes, or Poupart's ligament, and at others felt through the vaginal coats.

Symptoms.—Fever, rigors, pains at the lower part of the abdomen, tumefaction showing at some point varying in size, and in the cavity of the pelvis, generally inclining to the left side, altering the position of the uterus, and giving pain when that organ is moved by the finger. Inability to extend the legs straight, irritability of the bladder and rectum, pulse quick, night-sweats, anorexia, irregular bowels, restlessness, and when the result of hysteritis or puerperal fever, attended by emaciation. Duration may be short, or it may extend over some months, according to the disposition to *resolve* or *suppurate*. In the event of suppuration, it may discharge itself spontaneously into the abdominal cavity,

and produce peritonitis, and probably end fatally; or into the bladder, and escape per urethra with less danger; or into the rectum, the most usual and most favourable termination; or into the vagina, also a desirable result.

Prognosis.—Uncertain, sometimes though not often fatal; is tedious, and may give rise to other diseases of a more dangerous character; reduces the strength.

Treatment.—As long as rigors are absent, resolutive means should be steadily persevered in with considerable energy; but if the formation of pus is evident, then by every means induce the discharge, by rectum or vagina, spontaneously. But if the system is suffering, open the tumour through the coats of the rectum or vagina, if the depending part favours; if not, at the most favourable point elsewhere. Precede the operation by the exploring needle, if there is any doubt, particularly if above the pubes or Poupart's ligament. For maturing abscesses of the pelvis, the hip-bath is an excellent application. After the abscess is discharged, strict attention is necessary to the constitution (which probably has suffered): the use of a generous diet, bitters, tonics, &c. I prefer a curved trocar or bistoury for the opening of these abscesses.

ABSCESS, PUBIC, SACRO-COCCYGEAL, ETC.

Inflammation of the symphyses is sometimes followed by suppuration, ulceration, and separation of the bones, producing tedious and sometimes permanent lameness. If discovered early (not often the case, from false deli-

cacy), active resolutive means must be enforced; if these fail and suppuration is certain, open it with a lancet as soon as it is matured, for it is of consequence not to allow the pus to lie longer than strictly requisite over the symphysis; from this alone, tedious ulceration, if not separation, may be the consequence. If separation really occurs (particularly at the pubes), a tight and well-fitting bandage should be applied round the pelvis, to keep the bones in true apposition, and the recumbent position enforced for many months. If this accident occurs at the sacro-coccygeal connexion, a separation of the bones is very probable. After the discharge of the abscess, it will be necessary to be careful lest the two bones re-unite at right angles; in such cases, the junction must again be fractured at the succeeding labour; this can only be done by the bones being placed in their proper position by the index finger in the rectum, and the thumb on the outer surface; the parts to be thus examined and rectified from time to time, till the union (in proper position) is complete. The abscess in this case to be opened at its most dependent part, whether vaginal or rectal. During recovery, the patient should sit on a hollow chair, or what is better, one with a hole in the centre, as the parts are a long time tender. The treatment generally, resolutive and suppurative, the same as other abscesses. Abscess of the ovaries, uterus, psoas, nymphæ, have all the same common treatment. With respect, however, to an abscess of the substance of the uterus, which has been noticed by Siebold, Busch, and others, it is situated within the tissues, and is as likely to discharge

itself into the uterine cavity as the abdominal cavity, bladder, or rectum; the worst is, when it is discharged into the abdominal cavity: elsewhere it is easily got rid of; but when in the cavity of the abdomen, it may be absorbed, or sink into the pelvic cavity, and form a secondary tumour there, and felt in the rectum or vagina. Generally this termination is tedious, followed by ulceration, and it affects the constitution very considerably. In operating on these pelvic, &c., abscesses, the most useful instrument (and where the incision or puncture has to be made through the rectal or vaginal coats, and one that cannot be dispensed with) is the curved trocar (Fig. 1) here delineated; its length from shoulder to

Fig 1

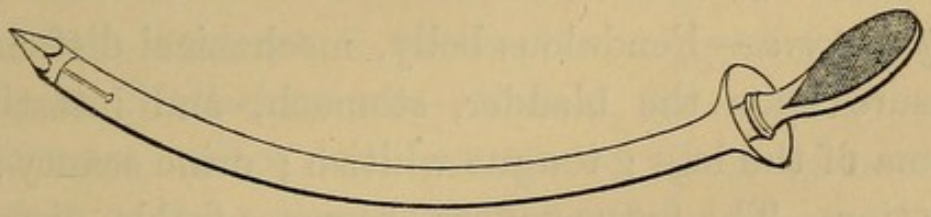
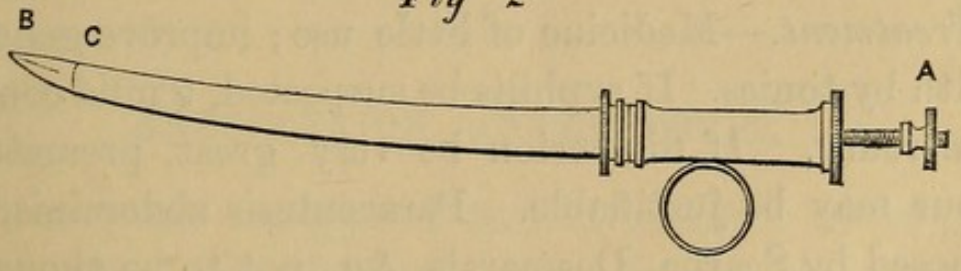


Fig 2



point is five inches: the next is the slightly curved bistoury, or the protected spear, enclosing a spring (Fig. 2). This last is a safe instrument to use, as the depth of the incision can be regulated by the cap on the

screw at A, Fig. 2; and the spear not thrust out at B until the curved end of the canula arrives at the point intended to be pierced.

AMNION, DROPSY OF.

An unusually large amount of liquor amnii, causing considerable distress from mechanical pressure. This is quite distinct from the secretion between the amnion and chorion. The disease is rare—at least, extensive deposits.

Cause.—Excessive secretion of the vessels of the amnion, most probably the result of previous inflammation, often accompanied by morbid condition of the placenta.

Symptoms.—Pendulous belly, mechanical distension, pressure upon the bladder, stomach, and intestines; œdema of the legs; tongue whitish; urine scanty; indigestion. The fœtus suffers, becomes feeble, diseased, or dies before completion of gestation.

Diagnosis.—Distinguished from ascites by signs of pregnancy.

Treatment.—Medicine of little use; improve general health by tonics. If syphilis be suspected, a mild course of mercury. If distension be very great, premature labour may be justifiable. Paracentesis abdominis, as proposed by Scarpa, Desmarais, &c., not to be thought of. If only consulted at the time of labour, rupture the membranes, but be on the alert lest flooding occur from the flaccid state of the uterus.

ANI, PROLAPSUS.

This troublesome affection is not an unfrequent occurrence in pregnant as well as other females, and a very common affection in children. It is too well known to require description, and I introduce it here merely to point out a means of dressing that has, in very stubborn cases, which defied every other means, succeeded most admirably. In adults, according to a suggestion of Dr. Broxholm, I have applied nitric acid over the whole exposed mucous surface, and immediately after smeared the parts over with lard, and then replaced them in their natural position; so far, I have succeeded in every case with only one dressing. In children, however, I prefer the suggestion of Mr. Lloyd, at Bartholomew's,—that is, by rubbing over the mucous surface with nitrate of silver in a solid form, two or three times, with a few days' interval. In these cases, after a few minutes I smear with lard, and replace the parts. Both these plans are highly deserving the notice of the profession in very stubborn cases.

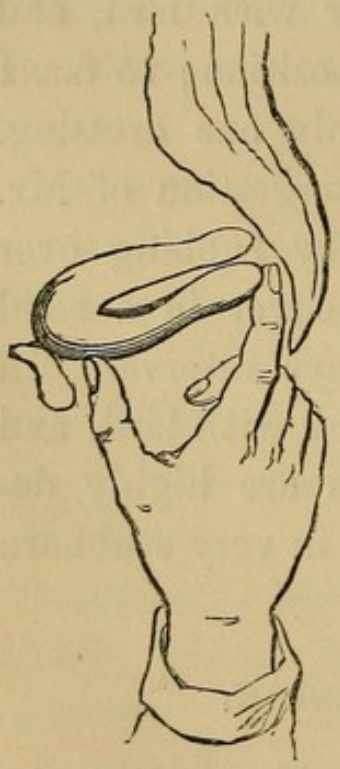
ANTEFLEXION, ANTEVERSION.

These terms are applied to that accident where the fundus uteri falls forward, immediately behind the symphysis pubis, and the os uteri tilted backwards towards the sacral curve, about its middle. It is a very rare occurrence, but there are some cases recorded.

Causes.—Sudden falls; general debility, and relaxation of the pelvic viscera; large fæcal accumulations; metritis; fibrous tumours; diarrhœa, &c.

Symptoms.—Sense of weight in the pelvis; pain; sometimes, though very rarely, retention of urine; constipation.

Diagnosis.—By vaginal examination; fundus at pubis; os in the sacral hollow can scarcely be taken for stone, which a sound would detect; ovarian tumours, situated more laterally; and the fundus and os uteri the very reverse of retroversion.



Treatment.—Often rectifies itself, if not severe. Pass the forefinger to the hollow of the sacrum; fix the tip of the finger into the os, or above the upper lip, and hook it downwards; at the same time, press the fundus upwards and backwards with the thumb of the same hand. So little has retention of urine to do with this accident, that it is advisable to let the urine collect, in order that the pubic space of the pelvis may be better filled, and afford a cushion to keep the fundus backwards, *in situ, when replaced.* After replacement, a broad, well-fitting bandage should be firmly applied round the abdomen, the recumbent position advised, and mostly on the back.

ANUS, IMPERFORATE,

Occasionally occurring in the obstetrician's practice, and usually requires a very simple operation to remedy; if the rectum beyond is normal in its bearings, a small crucial incision through the covering at the part, generally indicated by a different colour, in consequence of accumulated fæces beyond. But cases occur where the operation would be of no service, and therefore care should be taken to distinguish the nature of the case well before attempting it. I was called by my friend Mr. Ledward to see a case, some time ago, where there was no indication of fæces, or discoloration behind the usual position of the anus; and, in addition, fæces escaped from the urethra, mixed with urine. I advised no operation. Some time after the child died, and the post-mortem justified the decision. There was malformation of the rectum, which terminated, at some distance from its usual outlet, by a small entrance at the posterior and inferior portion of the bladder, which fully accounted for the escape of fæces with the urine from the urethra. The distance from the usual opening of the rectum to the partial cul-de-sac of the rectum, in this case, would have entirely defeated the operation, if it had been performed. The operation becomes more complicated if an opening has to be made into the base of the bladder or urethra, as a substitute for the rectum. And lastly, Littré and Callisen proposed an artificial anus, by cutting into the sigmoid flexure of the colon, or descending colon. But from its want of success, the operation cannot be advised.

ASCITES, FŒTAL.

ASCITES, OR TYMPANITES, may exist, and is detected by the difficulty to advance after the shoulders have passed the outlet. The finger will discover the abdominal enlargement.

Treatment.—If the usual traction and assistance with the fingers are not sufficient, the blunt hook may succeed; if that fail, tapping of the abdomen will become necessary, with the trocar, to give exit to the confined fluid, whether water or air.

ASPHYXIA, FŒTAL.

Cause. — Premature detachment of the placenta; uterine hæmorrhage; defective nutrition.

Symptoms. — Extremely feeble breathing, scarcely perceptible; no pulsation of cord; action of the heart scarcely definable.

Treatment.—First divide the cord; warm bath and cold affusion alternately; friction with flannels; irritating nose and fauces with a feather; electricity, if means are at hand; artificial respiration; after recovery, very warm clothing. If caused by pressure in prolonged labour, *bleed* (by removing the ligature from the cord) to a tablespoonful.

In the apoplectic form the face will be livid: in such cases, bleed to half an ounce by the cord. Other means, as above.

BALLOTTEMENT.

A term given by the French to a mode of examination *per vaginam*, to ascertain pregnancy. There is no synonyme in the English language for this word. Its meaning is succussion, or agitating the fœtus in utero. *Ballottement* is not applicable earlier than the fourth month, at least, its indications are very uncertain before that period. The mode is by an examination *per vaginam* with the index finger; the best position is standing, the feet about a foot apart. When the finger is placed on the cervix, the operator is sensible of a hard body lying within (*that is, if pregnancy exists*); the finger is then suddenly pushed against the cervix, the hard body retreats upwards, but after two or three seconds falls again to its original position, which is sensibly felt again by the finger. If pregnancy is advanced considerably, the hard body (fœtal head) will balance itself on the point of the finger, hence the term *ballottement*. Whilst the hand of the operator is occupied as above, the left hand is to be placed over the fundus uteri, gently fixing it.

Explanation.—The fœtus floating in the liquor amnii rests gently on the cervix, and the slightest percussion drives it upwards in the fluid, but after a few seconds it descends to its former position. *Ballottement* is pretty certain evidence of pregnancy, but should be supported by other tests. Some little uncertainty might arise if ascites, or an unusually large amount of liquor amnii, were present, or the fœtus very

small and cervix uteri unusually long. Polypus uteri might form the hard ball at the cervix, but would not retreat on being struck. There are other modes proposed, but not so advisable as the above, namely,

Patient supine, or on her side, one hand of the operator placed open on the side of the abdomen, whilst the opposite side is tapped sharply with the other, when the fœtus is thrown against the opposite parietes, so as to be felt by the open hand at rest. This plan has been suggested to avoid vaginal examination, but rests on greater uncertainties, and is only applicable to later periods of pregnancy, and was proposed by Dr. Montgomery.

Another mode, by Dr. Heming, has the same objection. The patient is placed on her side, with her knees and hips raised, so that the fœtus is brought near to the fundus uteri, and the latter in contact with the parietes; the jerk is given above the pubis, whilst the other hand is placed open over the fundus uteri, and the same results sought for as before.

The first mode, and the one usually adopted, has advantages even over the stethoscope, as it will detect pregnancy when the child is dead, where the stethoscope would fail. In one case only, the usual mode of *ballottement* must fail—that is, where the placenta is attached over or near the os or cervix; when this occurs, either of the two other modes will give a better definition of the case. From the fourth to sixth month is the best period for *ballottement*, and, before this operation, the rectum and bladder should be previously emptied. Fig. 1. The finger of

the operator is suddenly striking the cervix on the pubic side when the ball is felt; the effect of the stroke is perceived in Fig. 2, the ball (or head of the fœtus)

Fig. 1.

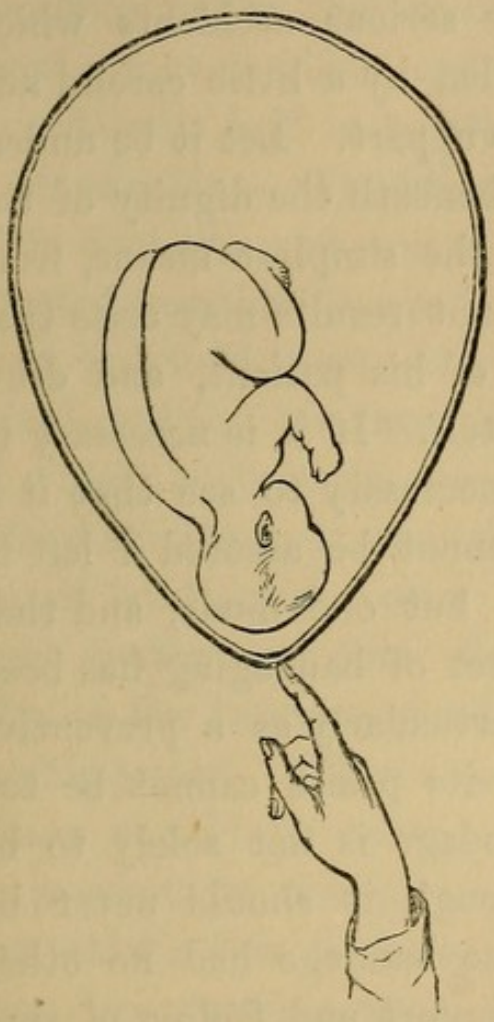
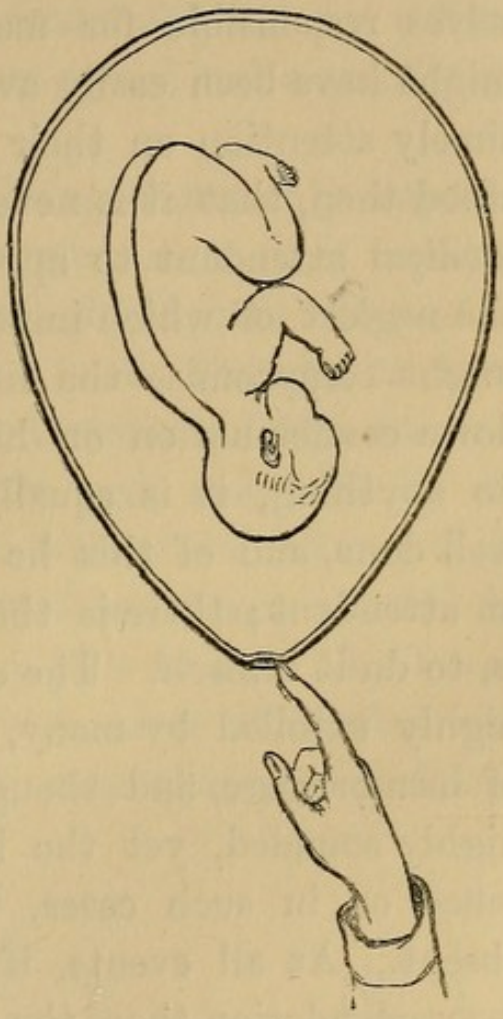


Fig. 2.



rises in the liquor amnii, and is not felt, but in a few seconds it again falls to the position of Fig. 1, and is again sensibly felt by the tip of the finger, and then balances on the finger.

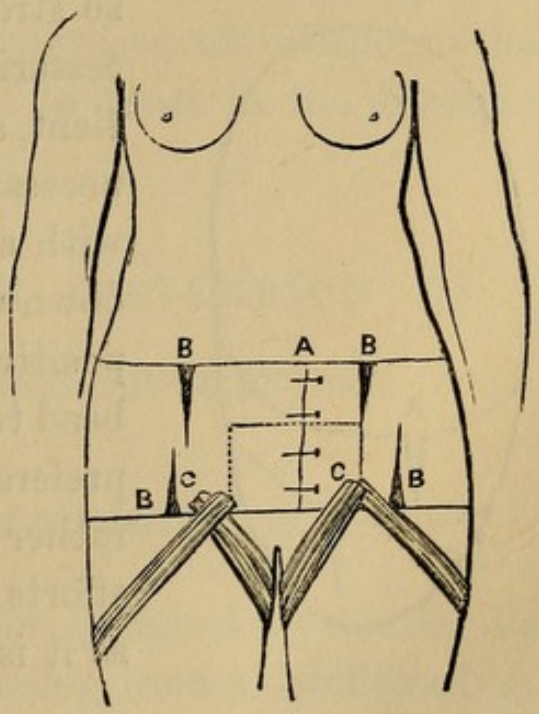
BANDAGE, ABDOMINAL.

There is scarcely anything apparently more simple in its application than the abdominal bandage, and yet, strange to say, after long observation and inquiry, I

have seen and heard of a large amount of evil from its being inefficiently and carelessly applied. Indeed, very many practitioners leave this very important matter entirely to the hands of nurses, and thus render themselves responsible for many serious accidents which might have been easily avoided by a little careful and timely attention on their own part. Let it be understood then, that it is never beneath the dignity of the medical attendant to apply the simplest means, from the neglect of which important results may arise that might compromise the life of his patient, and draw down condemnation on himself. If it is necessary to do anything, it is equally necessary to see that it is well done, and of this he cannot be assured if left to an attendant; there is then, but one mode, and that is, to do it himself. The effect of bandaging has been highly extolled by many, particularly as a preventive of hæmorrhage, and though its praise cannot be too highly sounded, yet the bandage is not solely to be relied on in such cases, though it should never be absent. At all events, if the bandage had no other recommendation than the comfort and feeling of support to the female immediately after accouchement, it would be amply sufficient for its general adoption. There is a variety of bandages in use, each strongly recommended by their inventors, some expensive, some complicated to make, most of them have all the good qualities attached to them, *except two.* 1st. *They are seldom at hand when wanted;* 2nd. Their expensive make defeats their utility. Therefore I suggest for adoption the simplest form of bandage, made of the

most simple material, and one that can be procured any where and on any emergency. Thus, one made of a straight piece of double calico or flannel—the latter is too elastic, and in summer uncomfortably warm,—I therefore prefer the double moderately-strong calico, about a foot in width, and from a yard and a quarter to a yard and a half in length.

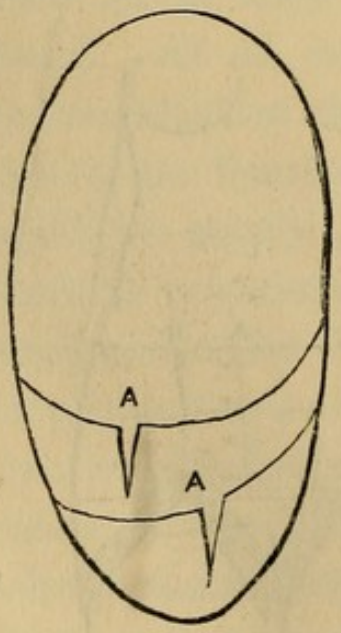
Application.—The uterus being thoroughly emptied of its contents, and well contracted, a couple of napkins doubled together as a pad, and placed over the fundus uteri, and held there with one hand, the hips are now raised, and the bandage passed under quickly, one end of which is brought over the pad, and held by an attendant firmly at one side, whilst the other end is passed contrariwise over the former, and secured in front by three or four strong pins at A. The lower edge of the bandage should just cover the pubes and the hip-joints. When steadily secured in this position, means should be taken to prevent its rising to the waist; this is best done by pinching up a small portion in two places on the upper edge, and one or two on the lower edge in front, like gussets, and pinning them as at B B. And an additional mode of preventing its rising is by two slips of calico, one passed under



each thigh, and the two ends secured to the main bandage in front at C. The dotted line in front marks the situation of the napkin pads. A certainty that no hæmorrhage is going on, and a good large folded napkin to the vulva, complete this part of the accoucheur's duty.

BANDS, VAGINAL.

Bands or cicatrices are sometimes formed in the vagina, the result of previous inflammation and sloughing from protracted labour, or violence in instrumental delivery, the healing of which has been irregular, forming these bands or cicatrices across the vagina, which considerably impede future delivery, by contracting the space of the vaginal canal. It is however possible, the efforts of labour and the advancement of the head may accomplish the breaking down (by laceration) of these impeding bands; but it is also probable that they may be so strong as to delay labour unnecessarily, to the prejudice of the patient, and therefore it may become necessary to cut the bands across with a bistoury, taking care to cut downwards, but not more than is positively necessary to allow the head to advance for delivery. It is preferable to use the bistoury rather than allow violent natural efforts to break down these bands, as it is difficult to say, under the



latter circumstances, where the tear might terminate, and which might probably end in a much worse evil, as recto-vaginal fistula, &c.; the operation is very simple, requiring more care than dexterity. It is best to cut the upper edges of these bands downwards, as at A A; a slight cut will be sufficient, when the impeded head will be liberated, and advances satisfactorily.

BELLADONNA APPLICATIONS.

In cases of irritable uterus, where narcotics are indicated, plasters of belladonna have been recommended to the abdomen or sacrum; the latter place preferred.

Boivin and Dugès assert, when polypi are very large, and cannot be forced out of the os, if the os is not in a relaxed state from previous hæmorrhage (which it usually is), free application of belladonna to the os uteri is advisable, and often has a very good effect.

In cancerous or scirrhous affections of the os, where pregnancy co-exists, the application of belladonna has been strongly recommended to assist in the dilatation of the morbid os uteri.

BLADDER, SIMPLE DISTENSION OF.

(*Vide* CATHETER, INTRODUCTION OF).

BLADDER, PROTRUSION OF.

Protrusion of the bladder (Vaginal Cystocele) has occasionally been known, arising from a debilitated and

relaxed state of the vaginal walls, pushing the coats of the vagina before it, and the tumour occupying the pelvic cavity.

Symptoms.—A feeling of fulness, pain, and tension in the vagina, with a desire but inability to pass urine; a soft tumour in the vagina, covering the child's head anteriorly, but never posteriorly; this latter feature distinguishing the case from the usual uterine membranes and liquor amnii, for which (it is said) it has been mistaken, though not very probable.

Treatment.—The first duty is to pass the elastic gum catheter—which should always be preferred to the silver female catheter, whenever there is any obstruction or deviation from the natural direction in the canal of the urethra, as less liable to do mischief. When the catheter is introduced, one or two of the fingers are to press the fundus of the bladder into its normal position, in an upward direction, behind the pubis. The directions for introducing the catheter will be found under the head CATHETER.

BLADDER, RUPTURE OF.

One of the most fatal accidents in obstetric practice, and sometimes co-exists with ruptured uterus, though rarely. Most frequently arises from inattention to its unusually distended state with urine, and also from the rash use of instruments.

Symptoms.—Violent, sharp pain; sensation of bursting quite distinct; anxiety of countenance; rapid sinking; tumefaction and tenderness above the pubis; if

co-existing with ruptured uterus, recession of the presenting part; indeed, many of its symptoms are analogous with ruptured uterus. The firm fulness of feeling of a distended bladder is not felt; but the tumefaction is more diffused, and there is slight fluctuation.

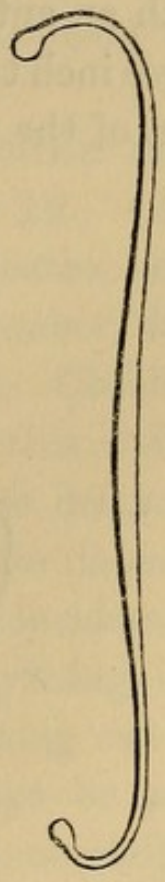
Treatment.—I should first state that this almost universally fatal accident scarcely can occur in a careful practitioner's hands. The child should be delivered immediately: *little more can be done* but to leave the helpless female to her wretched fate, unless the proposition of Dr. Blundell be adopted, of opening the abdominal cavity, sponging out the urine, and endeavouring to place a ligature including the lacerated part. Such an accident never occurred to me; but, after opening the abdominal cavity seventy-five times, for the extirpation of diseased ovaria, &c., I certainly should not hesitate in such a case (where otherwise death is inevitable) to attempt the saving of the female's life, however small the hope. I feel I should be fully justified in the attempt. If such an attempt were made, the treatment would be similar to that subsequent to ovarian extirpation or Cæsarian section; and if death resulted, it would most probably be from peritoneal inflammation, or shock.

BLUNT HOOK APPLICATION.

The blunt hook, or rather blunt crotchet, is an instrument of considerable utility to the accoucheur, and in careful hands its assistance is of great value. It is not within the province of this work to say anything on the history of this instrument; I shall therefore pro-

ceed at once to its practical application, prefacing my remarks by the following advice. Never use any instruments with a view of saving your own time, or of exhibiting your skill unnecessarily; when strictly necessary, use them with firmness and decision, and with as much dispatch as can conveniently be done, avoiding hurry; lastly, let the attendants see as little as possible of any instruments used. It may be necessary to apply the blunt hook to the armpit, after the delivery of the head in natural labour, or in natural presentations where the forceps or lever has been necessary to deliver the head; many of these cases are often fixed from being large, or the pelvis contracted, or parts rigid and unyielding, and where the finger is unable to accomplish the object. In these cases the armpit, next the perinæum, should be selected. It may be required to bring down the hips in cases after the head and shoulders are delivered, or to adjust the long diameters to each other; the hook is but seldom required in such a case, as the accoucheur has already a considerable amount of power in his hand for this purpose on the body of the child. If the hook should be used, pass it along the back. In breech cases it is often required to be applied to the groins, taking care to adjust the diameters before traction is exerted. In cases where the body is born, the arms remaining with the head, it may be necessary to use the hook by placing it on the inner bend of one of the elbows. In all applications of the blunt hook, care must be taken to have it fixed firmly on the right place, for if it should slip, irreparable mischief may result. In dead children, where

all is born but the head, it may be required to place the hook in the mouth when the finger has failed. It has been used after craniotomy, where the head is disproportionably large; but in this case the craniotomy forceps may be considered preferable. The eye-socket, cavity of the ear, mouth, under the chin, back of the neck, projection of the temporal bone, foramen magnum, are all good holdings for the hook. For the trunk, the clavicle, spine of scapula, over the false ribs, on pubis, coccyx, spine, promontory of the sacrum, and ischiatic notch, are all fair holdings; of course, in many of these cases evisceration will have already been accomplished to lessen the general bulk. Great care must be taken against slipping, and the perinæum should be well guarded and supported. As hooks of different sizes are sometimes required, I prefer the old double hook of Smellie and others affording all the tractile power necessary; and by wrapping a cloth round the end used as a handle, it is rendered easy of management to the accoucheur, as well as two sizes of hook in one.

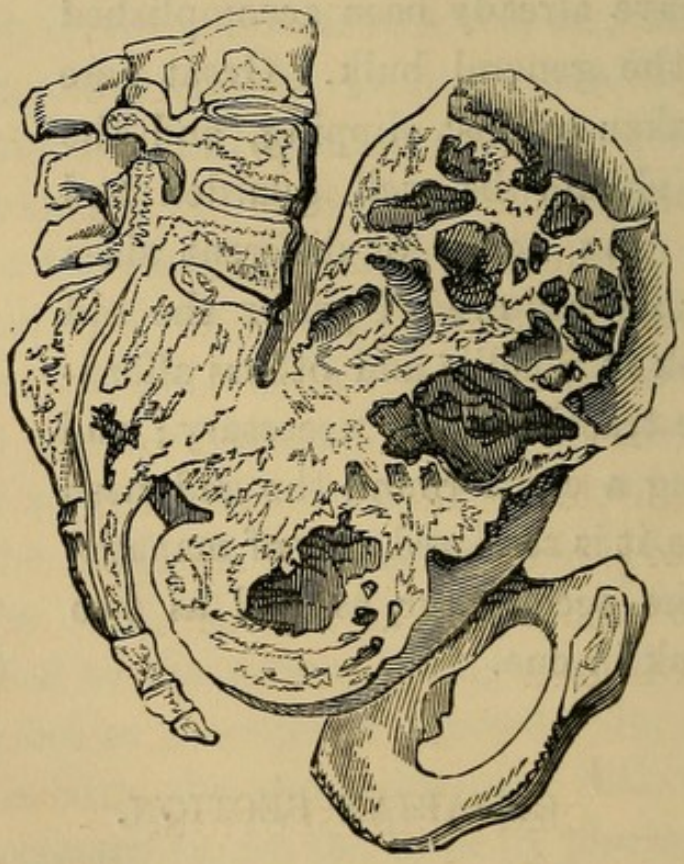


CÆSARIAN SECTION.

This is one of the most formidable operations in obstetric surgery, and, like its almost analogous one of ovarian extirpation, has met with the highest possible praise from some parties, and the most sweeping and

unjustifiable condemnation from others. It proposes to extract the living fœtus from the womb through the parietes of the abdomen by the knife. A mode said to have been practised for the birth of Scipio Africanus, Claudius Cæsar, Julius Cæsar, &c.; from the two latter the name of the operation has been derived.

Objects.—1st. To afford the mother a chance of life in a case otherwise perfectly hopeless. To the child a still better chance of life. The operation is justifiable with an antero-post diameter of an inch and a half and three inch transverse, or under, or almost perfect obliteration of the passage by osseous growths, as in the figure.



2nd. To extract a living fœtus from a dead mother, and which may be done a full hour after the death of the parent with a chance of success. 3rd. To extract an extra-uterine fœtus in extra-uterine preg-

nancy, or after rupture of the uterus; under these circumstances the operation is not called Cæsarian, but gastrotomy. I have some doubts that some cases recorded as Cæsarian are only gastrotomy; the one by Barlow has been said by parties present not to be more than that of gastrotomy.

Statistics.—British and American cases combined have been stated at 52, of which 40 died, and 14 recovered; about 1 in $2\frac{1}{3}$.

Nearly 400 foreign cases have been recorded; the result, 1 recovery in $2\frac{1}{3}$.

The last statement by Dr. Radford of British cases alone amounts to 64; deaths 46, recoveries 18. Children saved, 34. Foreign, 371 cases; 154 deaths, recoveries 217. Children saved, 139. Total number, 423. Mothers saved, 231; died, 192; or 1 in $2\frac{1}{3}$. Children saved, 167. It has been the misfortune of this operation, both in this country and in America, to delay its performance to the latest period, when labour is commencing, or has been in operation for a considerable time; placing the female in a condition anything but favourable to the chances for recovery: nothing can be more absurd. The operation should always be performed early, if no doubt exists as to its necessity; that is, preceding the accession of labour: every hour after the rupture of the membranes the hazard is increased.

I would come as near the completion of the natural period of gestation as possible, but would never wait (by choice) until labour had commenced.

Preliminaries to the Operation.—1st. The bowels to

be well evacuated, *but never by drastic purgatives.* The only admissible aperients are castor oil, or, what is infinitely preferable, the inspissated ox gall, which has a double advantage, of clearing out the bowels, and more particularly of removing flatulency (that troublesome object in all operations of the abdominal cavity). The ox gall removes it most effectually, as I have repeatedly experienced. 2nd. The bladder to be emptied naturally, or by catheter; and here, where extreme deformity exists, the elastic gum catheter is preferable to silver female catheter usually used. 3rd. Carefully ascertain the position of the placenta. 4th. The apartment to be heated to 75° or 78° Fahr. This point has only of late been admitted. The great success of my own operations for ovarian extirpation has been in a great degree owing to this particular circumstance, and I feel convinced that the only two Cæsarian sections since (in this part of the kingdom) owe a great portion of their success to the same cause; let, then, this very important point never be neglected. 5th and lastly. Exhibit chloroform, as directed in the early pages of this work.

Operation.—First a bold incision, from seven to ten inches, along the linea alba, from umbilicus to pubis, more or less, according to circumstances: if necessary, to go higher than the umbilicus. Care must be taken *not to cut through, but by the side of the umbilicus*, as it might give rise to umbilical hernia. The incision must be through the integuments and peritoneum, when the uterus is exposed. A somewhat shorter incision is enough through the uterus, taking care to avoid the

situation of the placenta. Then if the liquor amnii be in quantity, remove it by sponges; if not, it will do after the child, placenta, and membranes are removed, which must be done without loss of time. When extracting the membranes, twist them round whilst removing them. When the uterine cavity is emptied, see that the os uteri is pervious for the passage of the lochia; to be certain, pass the catheter through the os a little way. The incision of the uterus requires no suture—in fact, is better let alone altogether; but the parietes must be secured by three or four interrupted sutures; three or four adhesive straps between the sutures, over which a pledget of lint, and over all a good bandage, such as is described under the head BANDAGE, ABDOMINAL. After placing the female in bed, a good opiate, of not less than two grains of soft crude opium, must be given; perfect quiet enforced; diet and drinks limited, and of the simplest possible character. For the first, panada, meal gruel, &c.; and for drinks, Arabic gum-water, milk and water, toast-water, weak tea—all just warm, but never hot.

Cause of Death.—Shock; hæmorrhage; strangulation of a loop of intestine; metritis; but most frequently from peritonitis, or the opposite, extreme exhaustion. If from peritonitis, death usually takes place on the third or sixth day; but if from exhaustion, on the sixth, ninth, or twelfth day.

I have had, whilst this work was preparing, a case of Cæsarian section of a female, aged twenty-seven, of the first child, in consequence of a large fibro-cartilaginous pelvic tumour, occupying the whole cavity of the pelvis,

springing from the middle portion of the sacral curve, hard and immovable, affording only a very small space of an inch and one-eighth at the posterior edge of the symphysis pubis, terminating rapidly, laterally, to a point. The following diagram will explain:—Fig. 1. Outline of space behind the pubis; Fig. 2. Tumour;

Fig. 1

Fig. 2

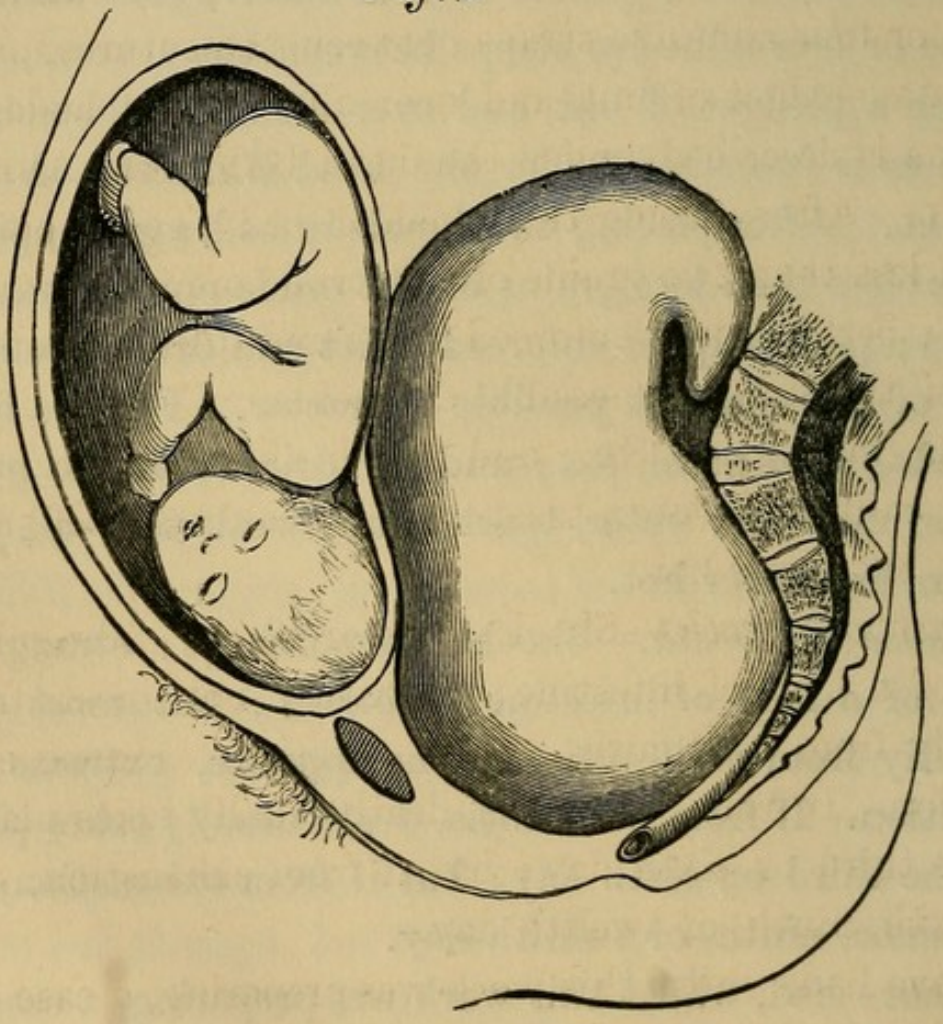
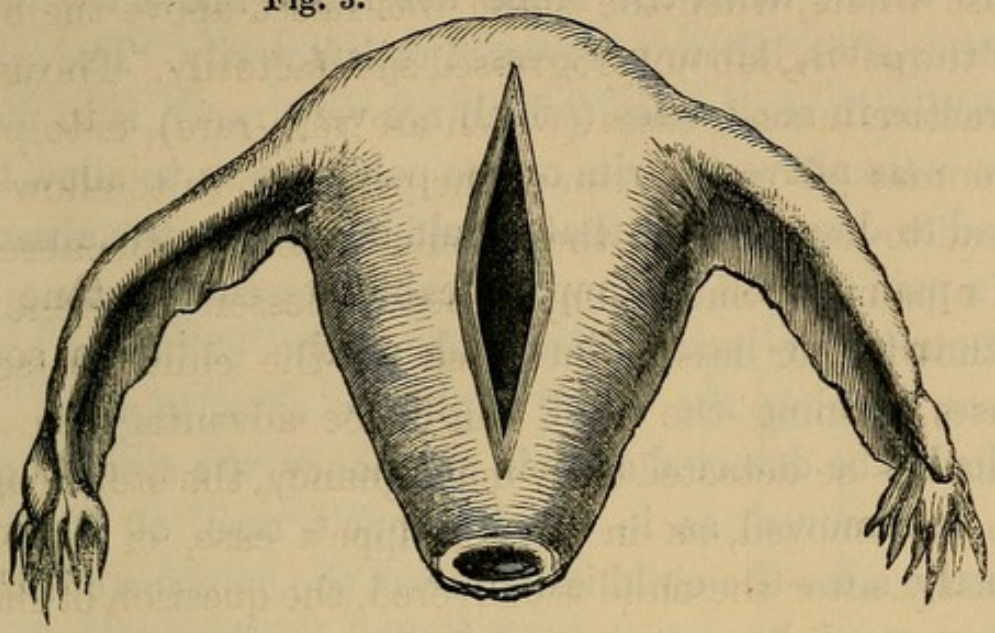


Fig. 3. The state of uterus after death, fourteen days after operation. (*Vide* page 45.)

Result of the Case.—Child dead at birth; mother

subject to extensive disease of the lungs; did well to the twelfth day. The abdominal incision entirely

Fig. 3.



healed; plasters all removed. The cough and dyspnœa, however, increased, and she sank on the fourteenth day

After Death.—Extensive tuberculosis; pus in the uterus; the uterine incision not in the least healed. If any choice had been offered, the condition of this female was not fit for any operation; but the question was immediate death or an attempt to save life (by the section), however short its duration—which, after all, was wonderfully extended, considering the extensive disease displayed (of long standing) after death.

CALCULUS, URINARY.

When calculus occurs large, it may descend before the head, and impede delivery, or expose the bladder to the necessity of incision, rupture, or laceration. Gillimeau first mentions this case. La Gonache had a case in which vaginal lithotomy was performed. Smellie

relates a case where the head forced the bladder, including the stone, downward and outwardly. Dubois had a case where, when the stone was raised above the brim of the pelvis, labour progressed satisfactorily. The usual practice in such cases (which are very rare), is to push the mass above the rim of the pelvis, so as to allow the head to descend, and that should be done in the absence of a pain: if that is impracticable, lessen the stone by lithotrity, or lessen the head of the child; in some cases, turning the child might be advantageous. If calculus be detected early in pregnancy, the stone ought to be removed, as in M. Philippe's case, of Rheims. Lastly, after the child is delivered, the question of lithotomy must be entertained before another pregnancy. Lithotomy ought not to be entertained at the time of accouchement, if by any possibility it can be avoided—by craniotomy or otherwise.

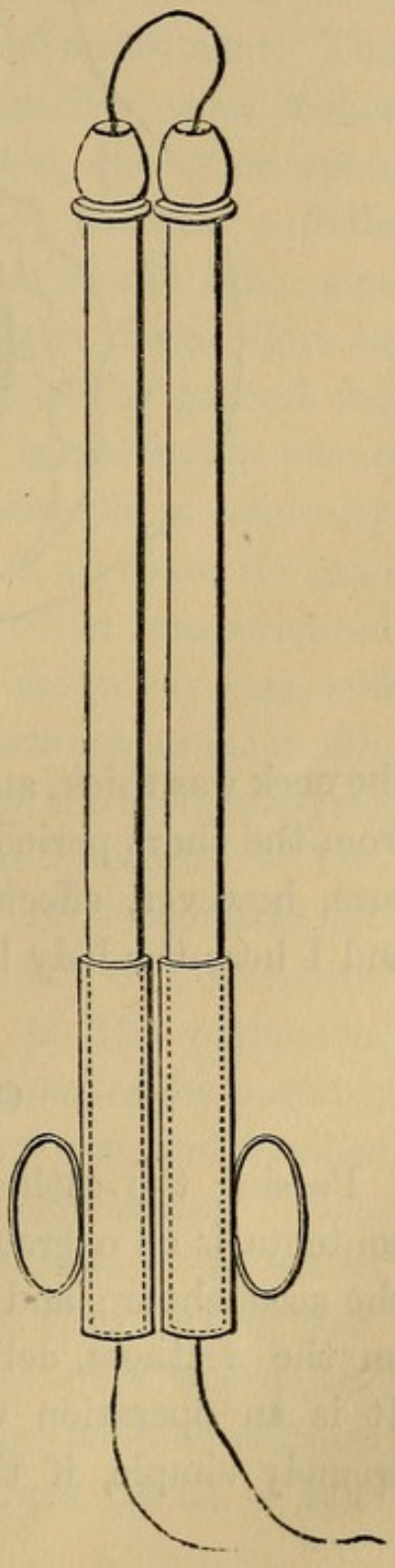
CALCULUS, UTERINE.

The cavity and substance of the uterus are, though very rarely, subject to the formation of calculi, the cause of which is unknown: they are seldom detected during life.

Symptoms are analogous to prolapsus, polypus, &c. Have occasionally been felt with the finger, or uterine sound. Cases have been recorded by Bonet, Skenchius, Lieutaud, Louis, Roux, Amussat. The calculi chiefly consist of soda, potash, lime, sulphates and phosphates, and gelatine, and are found as large as ten ounces. They may be spontaneously expelled; some require

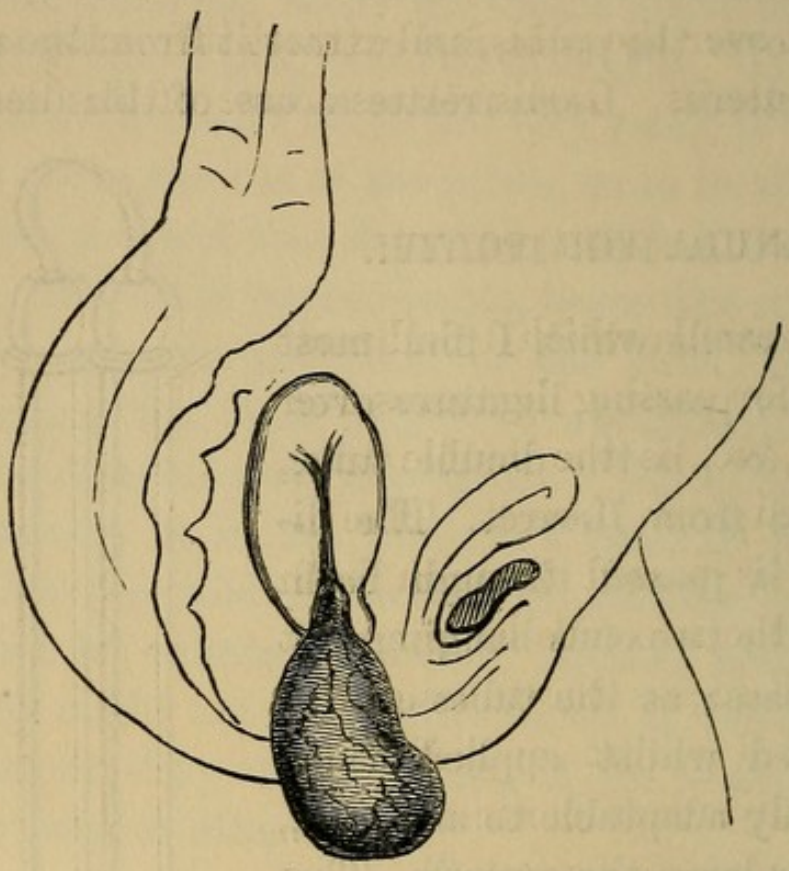
forceps, or scoop, or, if very large, may be held by the forceps, and broken down by Heurteloup's instrument. In very extreme cases, where life is at stake, cut down upon it over the pubis, and extract it from the substance of the uterus. Louis relates a case of this description.

CANULA FOR POLYPI.



The canula which I find most useful for passing ligatures over polypi, &c., is the double tube, modified from Levret. The ligature is passed through both tubes, the two ends hanging out at the base; as the tubes can be separated whilst applied, they are easily adaptable to any case, however large the growth. The ligature is moderately-*thick silk whipcord*, in preference to silver wire, as it possesses the property of tightening itself on being wet. Excision is preferred by many; hæmorrhage is the only objection; but as these masses are seldom supplied with large vessels, loss of blood seldom follows to any great extent. The outline (p. 48) was the case of a lady at Runcorn, on whom I operated in 1853: the tumour

was attached to the upper and anterior portion of the cervix internally, and was about one pound in weight;



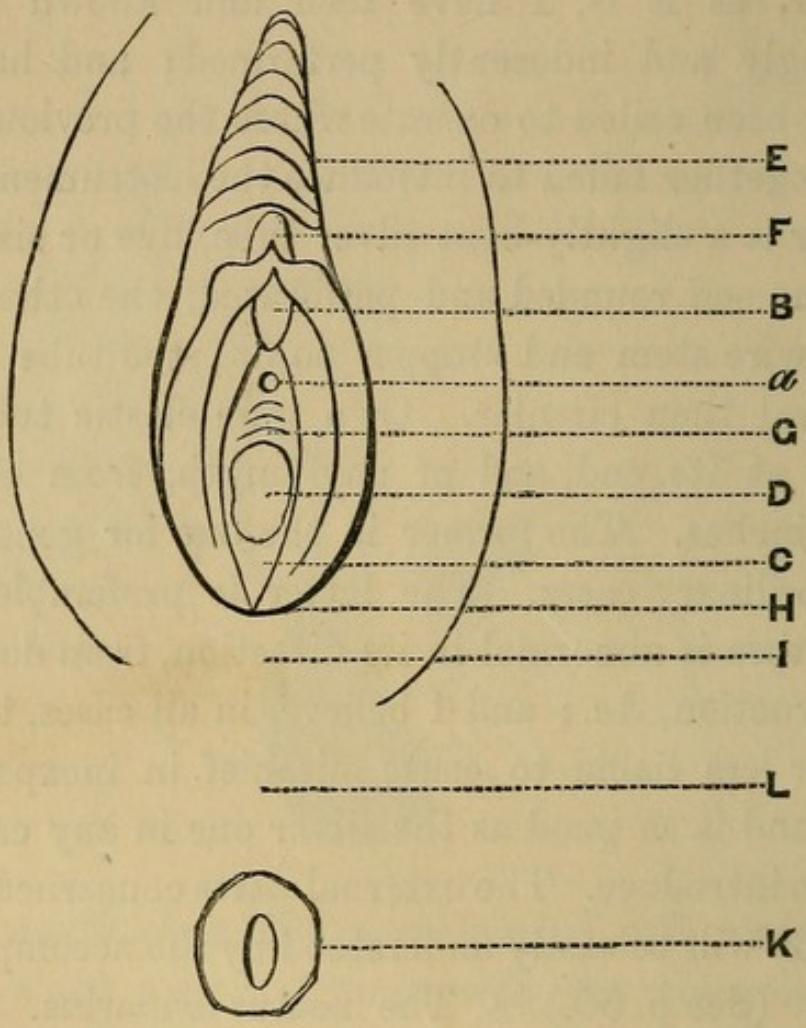
the neck was thick, and, I apprehended, rather vascular; from the short period of its growth, the whipcord ligature, however, effectually removed it in a few days; and I hear the lady has since borne a living child.

CATHETERISM.

Passing the catheter, to relieve the bladder of its contents, is an operation of the greatest consequence to the accoucheur; and his popularity is often dependent on the neatness, delicacy, and tact of its performance. It is an operation very frequently required, and extremely simple, if the operator has a thorough and

intimate knowledge of the external parts, without which he should never attempt its introduction. Simple, however, as it is, I have seen and known it very bunglingly and indecently performed; and have frequently been called to operate where the previous party had altogether failed to introduce the instrument. The catheter is a slightly-bent silver tube, five or six inches long, one end rounded and perforated, the other open, with a wire stem and stopper to fit; the tube a little more oval than circular. Or a gum elastic tube, perforated at its end, and of any length, from eight to twelve inches. The former is the one for general use in all ordinary cases. The latter is preferable where the urethra is abnormal in its direction, from deformity or obstruction, &c.; and I believe, in all cases, the gum catheter less liable to cause mischief in inexperienced hands, and is as good as the silver one in any case, and easier to introduce. The external parts concerned in this operation will be easily understood by the accompanying outline. (See p. 50.) A. The meatus urinarius. B. Vestibule. C. The hymen. D. Vagina. E. Præputium clitorides. F. Clitoris. G. Labia minora. H. Fourchette. I. Labia majora. K. The anus. L. The perinæum. There are a variety of modes recommended by authors, all of them very good, and each very easy and familiar to those who practise any one in preference. Some place the patient on her back, some on her side, whilst others have strongly advocated even the standing position. In applying the instrument, some recommend tracing downward in the median line from above, over the præputium clitorides, clitoris, upper fissure of labia

minora, and vestibule, when the index-finger falls into the circular depression of the meatus urinarius. Others

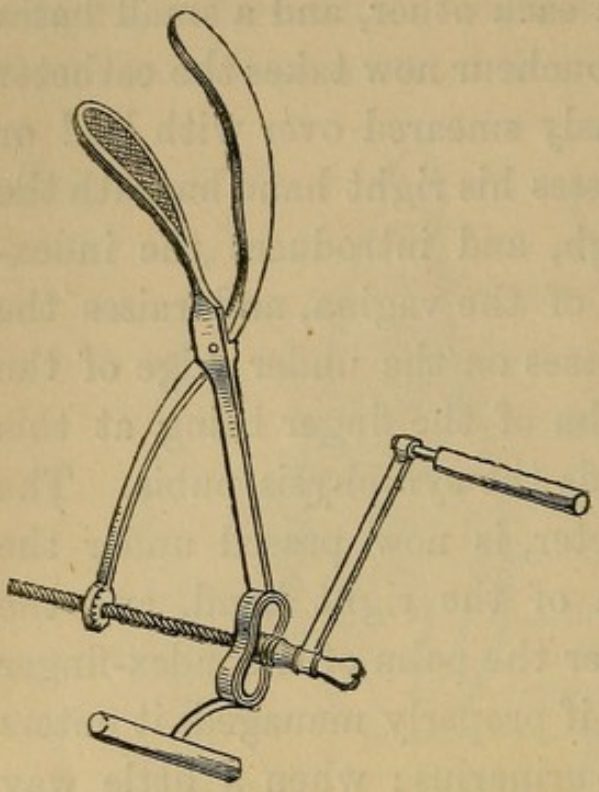


begin from below at the fourchette, over the entrance of the vagina; and somewhat higher than its upper edge, the meatus is found. All authors agree that any exposure of the external parts is unwarrantable, except where there is distortion by malformation or inflammation, when some little exposure is justifiable. Without distracting attention to the numerous plans proposed, I shall proceed to describe the one which, in my opinion, is best calculated to secure the object in view. Place the female on her back, in bed, covered by clothing; direct the knees to be raised, the feet and knees at

some distance apart from each other, and a small basin near the parts. The accoucheur now takes the catheter in the *left hand*, previously smeared over with lard or spermaceti. He then passes his right hand beneath the clothing, under the thigh, and introduces the index-finger into the entrance of the vagina, and raises the finger until it gently presses on the under edge of the arch of the pubis, the palm of the finger being at this time upwards, and towards the symphysis pubis. The left hand, with the catheter, is now passed under the clothing, to the position of the right hand, and the instrument slid gently over the palm of the index-finger of the right hand, when, if properly managed, it enters at once into the meatus urinarius; when a little way introduced, the end of the catheter in the hand of the operator is gently depressed and passed forward, and the bladder is easily entered. The plug, or stopper, is now removed, and the basin placed to receive the contents. If the patient is placed as directed, and the accoucheur standing by the side of the bed, no operation can be more simple, or easier to accomplish; the whole, however, depending on a good knowledge of the parts concerned, and their relative position to each other. If exposure is rendered necessary from unavoidable circumstances, it must be done with as much delicacy as possible—a feeling that should ever be foremost with the accoucheur.

CEPHALOTRIBE.

The cephalotribe is a pair of immensely strong forceps, the blades of which approach nearer together than



common forceps; each blade is separately introduced, and then approximated by a screw. Its object is to crush by great force the child's head, and thus reduce its bulk. It is rather a troublesome piece of machinery to manage. I believe the crotchet more available in careful hands. The application of this instrument will be considered under the head EMBRYOTOMY.

CLITORIS, AMPUTATION OF.

The clitoris is rarely the seat of disease; sometimes, however, it is affected with cancer, scirrhus, cauliflower excrescence, but more frequently it is elongated, which is said to be a prominent character of this organ in warm climates, and among the black races. I have seen it the subject of cauliflower excrescence, and excised it. In this case the disease was confined to one side, and I was obliged to take up an artery, otherwise the bleeding might have been serious. In 1842, I excised an elongated clitoris, of more than two inches in length, which caused intolerable itching; at least I supposed it the cause, and proposed its removal for cure.

As I anticipated, the evil ceased after the excision. In this case there was no bleeding, consequently no ligature required, and the elongation was confined to one side. In all diseases of the clitoris, I believe excision to be the only radical cure; but if the adjacent parts are implicated, of course it would be unwise to excise at all. The bistoury is the only instrument necessary, with ligatures to secure any vessels, should they require it; apply water dressings subsequently. The operation is extremely simple. Lay hold of the elongated or diseased clitoris, and extend it forward, then excise with the bistoury close to its root. Such cases generally do well, and are soon cured without much trouble.

CLUB FOOT (INFANT).

TALIPES VARUS.—Heel drawn up; foot turned in; walks on ankle. Arises from contraction of the gastrocnemii and adductors of the foot.

TALIPES VALGUS.—Foot outward; walks on the inner ankle. Caused by contractions of the gastrocnemii, and abductors are contracted.

TALIPES EQUINUS.—Walks on the toes; the only muscles affected are the gastrocnemii.

TALIPES CALCANEUS.—Walks on the heel; the muscles on the front of the leg affected.

The indications of cure are: to correct the contractions of those muscles producing the deformity, and to improve the condition of those acting in opposition. Various mechanical means and exercises do much towards their improvement; but the division of the tendo-

Achillis and other muscular tendons concerned in the contraction, has been a great triumph in modern surgery, and much success has been derived from these operations. Still it must not be resorted to on all occasions, or more tendons divided than actually necessary. Perhaps by a little patience and attention, to well-directed exercises, and mechanical assistance, the knife may in many cases be dispensed with; at least, let it be used only when other means fail, and then with great care and judgment as to the selection of the tendons to be divided.

COCCYX, FRACTURE OF.

The os coccygis is liable to anchylosis, either at its junction with the sacrum, or at some one of its own joints; in either case, its mobility is considerably lessened, if not entirely destroyed. In these cases, the coccyx is invariably drawn inwards, so as to lessen materially the capacity of the outlet of the pelvis. The usual consequence of such anchylosis is a fracture (when labour occurs) at one of its joints. Anchylosis is usually met with in first labours; where the female is pregnant late in life; and more particularly in females of sedentary habits or employments (as milliners). This accident is painful and inconvenient for a time, though such cases usually do well with attention. The patient should be instructed to keep the recumbent posture for some time, not, however, on the back, as all pressure on the part, externally, should be carefully avoided; regulate the position of the coccyx with the

point of the index-finger of the right hand introduced into the rectum, and the thumb of the same hand on the perinæum. Care must be taken to place the bone in a better position than when anchylosed before the fracture, and to retain it there by occasionally examining its position. The bowels must not be moved too frequently, as every effort to empty the rectum will move the fractured parts; still, the contents of the rectum should be kept relaxed by oleaginous or saline purgatives. If inflammation runs too high, a leech or two may be necessary.

CONVULSIONS, PUERPERAL.

Violent involuntary contractions, with rigidity and tension (tonic); or alternate shocks (clonic) — paroxysms—with more or less suspension of intellectual faculties: occurring before, during, and after labour. In 550 cases—fatal, 1 in 4. The child mostly still-born. Strong plethoric primiparæ, with male children, most liable. Least frequent before labour, and at about the seventh or eighth month; most frequent during labour. After labour, not frequent, and more favourable in issue. They are EPILEPTIC, HYSTERICAL, and APOPLECTIC.

Predisposing Causes. — First labours; plethora; aortic pressure; nervous temperament; atmospheric changes; moist weather; mental excitement; plurality; dead fœtus; excessive liquor amnii; bowels disordered; uterine contraction; distended bladder; injuries of the head; albuminous urine; absence of urea.

Exciting Causes (*Epileptic Form*). — Premonition seldom absent; agitation; restlessness; irritability; dyspnœa; very acute pain, increased by stooping, mostly on the side or back of the head; nausea; giddiness; defective sight; sounds in the ears; pain at the stomach; drowsiness; flushed countenance; twitchings; œdema in the face; dull, stupid look, and loss of consciousness; stammering; rigors; slow pulse; furred tongue; bowels constipated; uterine region tender;—these symptoms precede some hours, even days. Whilst in labour, sudden loss of sight; violent pain in the head or stomach; convulsions; face bloated and livid; throat swelled; carotids throbbing; veins prominent; eyes prominent, and drawn either inwards or outwards; pupils generally dilated; lips tremulous; mouth drawn; jaws closed, often including the tongue; foam at mouth, bloody; respiration rapid, laborious, and hissing; voluntary muscles, particularly of the legs, in violent spasm; pulse, at first, slow, after, small and rapid; bladder and rectum often spontaneously emptied—even uterus has accomplished the same.

These symptoms may continue from a few minutes to half an hour, when they subside; skin becomes moist; patient awakes, yawning, surprised, and confused; appears dull and stupid; complains of pains as from exertion; voice hoarse; recognises friends; intelligence without recollection. If these attacks are rapidly renewed, there is coma between. One convulsion seldom proves fatal; as many as sixteen or eighteen have been observed in twenty-four hours.

Convalescence.—Tedious; gait unsteady; memory

impaired; sight defective; sometimes mania remains; subsequent pregnancies are not necessarily liable to them, yet they do often occur in the same individual; proneness to abdominal inflammatory attacks.

Hysterical Form.—In the debilitated rather than plethoric habits; more frequent during gestation, or first week after labour.

Causes.—Want of sleep, fatigue, debilitated digestive powers.

Symptoms.—Tightness about the throat; sense of choking; globus; sobbing; oppression; face flushed, hot; dorsal muscles drawn to a curve; screams; sighing; urine copious; and consciousness. In this form no livid countenance, distortion, foam, twitching, hissing breathing, or convulsive motion of the jaw, as in other types.

Apoplectic Form.—No convulsive phenomena precede the coma; limbs lose sensibility and mobility; hemiplegia: learn if any concussion; observe for marks of injury; define from intoxication by smell of breath.

Prognosis.—One death in four; the severest form in primiparæ; more fatal during pregnancy, or early in labour, than after labour is completed; if delivery cannot be accomplished, the prospect is bad; coma between fits almost hopeless; the judgment better formed from the character of the interval than from the fits themselves; if a second attack is milder than a first, hope a favourable issue.

Pathology.—Post-mortems enlighten little: cerebral and pulmonary congestion, sometimes a clot in apoplectic cases: peritonitis; lesions not easily found;

sufficient attention not paid to the kidneys and their secretions. There is great impurity of blood, but the cause is uncertain.

Prophylactic Treatment. — Regular exercise; attention to the bowels; moderate general bleeding; cupping; mild diet; loose dressing; antimonials and diuretics.

During the Fit.—Put a cloth between the teeth; prevent the patient from injuring herself, without much restraint; dash the face with water; bleed freely to thirty or forty ounces; repeat bleeding, if necessary, to twenty ounces; ice cap; enemas with turpentine; mustard baths to the legs; relieve the bladder; see if child is expelled; watch for evidences of pain; when there is writhing and moaning, and if the head is on the perinæum, there is straining; use cathartics; tartar emetic till nausea; if pulse is thready and convulsions recur, try chloroform; shave the head, and apply ice to it.

Delivery.—It is not always proper to deliver; situation of the head may, with the state of the os, indicate it to be better to leave the delivery alone; such an attempt might kill the patient. In 200 cases of those left to themselves, 1 died in $4\frac{1}{2}$; by forceps 1 in 3; by crotchet 1 in 4; and by version 1 in 2. To save the child, ergot, forceps, or version. To save the mother, the crotchet. Never forcibly dilate the os uteri. If convulsions continue after delivery, try chloroform, opium, sol. antim. tart.; if coma, try leeches, ice cap, blisters, &c. In the hyperemic type avoid opium; where there is debility opium stimulates, and arrests

spasms; in such cases try camphor, ammonia, wine, brandy, and nutritious diet.

Hysterical Form.—Give spt. amm. fœtid., chloroform, camphor, ether, valerian, cold water dash; if vomiting, give tepid water, enemata of assafœtida, and turpentine.

Apoplectic Form.—Treat the case as one of usual apoplexy; these cases are rare, and often fatal: use forceps when they can be applied; crotchet; after death of mother, save the child by Cæsarian section. If mother lives, *After Treatment,* cool applications to the head; relieve the bowels; light diet; apply child to breasts; if no milk, apply mustard poultices. *Sequelæ.*—Paralysis, though rarely; gait unsteady; headaches.

CORD, ABNORMAL VARIETIES.

It is of importance to be aware of abnormal conditions which the funis sometimes presents.

1st. The vessels may divide at some distance from the placenta.

2nd. There are sometimes two veins and one artery, in lieu of the usual two arteries and one vein; sometimes only one of each.

3rd. One child has had a cord with two insertions in the placenta.

4th. The vessels have been partially and wholly closed.

5th. The cord has been said to be absent (doubtful).

6th. Sometimes the sheath of the cord contains a portion of intestine.

7th. In twins there are generally two distinct cords, but one has been observed, bifurcated into two ends.

8th. The cord has been inserted into a smooth part of the chorion, and the child lacked nutriment.

9th. The cord may be twisted so as to impair, or rather obstruct, nutriment.

10th. The cord is sometimes varicosed, sometimes contains hydatids.

11th. Sometimes the cord lacerates, and extensive hæmorrhage may result.

12th. If much extended, it may spontaneously sever.

13th. It forms loops, single and even double knots.

14th. It may be coiled round one or more limbs and body.

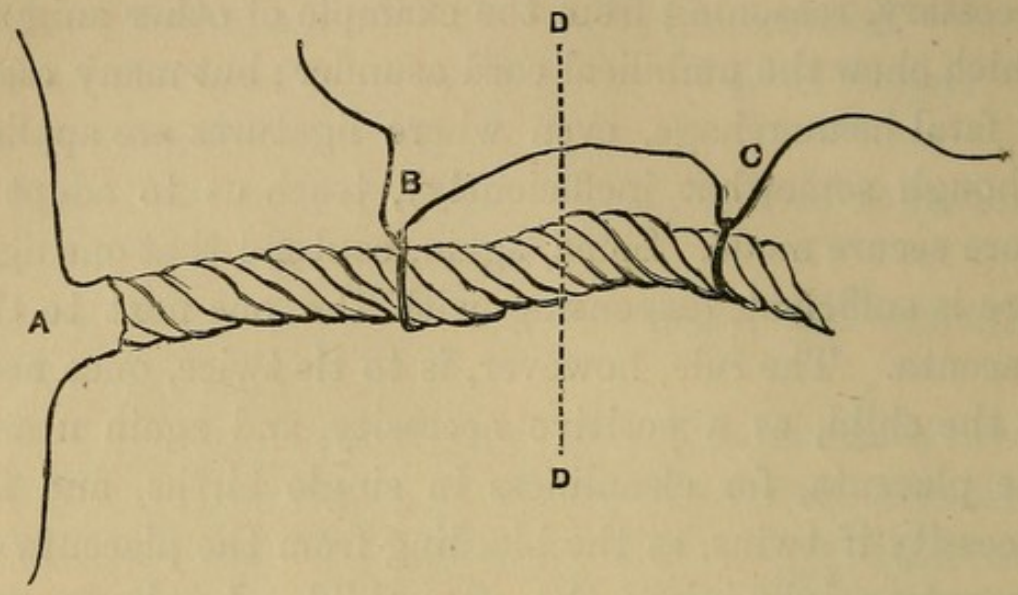
15th. I have seen it 5 ft. 6 in. long, and as short as 6 to 7 inches.

CORD, SECTION AND TYING OF.

There is often a great want of neatness and cleanliness in this very simple operation. Not the least exposure is necessary, and yet many authors (great advocates for delicacy) lay down as a rule, "*Always see what you are doing before the section is made, lest the penis or a finger be amputated with the scissors.*" I can scarcely believe such blunders possible, or that such unpardonable ignorance ever existed, and yet such cases are recorded, to the disgrace of the profession. Let it, then, be understood that this operation should be wholly accomplished under the bed-clothing. The ligature should be narrow tape, or (what I prefer) four

or five strands of strong linen thread together, with a knot at each end, about fourteen inches in length. It has been contended that ligatures are altogether unnecessary, reasoning from the example of other animals which chew the umbilical cord asunder; but many cases of fatal hæmorrhage, even where ligatures are applied (though somewhat inefficiently), teach us to adopt a more secure mode. Some, again, contend that one ligature is sufficient, dispensing with the one next to the placenta. The rule, however, is to tie twice, once next to the child, as a positive necessity, and again nearer the placenta, for cleanliness in single births, and for necessity if twins, as the bleeding from the placenta or placentæ might injure the after child. I only use *one* ligature, but tie *twice*. The ligature being about fourteen inches long, accomplishes both ties without drawing the hands from the bed for a second ligature. As a rule, wait for the child to cry freely, and the pulsation in the cord (a few inches from the child) has ceased. The first ligature to be about two inches and a half from the umbilicus, and the second about an inch and a half from the last, nearer the placenta. Sometimes the cord is of considerable thickness, and requires no little force applied to the ligature to effectually compress the vessels. When both knots are tied, cut the cord *and ligature* between the knots, protecting the parts in the hollow of the left hand, in such a manner that it would be impossible to include any part within the scissor blades but those requiring cutting: in this way no accident can happen without an immeasurable amount of ignorance, altogether at variance with a

trust so important. To enable the student to understand how one ligature serves for both tyings, A is the umbilicus; B the first knot; C the second knot;



D the cord and ligature cut through in the direction of the dotted line, under cover and protection of the left hand. After the child is removed from the bed, the end of the cord should be examined, and if there appears the slightest doubt of its being secure, another ligature should be immediately applied, rather than run any risk.

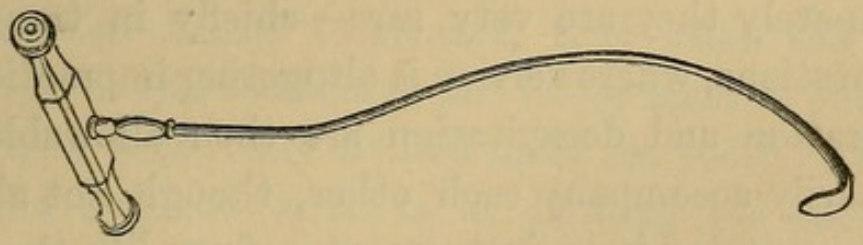
CRANIOTOMY FORCEPS.

The craniotomy forceps are used in reducing the head in Embryotomy (*vide* that term). The only case where this instrument has an advantage, is when the bones of the head are very firmly ossified, and too hard for the crotchet to fix its hold easily.

CROTCHET,

Or sharp hook, is an instrument of great utility for the purpose of extracting the fœtal head after it has

been opened; its form is that of a beak: the point should not be *very sharp*, or it will penetrate too easily, and tear out its holdings, and so might injure the soft parts of the mother, or the operator's finger; nor yet too blunt, or it might slip off its holding for want of sufficient penetration, and thus be ineffective in its object, yet still liable to injure the soft parts. It is a simple instrument to make, but difficult to get of the proper degree of sharpness. Dr. Davis invented a guard for this instrument, but the operator's fingers are better guards, and, what is of greater consequence, an excellent guide at the same time. For its application, *vide* EMBRYOTOMY.



CYSTOCELE, VAGINAL.

In some cases the vagina becomes so relaxed as to allow the bladder to descend below the brim, or is even pushed down lower into the pelvic cavity; under such circumstances it might possibly be mistaken for uterine membranes containing liquor amnii, when the puncture of them might become serious, if not fatal.

Symptoms.—Fulness and tension, with frequent desire to pass urine; tumour found, elastic, covering the fœtal head anteriorly, *but not posteriorly*. If catheter is introduced, it must incline backwards.

Treatment.—Use the gum elastic catheter as best adapted, and press the head upwards; there might be such a disposition of parts as to render the introduction of the catheter impossible; if so, a small puncture through the vagina into the bladder might be justifiable; at all events, be certain of the case, and the urgent necessity, before adopting so serious an alternative. If the child's head is small, the contents of bladder very limited, and the pressure not great, it might with propriety be left to nature.

DECAPITATION—DECAPITATOR.

There are cases where decapitation may be necessary. Fortunately they are very rare—chiefly in transverse presentations, where version is altogether impracticable: evisceration and decapitation are then allowable, and necessarily accompany each other, though not always. The decapitator is an instrument in form like the blunt hook, with only this difference—the under curve of the instrument has a cutting edge. This, or at least a very similar instrument, has been known and used since the time of Hippocrates, and has again been revived by modern writers.

Application.—Pass the usual blunt hook over the neck of the child, and, by traction, draw the part as low down into the pelvis as possible; then pass the cutting-hook to the same position, or at least by the side of the blunt hook. Having fixed the cutter, withdraw the blunt hook; then, by a weaving or downward sawing motion, whilst the fingers of the left hand are

kept steadily to the blunt point of the cutter, sever the head from the trunk: if carefully performed, there is no danger of the instrument injuring the soft parts. The body of the child is then to be extracted by the presenting part, and if not already eviscerated, it may yet be necessary to be done. The head is then to be seized by the blunt hook or crotchet being placed in the foramen magnum in the usual way. In all transverse presentations, where version is impracticable, this operation will be sufficient, except where great deformity or pelvic tumours interfere.

DENTITION.

I have here briefly to remark, that when the gum expands over the tooth, and the latter appears pushing forward, let it be freely divided until the tooth be fairly felt; the frequent error is in dividing too soon, or dividing inefficiently. If done too soon, the gum unites by a hard cicatrix, more difficult and painful for the tooth to penetrate afterwards, and is often the means of exciting serious convulsions.

DILATATION, ARTIFICIAL, OF OS UTERI.

Sometimes this system of interference is advised by the Scotch practitioners, but is not generally approved by British authors. It seldom answers any good purpose; still there are cases, *though rare*, in which such a proceeding may be justifiable: *for instance*, where the anterior lip of the os is confined between the head and the pubis, which is just possible. I cannot

see any advantage even in this instance. Where there is tense rigidity of the os, in very extreme cases, incision has been practised with advantage. These, however, must be rare cases, and should not be attempted on the responsibility of one practitioner.

ECCHYMOSIS OF LABIA.

The labia pudendi are subject sometimes to ecchymosis or thrombus—that is, an extravasation of blood from the lesion of vessels forming a considerable-sized tumour in one or both labia, but mostly confined to one. It is excessively painful, and if not attended to early, has a tendency to slough, with intolerable fœtor. If the tumour be small, it may give way to cold applications to the part, and purgatives. But if stubborn, though small, it will require free incision; and if large, the only good practice is to lay it freely open, and dress it freely and frequently with water dressings. In 1823, I published a curious case of this kind in the "Medico-Chirurgical Magazine," affecting both labia of a child in utero. The case was a breech presentation, accompanied by two distinct tumefactions that at the time were rather puzzling; but as the efforts of labour were effective, and the parts advanced freely, there was no need of any interference. After birth, both labia of the child presented a singular appearance, being enlarged equal to two moderately-sized pears, of a livid black colour, the parts between the clitoris partaking of the enlargement and discolouration; otherwise, the child was perfectly natural. Large as these tumours

were, I hesitated in so young a child to incise, dreading the loss of blood; I therefore contented myself by applications of lint in vinegar and water, and, to my great satisfaction, in about three weeks they entirely disappeared. As the tumefactions were detected before the labour was far advanced, the injury could not have arisen from the efforts of labour. In fact, I feel no doubt they existed in utero, for which no cause could be assigned, except that the mother had a sharp blow on the abdomen by a fall, some time previous to labour.

ELECTRICITY

Is a most valuable agent, and has been used very successfully by Dr. Radford in post-partum hæmorrhage, and also advised by Dr. Ramsbotham and others. In public institutions where it can always be in readiness, it should never be neglected; but the difficulty of having it at hand defeats its great utility. It is almost unnecessary to observe, that an accoucheur could not possibly carry about with him all the many suggested improvements of apparatus applicable to midwifery practice; even if it could be done, it would be inconvenient to himself and a source of alarm to his patient.

EMBRYOTOMY.

Embryotomy.—*Definition.* Reducing the bulk of the child by mutilation, so as to enable it to pass through the pelvis. *Embryulcia.* A similar term. *Evisceration* alludes to the emptying the chest and abdominal cavities. *Craniotomy* and *Cephalotomy.*

Emptying the head of its contents. *All* parts of the operation of *Embryotomy*.

Object.—To reduce the child, to enable it to pass where the pelvic diameters are too small to allow a living child to pass, from deformity or tumours; or where the head, from disease, is too large, though pelvis natural; and thus to save the mother, at the expense of the child.

Necessary Conditions.—When the head, though compressed, will not pass; when there is only just room for a mutilated fœtus to pass; when the forceps cannot effect delivery; when there is hydrocephalus.

Instruments.—There are more in use than necessary: perforator; crotchet; bone forceps; craniotomy forceps; cephalotribe; kephalepsalis; osteotomist. There is very seldom any necessity for more than the two first.

Dimensions of Pelvis requiring them—Antero-posterior diameter, according to Osborne, $2\frac{3}{4}$ inches; Clarke, $3\frac{1}{2}$; Burns, $3\frac{1}{4}$; Le Roi, 3; Aitkin, $2\frac{1}{2}$ to 3; Busch, 3.

Smallest Diameter allowing it. — According to Dewees, 2 inches; Baudelocque, $1\frac{2}{3}$; Hull, $1\frac{3}{4}$; Burns, $1\frac{3}{4}$; Gardien, $1\frac{1}{2}$; Hamilton, $1\frac{1}{2}$; Davis, 1.

Mortality.—To the child, always; to the mother, 1 death in 5.

Frequency.—British practice, 1 in 220 cases; French, 1 in 1200; Paris itself, 1 in 1628; German, 1 in 1944; Vienna, 1 in 688; Ireland, 1 in 128. The difference here expressed between British and Continental practice is so remarkable, that the question naturally arises, to what is it owing? Can it be accounted for by the

effects of practice in Catholic states laying more value on the life of the child (even at the risk of the parent); whilst in Protestant states, as in Britain, the child is always sacrificed to save the mother. But if this be the cause, how is it that Irish practice shows even greater returns of mortality than Britain?

Prospects.—Always more unfavourable than forceps cases. The only alternative is the Cæsarian section; or, if deformity is very extreme, abortion in the early months; or in the latter months, by the induction of premature labour.

It is justifiable when there has been strong labour for some hours (about five or six), and no advance; when the forceps have failed, or are inapplicable; when there is great exhaustion, child probably dead, and forceps ineffective.

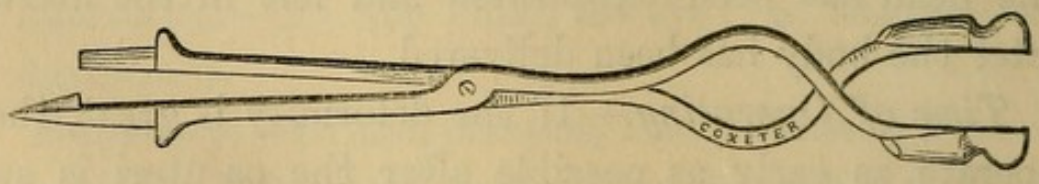
The Operation is positively necessary, often where the fœtus is dead; when the antero-posterior diameter is under 3 inches and not reduced below $1\frac{1}{4}$ inch; when there are fibrous, osseous, or other obstructing tumours; where there is hydrocephalus; when rupture of the uterus, convulsions, or severe hæmorrhages occur; when the arm and head are wedged in the pelvis; and when the head has been decapitated and left in the uterus, after the body has been delivered.

Time of Operating.—If the deformity is great, then operate as early as possible after the os uteri is sufficiently dilated; wait longer if the capacity is more moderate. If tumours obstruct, be careful to try if they are sufficiently mobile to raise above the brim before proceeding to operate. If convulsions or hæ-

morrhage be present, the period must be regulated by the urgency of the symptoms.

Reflections.—Before any instrument is taken in hand for this operation, bear in mind that the murder of a human being is to be the result; let then, no desire to exhibit mechanical skill induce any one to operate unless the most justifiable necessity calls for it. I envy not that man's reflections who acts otherwise. On the other hand, let no timidity or indecision ever interfere with a necessary duty when once it has been determined on.

Operation.—Having decided by consultation, and presuming the bladder and rectum have been emptied, and the os uteri sufficiently dilated for the purpose, place the patient as you would for the application of the forceps; let all the instruments necessary for the operation be placed in a vessel of tepid water; then let your assistant (in whom you ought to have every confidence) chloroform the patient, and take the entire responsibility of watching and regulating its effects. When the anæsthetic stage is complete—viz., unconsciousness of pain—proceed to pass the perforator (that of Holmes as good as any), guarding the point by the



fingers of the left hand, and avoiding the fontanelle and sutures; fix the point firmly on the bone; rotate the point, at the same time pressing gently forward until the instrument pierces up to its shoulders; then sepa-

rate the handles, and again rotate until a large opening is made for the exit of the brain mass. Sometimes another piercing may be necessary, but I have always found one sufficient. The brain will then have to be removed, if it has not already been ejected, after the removal of the perforator. In removing the brain, be careful to secure the separation with the finger of the medulla oblongata. The crotchet must now be passed, and fixed on the base or facial bones; try to get a firm holding, and before traction is used, try to wrap a fold of the loose scalp round the head of the crotchet, to protect the soft parts of the mother (from the effects of a slip of the instrument) as much as possible; pull steadily during a pain, and in doing so, be careful to bear in mind the axis of the pelvis. When exerting traction, whilst the parts are descending, prevent (by the fingers of the left hand) the sharp edges of the fractured bones from tearing the vagina. Some prefer the craniotomy forceps (Fig. 1), that seize the skull bones, inside and outside surfaces, in its mandibles; others the osteotomist (Fig. 2), which cuts out pieces from the skull; but I believe the crotchet, in careful hands, is sufficient for any case short of that requiring Cæsarian section. I have always preferred it, and therefore recommend its use.

Sometimes a few minutes' rest will materially assist in allowing the mutilated parts to mould and accommodate themselves to the passage, which they occasionally do in a most wonderful manner.

Dangers to be avoided.—Be careful the perforator does not slip. Let the left hand be kept steady near

Fig. 1.

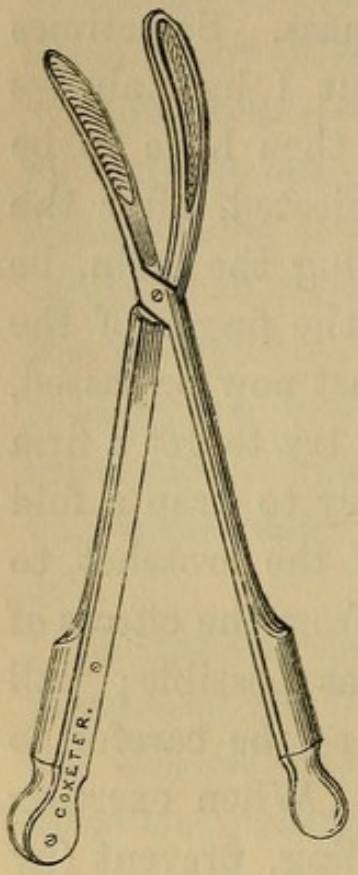
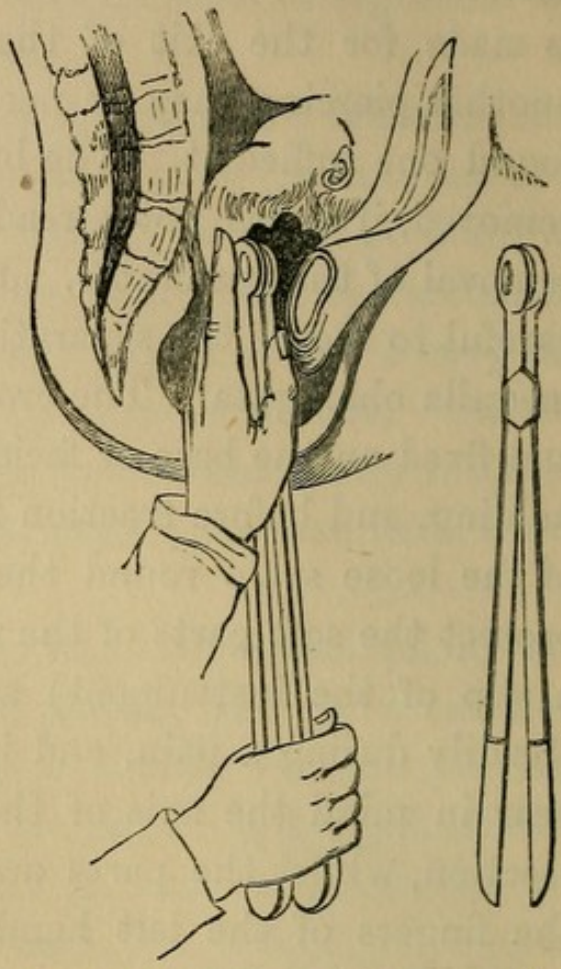


Fig. 2.



its point, to check the slip, should it occur; be equally careful the crotchet does not slip in traction, and injure the vagina.

Sequelæ.—Shock may kill the patient, as in all other serious operations; chloroform lessens the liability to shock: inflammatory action subsequently very probable.

After Treatment.—A dose of morphine, or, what I prefer as more certain, two and a half to three grains of crude opium; quiet; darkened room; emollient enemata; catheterism; fomentations, &c., to relieve pain, or leeches if necessary.

General Remarks.—The necessity for this operation is always to be regretted; if it can be foreseen in time, induction of abortion, or premature labour, according

to the moderate or extreme features of the case, should never be lost sight of; indeed, every effort should be made to avoid embryotomy, or its still more serious alternative, the Cæsarian section.

ENCYSTED TUMOURS OF LABIA.

Various in size, circumscribed, semi-transparent.

Symptoms.—Few, slightly marked; size and weight inconvenient; aggravated by motion; the skin seldom discoloured; contain glairy fluid, sometimes of a chocolate, more rarely pus, and still more rarely material almost solid. When attacked by inflammation they become painful, when ulceration and a bad healing sore may result; they are more frequently symptomatic than otherwise, chiefly connected with uterine disease.

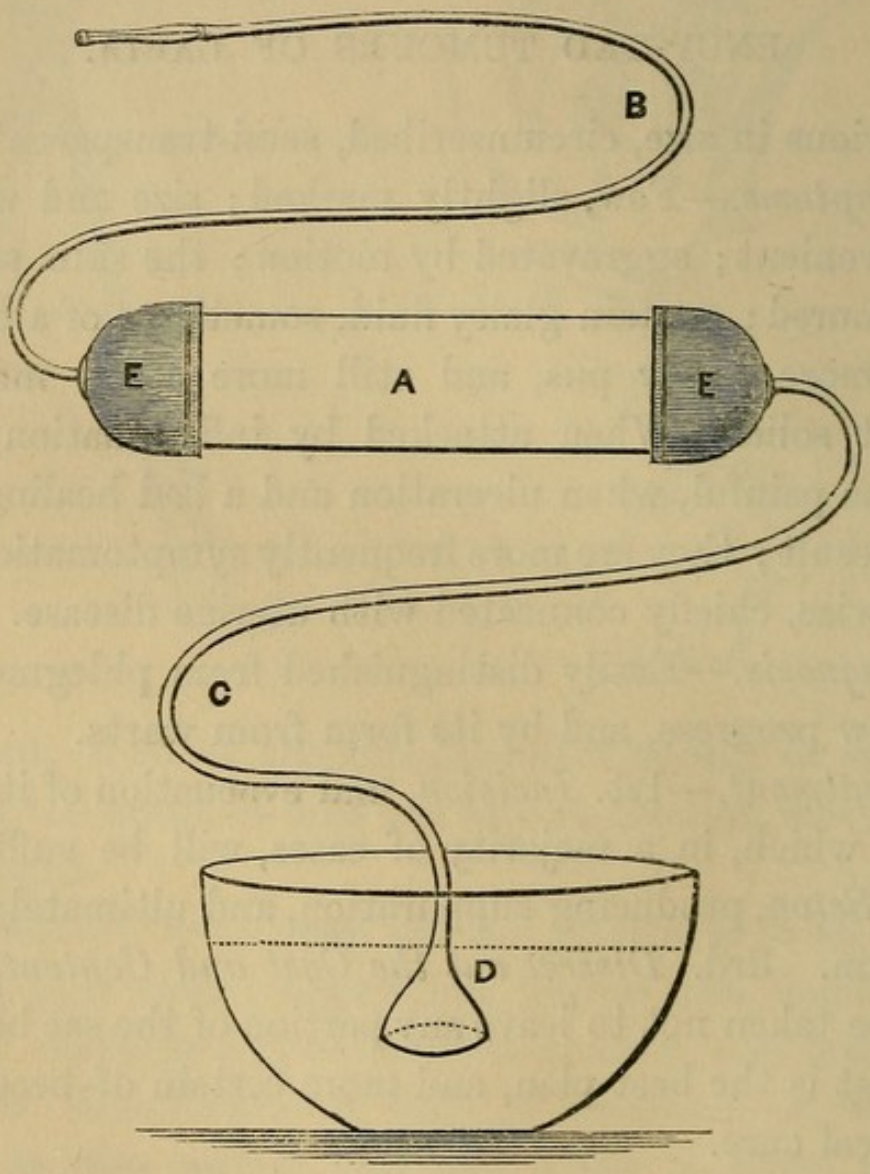
Diagnosis.—Easily distinguished from phlegmon by its slow progress, and by its form from warts.

Treatment.—1st. *Incision*, and evacuation of its contents, which, in a majority of cases, will be sufficient. 2nd. *Seton*, producing suppuration, and ultimately obliteration. 3rd. *Dissect out the Cyst and Contents.* If care be taken not to leave any portion of the sac behind, the last is the best plan, and more certain of becoming a radical cure.

ENEMA.

Enemas are of great utility in obstetric practice, and are equally applicable to children as adults. There are few instruments better suited to this purpose than the common pewter syringe, of from two to four ounces for a child, and from ten to sixteen ounces for an adult.

The enema pump requires one person to the syringe, and another to manage the exit pipe, to steady it at the anus. I have here given a sketch of a simple and very effective apparatus, which can be worked by either



hand (even the left, easily), and the exit pipe kept well to the anus by the other hand; thus one manages the whole affair. A is a vulcanized india-rubber tube, of an inch and a-half in diameter and eight inches long; B is a quarter-inch tube leading to the exit pipe; C is a similar pipe, supplying material for injection from the

vessel; D the vessel, filled with fluid to the dotted line; E E are two valves working alternately, one allowing material to flow into the large tube A, and the other opening to forward it to the exit pipe. The action of this instrument is extremely simple. Thus, with the right hand place the exit pipe in the rectum, holding it steady in its position; then with the left hand grasp the tube at A, and alternately open and shut the hand, the result of which will be, after the second grasp, that the fluid rises from the vessel, and rushes through the valve at E on the right, into the partial vacuum formed in the large tube by the last grasp; this part is now filled with fluid, which at the next grasp is forced forward through the exit pipe to its destination, leaving space for a fresh supply to rush into the main tube, and so on, continued till the vessel is emptied. It is necessary to weight the end of the supply pipe to sink below the surface of the fluid in the vessel D. Simple as this instrument is, it has a surprising power; one of the size stated is able, by this mere grasp, to send water fifteen yards, and it is applicable to all purposes for which enemas are applied.

EPISORAPHIA.

(*Vide* Uteri Prolapsus.)

ERYSIPELAS.

Whether in adults or infants, try painting: in the adult, with tinct. iodini; in infants, dilute it with half water.

EVISCERATION.

This operation is only to be had recourse to where turning is impracticable in transverse presentations, or where, after the lapse of some hours (say five or six) from the rupture of the membranes, or when the trunk of the fœtus is so wedged in the pelvis, or at the brim, that the introduction of the hand to attempt turning would be attended with great danger; or, after the head has been emptied, the diameters may be so small as to render evisceration of chest, and even abdomen, an act of necessity. Under any of these circumstances evisceration is justifiable.

Operation.—The position to be the same as in the application of forceps or embryotomy; instruments the same. If the arm present, use traction by it to fix the chest, then pass the perforator, guided and guarded by the fingers of the left hand, the handle of the instrument being in the right hand; pierce between the ribs, then enlarge the opening by rotation until a sufficient outlet is made for the exit of the viscera; withdraw the instrument, pass the hand, remove the contents of the chest, and in the same manner remove the contents of the abdomen, if necessary, when, in all probability, the trunk will collapse sufficiently to pass, with the assistance of uterine pains; but if those are absent, the crotchet may be necessary to bring the parts down. The ribs, spine, os ilium, and scapula are good points for holding. Before traction with the crotchet, bear in mind the axis of the pelvis, and guard the sharp points of bone from injuring the soft parts.

EVOLUTION—EXPULSION SPONTANEOUS.

Spontaneous *expulsion*, that is, when the body of the child is fairly engaged in the pelvis, and the arm presenting, is a circumstance not only quite possible, but quite consistent with the laws of uterine contraction, and the arrangement of the diameters of the fœtus and pelvis. But spontaneous *evolution*, or the substitution of another part for the one originally presenting under these precise circumstances, is not only absurd, but altogether impossible. That Dr. Denman was really deceived, or misunderstood the point in dispute, is certain; and it is equally certain that the profession is indebted to Dr. Douglas for the true explanation of this interesting fact, and which is generally (at least with the singular exception of Dr. Murphy) acknowledged to be right. It is, however, quite evident that Dr. Murphy mixes this case with another of a totally different character, and *the one which* misled Dr. Denman. This is easily proved by Dr. Murphy's own statements. In the one case, the fœtus is fairly *engaged in the pelvic cavity;* in the other case *it is not so engaged.* In the *former* it can never withdraw its first presentation and substitute another, but can double itself, and force the remaining parts, past the part first presenting; but in the latter, evolution, to an extent of substituting one limb for another, is quite possible, and no doubt, has often occurred. That Dr. Denman felt himself wrong, and generously confessed it, is evident from the following liberal expression: "*To defend this* I AM NOT VERY

SOLICITOUS;" then, as if desirous not to acknowledge a fair defeat, he adds: "*yet I may observe, that my explanation is not given in positive terms.*" It would have been well had it ended here, but he adds, ungenerously, and, I may say, unlike Denman, "*if there be an error in the explanation, others may also err in their own opinion.*" In latter days, Dr. Murphy endeavours to patch up the hopeless and erroneous position of Dr. Denman, and by maintaining that which he (Dr. Denman) was not over solicitous to retain, by conceiving evolution possible. Now I will quote Dr. Murphy's own words, to show that the cases he alludes to are not engaged in the pelvis at all:—"*I have met with cases where the arm presented and occupied the* OS UTERI *completely, but afterwards retreated, and the breech took its place.*" No one for a moment ever doubted it; but it is no less true that the child in these cases was not engaged in the pelvis, and therefore might, to a limited extent, evolve, so as to substitute another part. But this is not the point in question. Let the child be fairly in the pelvis, the arm presenting, shoulder under pubis, and will any man be bold enough to say that arm will ever retire, and another part be substituted? I simply answer, No; but if the child be rather small, and the pelvis capacious, the body of the child may double upon itself, and force the remaining parts past the first part presenting. To make this plain in as few words as possible, I will direct the reader's attention to the annexed beautiful sketches from the work of Chailly. Here he will observe, as the labour progresses, not the slightest alteration in

the position of the original part presenting occurs, but the remaining parts of the fœtus are propelled past the

Fig. 1.

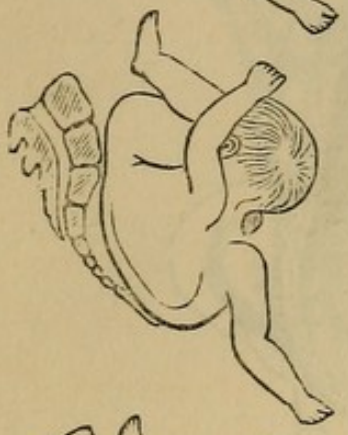


Fig. 2.

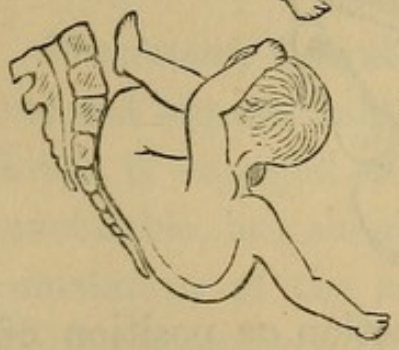


Fig. 3.

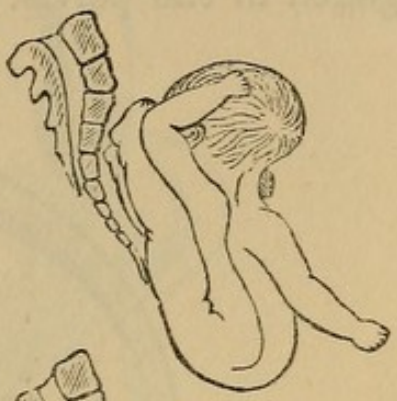


Fig. 4.

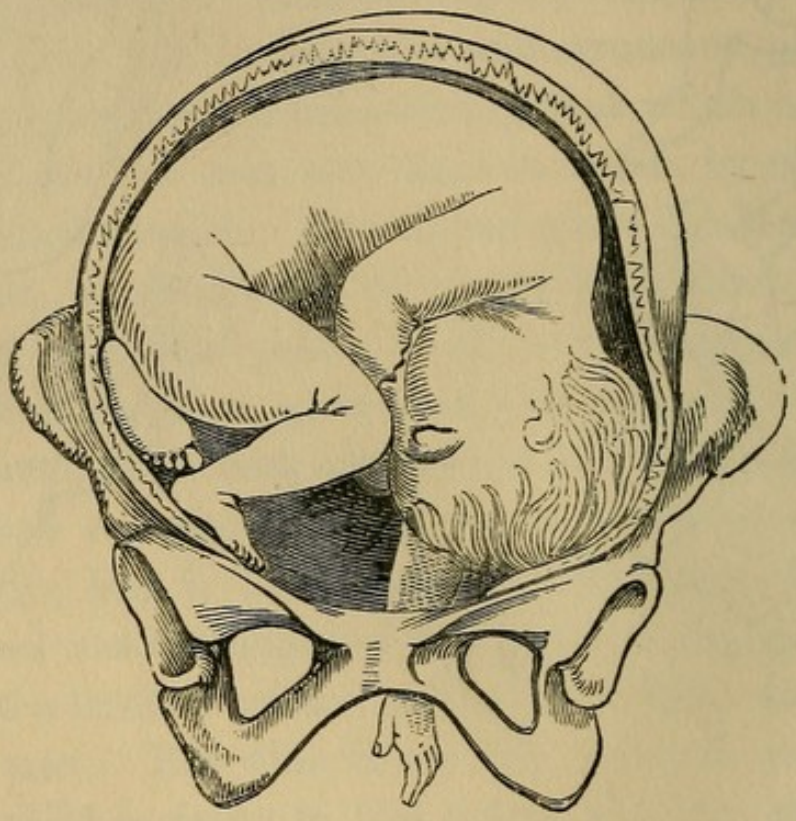
Fig. 5.

first presenting, as Dr. Douglas states, and which he calls spontaneous expulsion. Dr. Radford and Mr. Winterbottom call this torsion, or doubling of the fœtus. (See "Obstetric Record," vol. i. p. 246.) Notwithstanding, it must be confessed that it necessarily follows that the pelvis should be capacious, and the fœtus smaller than the average.

I now come to those cases which, I feel no doubt, deceived, or more probably misled, Dr. Denman; and

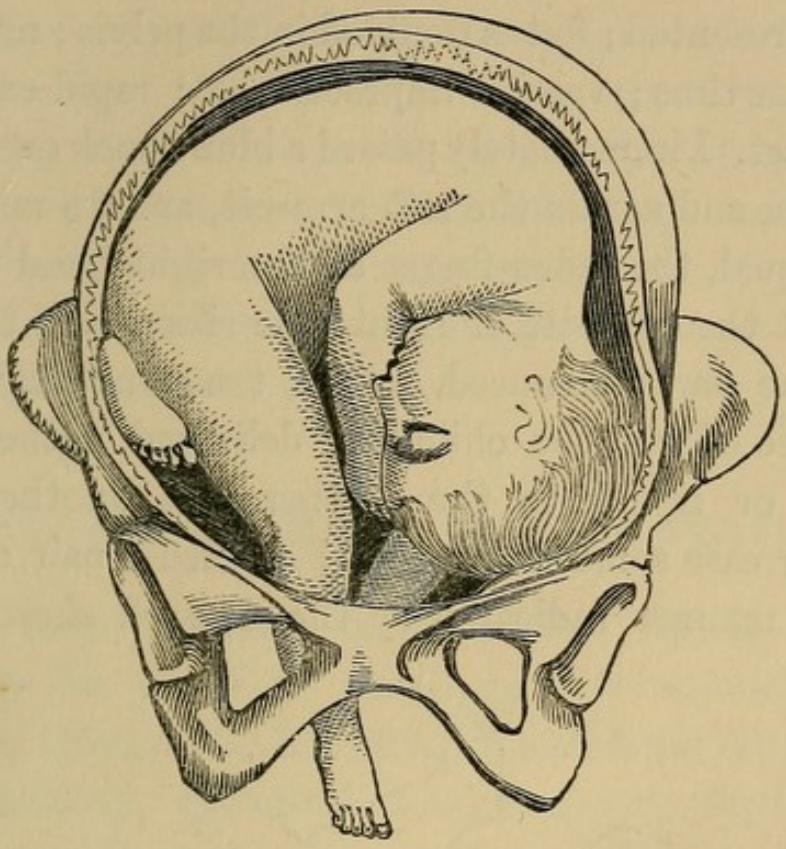
from Dr. Murphy's own admissions, I infer the same will apply to his cases; and perhaps the only condition of parts where one limb can be substituted for another, and that is in the uterus, and before the fœtus is engaged in the pelvis. In fig. 1, the hand presents, but

Fig. 1.



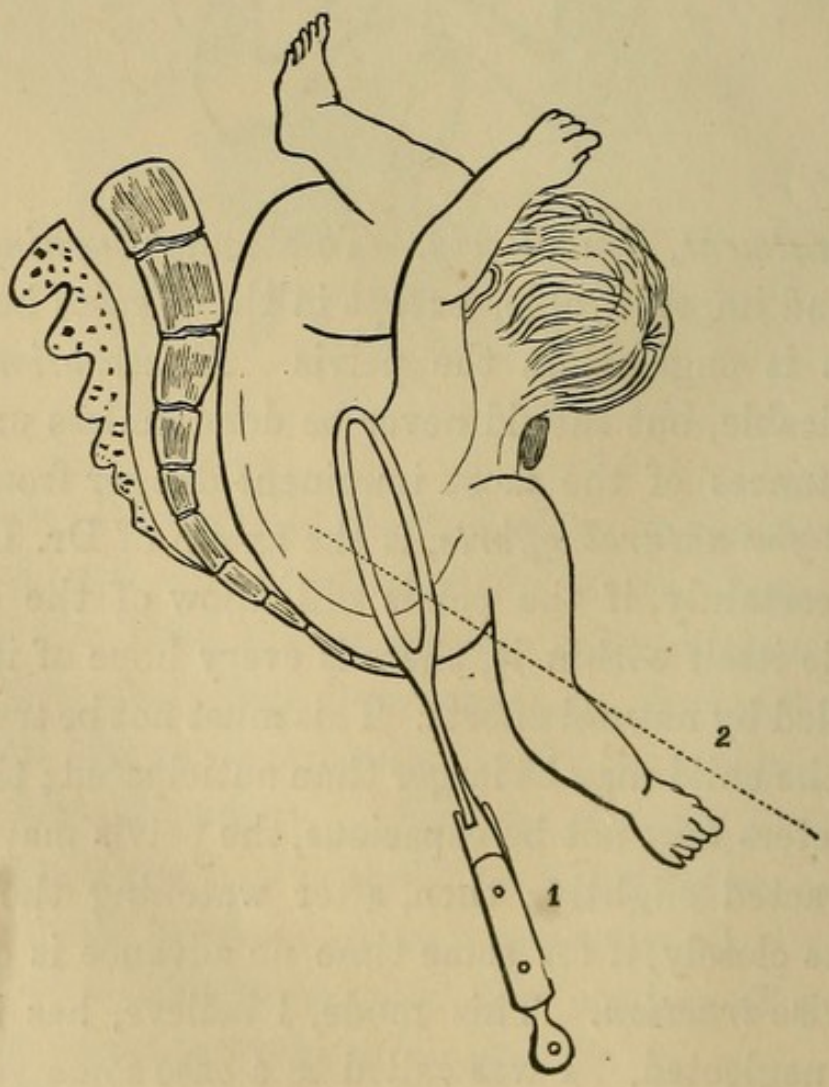
the slightest alteration of uterine action or position of the patient will dislodge the foot, which, from the position of the head, makes a better descent than the hand had previously done; consequently, the hand rises in utero, and the case terminates easily, to the surprise of the anxious attendant. (*Vide* fig. 2, p. 81.) Now I challenge any one to show how this substitution could ever take place in those cases previously cited: the laws of uterine contraction and the position of parts are quite at variance with such a process.

Fig. 2.



Treatment, Operatively.—To attempt *turning*, injurious and impracticable, except in those cases before the fœtus is engaged in the pelvis. *Evisceration*, easily practicable, but should never be done, unless under circumstances of the most imminent danger from delay. *Wait for natural efforts*, is the axiom of Dr. Douglas; and certainly, if the pelvis will allow of the child to double itself within it, there is every hope of its being expelled by natural efforts. This must not be trusted too far; the child may be larger than anticipated; the pelvic diameters may not be capacious, the pelvis may even be contracted slightly; then, after watching the natural efforts closely, if for some time no advance is observed, I advise *traction*. This mode, I believe, has been too long neglected. I was called to a case some years ago,

in consultation with two previous medical attendants. Arm presented; fœtus doubled in the pelvis; no advance for some time; version impracticable; rapid exhaustion manifest. I immediately passed a blunt hook over the left scapula, and across the left arm-pit, and to make traction equal, the index-finger of the right hand was held against the opposite or right side ribs; with this traction the parts advanced, and in ten minutes, with two or three efforts, the child was delivered, without mutilation or injury to the mother. In another almost similar case some time after, I applied a pair of forceps in the manner indicated by the annexed sketch, which

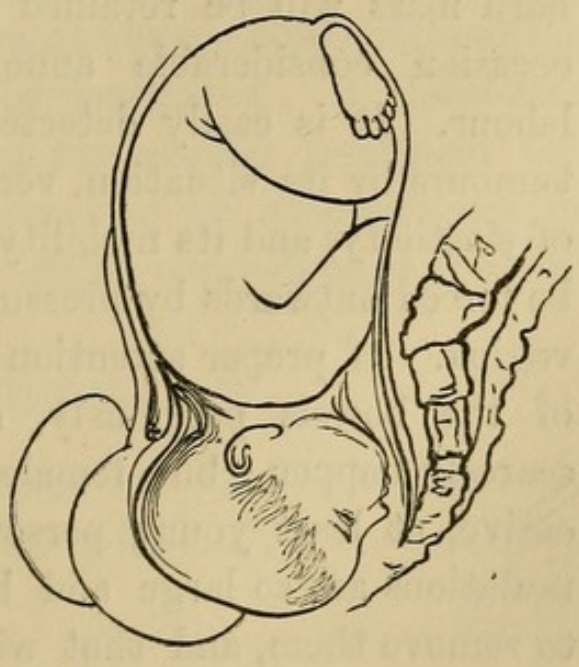


illustrates both cases just given. The operator must bear in mind, *first*, to lubricate the perinæum well; and, *second*, to keep the traction well in the axis of the pelvis. By these views it will be perceived that turning, and evisceration, are altogether discountenanced. In such cases, wait for nature's efforts, and when convinced of her inability, then bring traction to aid, in such a manner as here proposed.

EXPULSION OF HEAD THROUGH PELVIS

Presents four peculiar characteristics, which should invariably be borne in mind by the accoucheur—FLEXION, ROTATION, EXTENSION, and RESTITUTION.

In FLEXION, the first condition on entering the pelvis, the chin is forced upon the breast each pain, which causes the occiput to be depressed, and this is its condition until it reaches the sciatic ligaments and anterior inclined plane; when the second motion, or ROTATION, by which the occiput slides on the left anterior plane of the ischium, in order to place itself behind the pubes, whilst the forehead at the same time slides on the right plane towards the hollow of the sacrum; this point is marked by cramps. At this point EXTENSION begins, when



the chin leaves the breast more and more, the vertex emerges under the pubes, distends the vulva, and the face slides along the coccygeal and perinæal plane; this point is known by straining tenesmus, and dilatation of perinæum; the labia majora are pushed back, nymphæ pressed upwards, and the parietal points pass out, and the whole head is expelled. Now, free from any force, the fourth condition, or RESTITUTION: the head resumes its relation to the trunk, and face turns to the right thigh of the mother; shoulders follow on the planes, the right rotates towards pubis, and remains for a time as a pivot; the trunk now bends, and the left shoulder emerges along the coccygeal plane; the rest of the fœtus follows rapidly.

FÆCAL ACCUMULATION

Is not unfrequently met with, both in pregnancy and labour. Sometimes along with more liquid motions, a hard mass will be retained in the rectum, and may occasion considerable annoyance and delay during labour. It is easily detected and distinguished from tumours by its situation, very irregular form, its want of elasticity, and its mobility. If time presses, it may be forced outwards by pressure with the fingers in the vagina. If proper attention is paid to the regulation of the bowels previously, such a circumstance can scarcely happen; but females are not very communicative, at least young persons. Sometimes the accumulations are so large and hard as to require a scoop to remove them, and that with no little difficulty. I

was once consulted about the removal of a very large and intensely-hardened fæcal mass, which threatened laceration to the sphincter without great care. I ordered an injection of tepid ox-gall, which in a few minutes dissolved the hardened ball into a soft pulpy consistence, which was immediately voided with great ease. I believe ox-gall to be a specific, not only for regulating the bowels during pregnancy, but also in the emergencies above-stated; for a lengthened essay on its preparation and uses, *vide* "Medical Times," 1842, pp. 100—114.

FALLOPIAN TUBAL RUPTURE

May occur from over distension by catamenia, serum, pus, pregnancy, and ulceration. In pregnancy it often occurs about the third or fourth month.

Symptoms.—Sudden violent pain in the uterine region; faintness; coldness of extremities; and general symptoms of internal hæmorrhage, followed by death in a few hours, sometimes in a very short space of time.

Treatment.—As it is almost always fatal, little or no remedial treatment can be suggested. If, however, time permits, bleeding, and the general treatment for peritonitis, is the only course to be adopted; nevertheless, it is probable that little good will arise from it.

FISTULÆ.

The fistulæ to be considered are the Vesico-Vaginal, Vesico-Uterine, Vesico-Utero-Vaginal, and Recto-Vaginal.

FISTULA, VESICO-VAGINAL,

Is an opening or communication between the bladder and vagina, a case by no means rare, but extremely distressing, seldom cured, and often given up as hopeless; it is more frequent than the recto-vaginal, more refractory, and more frequently follows than is the consequence of labour.

Causes.—Instrumental delivery; long-retained old-fashioned pessaries; delay in delivery, long pressure of the head; retention of urine; ulceration; cancer; sometimes an extension of rupture of the uterus; the result of abscess, as stated by Professor Simpson.

Situation.—The situation of the rent or perforation is of considerable consequence in reference to treatment, whether at the junction of the urethra and bladder, in the neck, or in the posterior wall.

Character.—No less important: a simple rent has a better prospect of cure than a circular opening, however small; but the worst cases are where there is considerable loss of substance; such are usually hopeless.

Symptoms.—Inability to retain urine; dreadfully offensive smell, not to be mistaken; excoriations; if the rent is near the neck of the bladder, the escape of urine is constant; not so frequent, if posteriorly; pass the catheter, and trace the urethra with finger in the vagina; speculum shows the extent of injury, and its condition.

Prognosis—Not favourable; spontaneous cures have been effected when the injury has been at the junction of the urethra and bladder; if posteriorly, and much loss of substance, the case is generally hopeless.

Treatment.—Keep the catheter in the urethra; keep the patient laid down for some time; *cauterize* the edges of the opening with nitrate of silver, or nitric acid; *actual cautery* has often succeeded: to apply the cautery, the patient is best on her back, the vagina well dilated, when the rent can be safely touched by the cautery. It is often easily seen, particularly if the catheter has been previously passed; *suture* has of late years been often successful, mostly by French and German surgeons; it has also repeatedly failed; there are many modes of accomplishing this suture, but the simplest are the best, small curved needles made for the purpose, held in the mouth of a pair of forceps, are, with a little management, easily passed through the walls of the rent, and then tied with the forceps: two or more sutures may be required, the ends of the ligatures cut off; some prefer metallic sutures, but I see no special advantage in them; remove the dilator or speculum, and place the patient in bed; vaginal injections of warm water occasionally, and aperients. It is recommended by some, to pare the edges before using the suture, if this is done, hæmorrhage may be the consequence: if so, cold water injections to be used in lieu of warm. The sutures generally leave on, or about the eighth day, when the success or failure will be apparent. The catheter must be constantly kept in the urethra, during the healing, if possible. Naegele proposed two small plates, like a doubled piece of paper, the front edges brought together by a screw, including the edges of the wound, and so retained together; the handle of the instrument is then unscrewed

from the blades, which are left behind: this plan has also failed. Dr. Blundell mentions the recovery of a case treated as fistula in ano, by laying it open by incision to the rent. *Elytroplastic* mode, proposed by Velpeau, an operation similar to the rhinoplastic operation for new noses, by interposing a portion of integument from another part, and retaining it there by suture. Jobert had four cases—two cured, one died, one failed. Roux also failed. *Closure of vagina*, proposed by Cassis, by inflaming the mucous membrane by caustic, but we have no proofs of success, and it is only substituting one evil for another—*in other terms, bad surgery.* Lastly, in incurable cases, the *Plug*, formed of hollow inflated bags of india-rubber, or moulds of wax, has had advocates: these are but temporary reliefs, forming no steps towards a cure. After all, in such cases surgery is yet at fault; and great room is left for improvement.

VESICO-UTERINE AND VESICO-UTERO-VAGINAL FISTULÆ.

The first, when the rent is from bladder, through the parietes of the uterus; the wall between bladder and vagina untouched. The second, where the rent includes portions of uterus, vagina, and bladder. The extent of injury differs, but is generally too much.

Causes.—Generally mechanical; large head and contracted pelvis; tedious labour; inflammation and sloughing from pressure; badly-applied forceps. The interesting cases of Professor Simpson show many of these fistulæ may arise from pelvic abscesses.

Symptoms.—In vesico-uterine, the urine is constantly

escaping, but the point whence it comes not detected by either finger or speculum; distinguished from other cases by less urine flowing in a sitting than in a lying posture, and still less by standing up. Examine the os uteri by speculum, and the urine will be seen occasionally filtering through the os; and if water be injected into the bladder, it will be seen escaping at the os. *Vesico-Utero-Vaginal* as the Vesico-Vaginal, but the laceration is apparent to the eye by speculum; the os uteri more or less destroyed; the urine escaping in all positions alike, menstrual secretion mixed with urine.

Prognosis.—Always very serious, since so many parts are implicated.

Treatment.—Can these injuries by previous management be prevented? It has been suggested, when the os is dilatable, the anterior lip be pushed up over the head and held there, with the view of its escaping injurious pressure; not difficult to accomplish, but I doubt the advantage. Labour prolonged too far, so as to cause inflammation and sloughing; might be avoided by timely application of forceps, or, where these cannot be applied, *craniotomy;* but there is the addition of the evil sequelæ of that formidable operation. I believe the evils of delay are far less in the aggregate than the substitution of more serious alternatives.

Curative.—First, Vesico-Uterine.—Keep the catheter in the bladder; plug the cervix uteri; apply the nitrate of silver (but how? there is the difficulty). Jobert dissects off the reflected vagina from the anterior lip till it reaches the rent, the edges of which are pared with a bistoury, and sutures applied so as best to secure

the rent. Another mode, by closing the opening between uterus and vagina, leaving the one by the bladder open; this by dividing the cervix laterally, and dissecting the anterior lip of the vagina, and uniting these together by suture, which in one case has succeeded.

Vesico-Utero-Vaginal.—Three plans have been proposed by Jobert. *First*, dissect vagina from remains of cervix; pare the rent; unite by suture the remains of cervix with the edges of the rent. *Second*, dissect the vagina from the cervix; in dividing this latter at each side, pare the rent; unite by suture the posterior lip of os uteri to the edges of the rent. *Third*, differs only in a depression being made in the anterior lip to fit more truly the edges of the rent. Jobert reports three cases cured on this plan.

RECTO-VAGINAL.

This character is less frequent, and admits of easier remedy, than those already treated on. It has been known to be congenital.

Cause.—Most usually from labour, long-continued pressure giving rise to inflammation and sloughing; ignorant use of instruments; disease of the rectum; pelvic abscess; may exist with, or independent of, vesico-vaginal fistula.

Situation and extent.—Vary; seldom implicate the sphincter ani.

Symptoms.—Mucous membrane of vagina and rectum red and congested; purulent discharge per vaginam and rectum; flatus and fæces through vagina, variously

modified; fluid material only passes through small rents, solid matter through larger openings; great irritation; patient reduced to a pitiable condition. There are, however, some cases that admit of something being done for relief.

Treatment.—The means are cauterization, compression, and the suture; indeed, the means suitable for vesico-vaginal, are applicable in these cases, and are more easily applied. There are, however, other cases where the extent of injury is lamentably great. In such cases, Jobert places the patient on her back, raises the thighs; the superior wall of the vagina is raised by univalve speculum, and the lower depressed to bring the rent in view; pare its edges, and put in as many sutures as are necessary to secure the opening; cleanse the parts; and lastly, to take off the strain from the sutures, make incisions in the vaginal walls, longitudinal or transverse, as best may suit the purpose. The patient kept quiet; the bowels intentionally constipated for a few days, till sutures are removed; syringe the vagina frequently with emollient fluids, until union is complete; then relieve the bowels by injection of an emollient nature; great attention will be necessary for some time to the bowels, to prevent the formation of hardened fæces.

Prognosis.—To be always guarded.

FLATULENCY.

I have very frequently been engaged with serious operations on the abdominal cavity, such as ovariotomy, &c., and found, in my early experience, much trouble to

arise from the state of flatulency so often present in the intestines, in some cases sufficient to make the viscera almost unmanageable. At last I revived the exhibition of inspissated ox-gall in a variety of diseases (*Vide* "Medical Times," 1842, pp. 100—114), and found, by giving it in doses of ten grains twice a-day, previous to any operation, for three or four days, I had at command an agent of great value, to precede all operations on the abdominal cavity. I can with sincerity avow, since I commenced its use I have not had the slightest trouble in managing the viscera, but, on the contrary, found the intestines occupying the least possible space, free from fæcal or gaseous contents. I therefore earnestly advocate its use, not only on this score, but I have always found the tendency to inflammatory action much less where it has been used, than where it has not; at the same time, I would caution the reader against the use of this preparation as generally bought, mixed with colocynth, &c., to make it active; whereas the very opposite is the character of true ox-gall, aperient without sensible activity. It is easily made, and then can be depended upon. For full directions, *vide* "Medical Times," 1842.

FŒTAL DEATH.

In operative obstetricy, many questions will be decided by the state of the fœtus—if it be living or dead; it therefore becomes an important matter to decide.

Signs of Death.—Motion ceased; flaccidity and subsidence of abdomen; receding of umbilicus; mobility of

uterine tumour; sense of weight and coldness in the abdomen; breasts flaccid; no milk; appetite and general health bad; countenance sunk; dark shade round the eyes; breath fœtid; rigors; no usual sound by stethoscope; meconium discharge in head presentations; putrescent discharges; flatus; absence of pulsation at fontanelle; cord (if it can be felt) without pulsation; desquamation of cuticle; looseness of fœtal bones; emphysema. No just conclusion can be drawn from one or two of these signs taken of themselves, only by a combination of them.

Fallacies.—Mother's account of suspended motion not to be relied upon; coldness, sense of rolling, and depreciation of general health, may arise from other causes. On the contrary, a dead fœtus may exist without these signs, and even motion under such circumstances has been fancied; liquor amnii may be dark and bloody, and the fœtus alive; meconium may discharge in breech cases with living children; absence of pulsation in the cord may arise from pressure upon it. Hence the necessity of many confirming points combined before the child can be pronounced dead, and an operation depending on that point proceeded with. The points of agreement cannot be too numerous.

FŒTAL MOTION.

Perceptible to the attendant; felt by the mother; sometimes violent; mostly moderate; sometimes in jerks; may be seen beneath the dress. Felt distinctly by applying a cold hand to the abdomen; or with both

hands pressed on each side gradually. May be deceived by contraction of the abdominal muscles, by flatus, and by irregular uterine contractions in suppressed menstruation. If the signs of pregnancy are accompanied with clearly-distinguished motion, the general presumption is, that pregnancy exists.

FORCEPS.

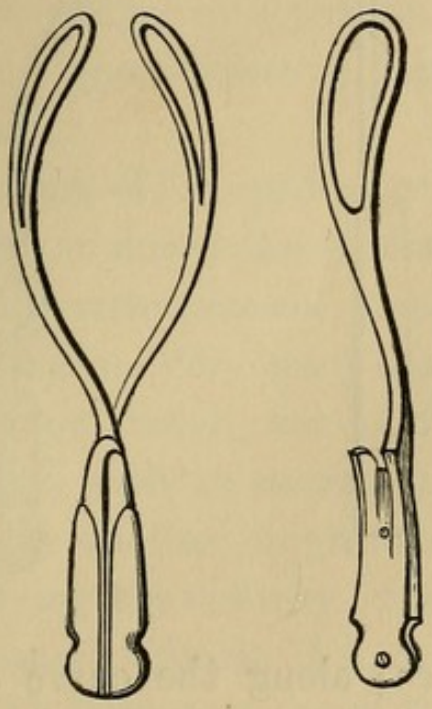
As I am not about to write a history of this valuable instrument, I shall merely observe that there are two classes—1. Short forceps, to act on the head in the pelvis; 2. Long forceps, to act on the head whilst at the upper aperture. It would be an endless task to review the vast variety of curve, and general form of this instrument, from the time of Dr. Paul Chamberlen to the present day, and I also believe it would be a loss of time. Almost every obstetrician has had a hobby of this sort to ride, by exercising his inventive powers in having a forceps of his own. I shall not attempt to conduct the reader into this inquiry further than pointing out those I consider most entitled to notice.

SHORT FORCEPS.

I give the preference to those of Dr. Collins and Dr. Simpson. I have had more experience of the former, but I think, of the two, I should now make choice of the latter, as applicable to a wider range of cases, partaking of both short and long forceps to a considerable extent. In my early practice I used Haighton's forceps, with a slight backward curve, but generally found them too light, and consequently, weak in the blade;

and I should earnestly advise the young practitioner to avoid using any forceps with backward curves, and above all, the strong backward curve of Dr. Hamilton's forceps. I believe frequent and extensive injuries have been inflicted by the application of such instruments; indeed, the backward curve, except in well-experienced hands, is somewhat difficult of application, and requires both judgment and experience.

Collins's forceps are about ten inches in length, the curve nicely proportioned, most easy of application, and



quite strong enough for their work; but they are strictly short forceps, and therefore not so wide in their application as if one or two inches longer; on this account, for many years I used the forceps of Dr. Haighton, although they have a slight backward sweep. As I before stated, Collins's forceps are 10 inches in length; $5\frac{1}{2}$ in the blade; $4\frac{1}{2}$ in the handle; $2\frac{7}{8}$ths greatest width

across both blades; $1\frac{1}{2}$ distance between points; $1\frac{5}{8}$ths breadth of blade.

Professor Simpson's forceps (fig. 1) are in whole

Fig. 1.

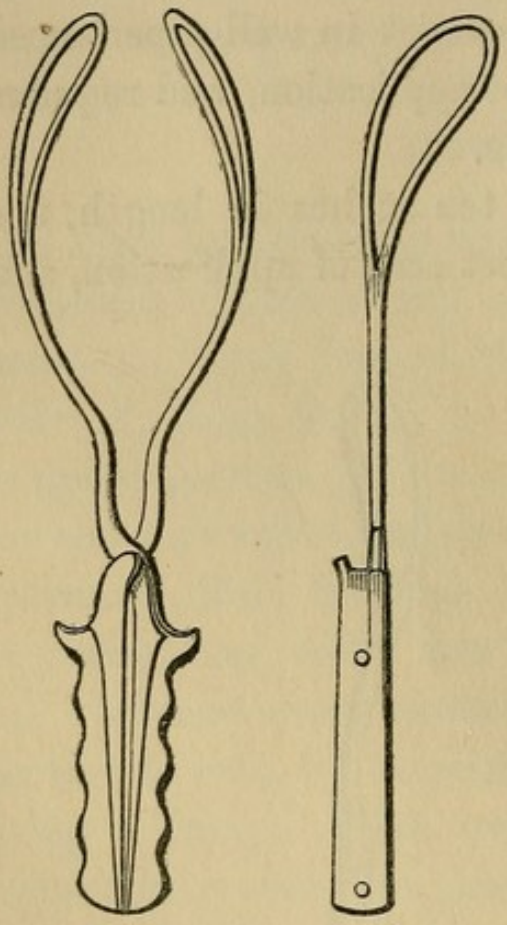
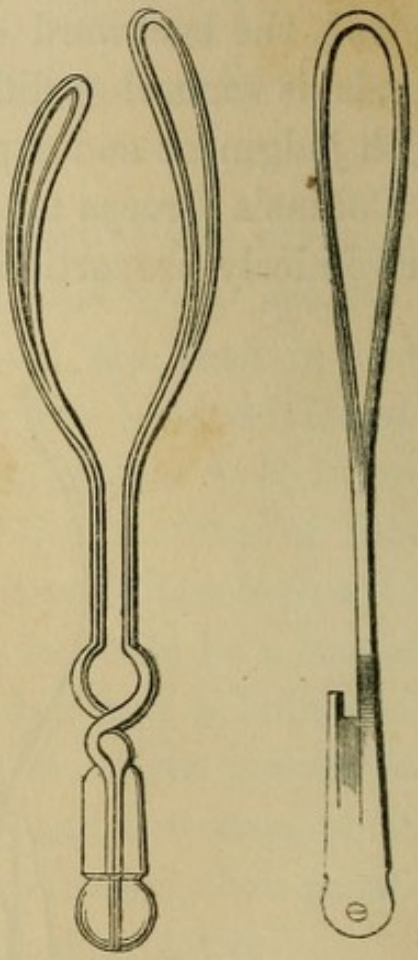


Fig. 2.



length, 13 inches; along the curve of blade, $6\frac{3}{12}$ths; direct length of blade, 6 inches; handle, 5 inches; greatest width of blades, $2\frac{10}{12}$ths inches; between points, $1\frac{2}{12}$ths; breadth of blade, $1\frac{10}{12}$ths; length of shank, 2 inches. The handle with notch tops to give more power as a tractor than compression. They have a wide range of application; are really both short and, to a certain extent, long forceps; are strong and effective, sufficient in compression, and powerful tractors.

LONG FORCEPS.

Cases however occur where the more decidedly long forceps are called for, when I should not hesitate to give preference to those of Dr. Radford (fig. 2, p. 96). Their entire length is $13\frac{3}{4}$ inches; length of blade direct, $10\frac{3}{4}$ inches; length of handle, 3 inches; greatest width between the blades, $2\frac{6}{8}$ths inches; breadth of the blade, $2\frac{3}{8}$ths inches; length of the shank, $3\frac{1}{2}$ inches. The blades are unequal; the handles somewhat short in proportion; at the bottom of the shank a curve is formed in each, so that when the blades are locked, a sort of ring is formed, through which the finger or a portion of napkin can be looped, which gives great power to this excellent instrument as a tractor.

That the invention of forceps has lessened the amount of human suffering, reduced the mortality of both child and mother, in obstetric practice, cannot for one moment admit of a doubt. Very many cases that in former days ended in craniotomy, are now terminated by forceps with safety both to mother and offspring; to which we may add another improvement—shortening the time for delaying the delivery, which formerly was alone often the cause of death. I look, therefore, on the introduction of the forceps as one of the greatest boons to suffering humanity: still they must not be considered as entirely void of danger; neither must it be forgotten that they have been, and are sometimes, liable to abuse. If the rule, however, be borne in mind, never to use operative instruments of importance, to save the time of the attendant or to exhibit mechanical skill, but to use them only when they are truly and legitimately called

for, then, and then only, will instrumental aid be placed in its proper position.

General Application of Forceps.—To facilitate delivery in mal-positions of the head, at the brim, or in the cavity of the pelvis. By rectifying the position, and by traction to act as a substitute for uterine action. To lessen the time of labour, which would otherwise be too much prolonged. To avoid the necessity of a more severe operation. To save the life of the child. The power of the forceps is twofold — 1st. Compression; 2nd. Traction. It is evident compression should be limited, sufficient to grasp firmly, to give power to traction, but not so much as to injure the child, else it becomes no longer forceps (as understood), but a *cephalotribe.* The statistics of the application of the forceps are about one in $342\frac{1}{10}$th cases in Britain; one in 140 in France; one in 159 in Germany. The average of the whole, taken from 622,213 cases, is one in $176\frac{1}{5}$th. In Britain, forceps cases present one death in $20\frac{3}{4}$ cases; in France, one death in $14\frac{3}{4}$ cases. In Britain one child died in 4; whilst in France and Germany, one child died in $4\frac{3}{4}$. If these results are compared with the results of craniotomy, it will be immensely to the advantage of forceps. These advantages are—1. Easy application; 2. Fully accomplish their intention; 3. Imitation of uterine action; 4. Aid uterine action; 5. Less liable to slip than vectis; 6. Mortality limited, compared with crotchet.

Disadvantages pointed out.—1. Sometimes difficult of application for want of space. 2. Two blades more difficult of introduction than one, as vectis. 3. Liabi-

lity to injure os uteri (not easy, if proper caution is observed). 4. Apt to slip. 5. Pressure by compression may destroy fœtal life. 6. By adding to the volume might with greater probability lacerate the perinæum.

What, then, are true Forceps Cases?—1. When the head cannot enter the brim from mal-position, and the hand cannot rectify the position.

2. When the head is in upper aperture, and pains inadequate.

3. When the head is at the brim, and a little large, some little compression by forceps may succeed. These three points are for the long forceps to rectify.

4. Close fitting of the head in the cavity of the pelvis, when the transverse diameter may be reduced six-eighths of an inch.

5. In some face cases, where the difficulty lies in the lower outlet.

6. Where the forehead is to the symphysis pubis.

7. In prolonged labour for want of uterine power.

8. When hand or arm descends with head.

9. In convulsion, hæmorrhage, or rupture, if head is within reach.

10. In some breech cases, to extract the head after the body is delivered.

11. After vaginal hysterotomy.

12. In cases of prolapsed funis, to save child.

Avoid the Use of Forceps—In cases of distortion, tumours, exostosis. When os uteri is rigid, and undilatable, and passages dry and inflamed. If the exhaustion has been carried too far. If the child be really dead. In hydrocephalus.

Time for Operating.—Not before rupture of the membranes; when general symptoms call for interference; symptoms better guide than lapse of time; wait, but not too long; if parts are dry and inflamed they tear easily, consequently laceration is certain; if, twenty-four hours after rupture of membranes, no advance has been made for the last four hours; if exhaustion, manifested by quick pulse (above a hundred); cessation of pains; greenish discharges; unpleasant smell; anxiety of countenance; hurried breathing; tongue coated; vomiting; shivering; coldness; and muttering delirium; then labour must be terminated. If the uterus is acting with energy; strength and spirits good; countenance cheerful; pulse under a hundred; tongue moist and clean; no vomiting or rigor; no heat, swelling, or tenderness of parts; the head advancing and retreating: *delay the application.* No female ought to be more than twenty-four hours in strong labour after the rupture of membranes, as natural efforts appear to be unavailing, and dangerous symptoms may arise.

Preliminary Steps.—Pass catheter; empty the rectum by enema; place the forceps in warm water; chloroform; get correct position of head; *position*, on left side, at the edge of the bed; pass two or three fingers, to guard the blade from inclosing the os; if at the superior aperture, the introduction of the whole hand may be necessary to guide the blade, introduce the upper blade first; keep the point of the blade close to the head by a wriggling, gentle motion, then introduce corresponding blade with same caution, and if they lock easily they are right, if not, withdraw the

last blade, and be more careful; see that no soft parts or hairs are included in the lock; grasp the handles firmly, do not tie them together, let the motion be partly lateral, partly extracting; relax at intervals, in fact, imitate uterine action; be careful of the forceps slipping, and bear in mind the axis of the pelvis, varying the motion accordingly; as the head advances, raise the handles towards the abdomen with the right hand, and with the left protect the perinæum; keep the blades in position till the head is fairly delivered. *In occipito-posterior positions:* Apply as before; traction from the perinæum towards the abdomen. *At the superior aperture.* First traction downwards and backwards. *In face presentations* apply the concave edge of the blade towards the chin in the mento-anterior position. *Where the head remains after the body is born,* raise the body well up; apply upon the sides of the head, sliding the blades beneath the body. *After the head has been severed, and left behind,* seize by craniotomy, or other forceps, about the occipital foramen; then fix the head, and pass the other forceps; when secured, perforate.

Dangers probable with Forceps.—Laceration of the vagina, cervix uteri; bruising soft parts; and laceration of perinæum. *To the child.* Scalp cut or bruised; undue compression; paralysis of the facial nerve from pressure. *Cautions.* Avoid great force; never apply if parts are rigid and undilatable; be certain of head-position; do not use lateral motion too freely; observe intervals; relax the grasp occasionally; do not hurry the head too rapidly through the outlet; remember to

support the perinæum; and lastly, recollect the axis of the pelvis, both in introducing the blades, and extracting the head.

After-Treatment.—Guard against shock; give opium, wine and water; may require ammonia; quiet; if soreness, warm water injections and fomentations.

Substitutes for the Forceps.—The whalebone loop of Dr. Conquest is easily applied over occiput or chin: it is, however, liable to slip, and I never considered it to be very effective. Professor Simpson invented a *sucker tractor* of vulcanized india-rubber, to be applied to the head, and then the air from between exhausted by a syringe attached. It has succeeded in his hands, and perhaps when the instrument is further improved it may be of some value; it has powerful tractive force, is safe to the mother, but probably might injure the child; it is, however, as yet a matter of experiment, and the results too few to decide for or against. Dr. Evans, of U.S. (Chicago), has contrived a network, applied by two steel rods, enclosing the head as in a bag, similar to applying a ligature round a polypus; this instrument (an old idea revived) is ingenious, but its utility has yet to be tested, and is not very likely to supersede the general use of the forceps.

GASTROTOMY.

The circumstances requiring this formidable operation are these:—In cases of ruptured uterus, the child escaping through the rent, wholly or partly, into the abdominal cavity. Three modes of treating this injury

are proposed. 1st. By passing the hand, and drawing back the fœtus through the rent, and delivering *per viâ naturales*. 2nd. To leave the case to nature; and lastly, to perform gastrotomy. With regard to the first mode, so few recoveries are recorded, that rather discourage than recommend its adoption; perhaps the successful cases of this nature have been those where the rent has been *not in the body*, but the cervix uteri. The second mode: admitting that some have survived this injury, what does it prove more than that nature is capable of making great and extraordinary efforts to secure recovery, and do more than we could have expected? But this will not justify trusting such cases to the powers of nature; for it is evident that a portion of them must have sunk under the most acute and protracted suffering. The third mode, however formidable from its analogy to the Cæsarian section it may appear, has been attended with most success. I should feel justified in preferring it to either of the former modes, except where the child can be immediately extracted after the accident.

The Operation.—It will be unnecessary to occupy more space by entering into the particulars of this operation. It is in every respect analogous to, and indeed forms a part of, the Cæsarian operation: the same preliminary cautions, the same instruments, and the same dressings and after-treatment. I have only, therefore, to refer the reader to that article; for, with the exception of not having to incise the uterus, which has already been lacerated, the operation is the same.

GESTATION, DURATION OF.

The probability of something like a certainty of ascertaining the duration of utero gestation is, in many obstetric points of inquiry, a question of very considerable importance, as it may often assist in fixing the best period for an operation. I therefore wish to refer the reader to a small work I have just published, entitled "Observations on Utero Gestation, with the view of correcting the Opinions generally entertained in respect to Protracted Gestation," (London: Renshaw, Strand: 1855), in which I have, I believe, proved (though the sources of proof are but limited) from some twenty cases, where the date of a single coition, and the exact date of delivery, with ages of both parents, are correctly obtained, the following facts:—

First. That there is no such latitude as is generally supposed in the many cases recorded, of supposed protracted gestation.

Second. That there is a slight difference in the gestative period, according to the ages of the parties concerned, but by no means so great as has been supposed.

Third. That the gestative period is the same within a few hours, more or less, in all cases where the ages of both parties are analogous to each other.

Fourth. To arrive at a correct gestative period, it is imperatively necessary to take the mean of the two ages, allowing some little for the earlier maturity of the female system; thus, a male of forty cohabiting

with a female of twenty, shows a mean of thirty; but owing to the female arriving at maturity earlier, I fix the mean one year below, in favour of the female; or at twenty-nine, instead of thirty.

Fifth. That as age advances, the gestative period is lengthened gradually; or in other words, young females have a shorter term of gestation than older ones.

Sixth. Where there is a disparity of age between the parties, the true term is in the mean of the two, allowing one year for the female, as in the fourth position.

Seventh. The causes of all those marvellous cases of protracted gestation are fully and satisfactorily explained.

In the work above alluded to, I have entered fully into all these questions, with a large amount of proof derived from lower animals. The cases of human parturition, with all points fully made out, do not amount to more than twenty, yet the views I advocate in the above propositions, are well substantiated.

At	12½	years,	gestative	period	264 days.
	15	,,	,,	,,	267 ,,
15 to	15½	,,	,,	,,	267 ,,
16 to	17	,,	,,	,,	270 ,,
	19	,,	,,	,,	272 ,,
	25	,,	,,	,,	274 ,,
	30	,,	,,	,,	276 ,,
	35	,,	,,	,,	278 ,,
	44	,,	,,	,,	284 ,,
	52	,,	,,	,,	290 ,,

Here it is evident the period progresses with the age, whilst between the oldest and youngest there is but twenty-six days. There is no protraction ever shown in tables of single coitu; none in lower animals. The errors on this question lie in the fancies of females, and miscalculations as to circumstances. *Vide* "Observations," above alluded to.

HÆMORRHAGE.

Hæmorrhage, General Character of.

Said to occur 1 in 146; according to Collins, 1 in 125. Fatal to mothers, 1 in $5\frac{1}{2}$; to children, 1 in 4. Discharge must be greater than usual to be styled hæmorrhage: either a small quantity, gradually escaping for some time, or an excessive discharge in a short space of time, is termed hæmorrhage.

Danger.—According to its effects on the system, rather than the amount lost.

Symptoms.—Face ghastly pale; pulse low, frequent, irregular, intermittent; weariness; fainting; sighing; vomiting; tinnitus; skin damp, cold; breath cool; restless tossing about; involuntary jactitation; desire to get up; sobs; dimness of sight; repetition of syncope; convulsions; death.

Modes.—Profuse gushes, generally in placenta prævia; draining slowly, is the character of secondary hæmorrhage.

Suppression.—Natural; *syncope* by allowing coagulation; *vomiting* may suppress, but sometimes aggravates: indicates concealed hæmorrhage.

Coagulation.—As hæmorrhage progresses, animal heat is lowered, and blood more disposed to coagulate; syncope always favours this condition; fibrine is thrown out, and a natural and permanent closure effected; the great point to be aimed at is the obliteration of uterine vessels by contraction, as clots may increase hæmorrhage. If syncope occurs in flooding, the danger of its continuance often supersedes its coagulating advantages.

Position.—Laid flat, on a mattress, slightly covered; window and door open; perfect quiet; no teasing questions; attendants few.

Regimen.—Ice water; lemonade; cream of tartar water; infusion of roses, with dilute sulphuric acid. If drain be long, give broths, jellies, solids, light meats, eggs, &c. If diarrhœa comes on, the prospects are worse.

Amount lost or losing is of great consequence to know; if hæmorrhage is active and large, the colour is bright; if small and continuous, it is pale; if long continued, very pale.

Venesection.—Sometimes useful in threatened abortion, particularly in strong plethoric habits, in the early and middle months.

Medicines.—If constipated, aperients, avoiding those acting directly on the rectum: the best—ol. ricini; sulph. magnes.; Seidlitz powder.

Astringents of but little service—alum and tannin best. If acet. plumbi be used, use boldly two to four grains, with one grain of opium, hourly for three hours, in extreme cases. I have tried Glauber's salts in tea-

spoonful doses, with great advantage; they act as aperient, and arrest by coagulation.

Crude Opium.—Difference of opinion concerning it: some contend its effects are directly controlling loss of blood; others that it merely allays restlessness; the truth is, if it secures the latter, it is more likely to control the former. If hæmorrhage has been great, eyes sunk and glazy, lips white, skin cold, corpse-like, pulseless, action of the heart scarcely perceptible, stimulants ineffective in this state, if anything can rouse, it is opium. Give laudanum in tea-spoonful doses, unless there is vomiting—then solid opium is preferable, or enemata with laudanum or black-drop. Opium is applicable to hæmorrhage after delivery: it acts as a stimulant. In abortion, it allays uterine action.

Digitalis.—Though spoken of, I believe it of no utility.

Turpentine.—Of use in passive hæmorrhage.

Ipecacuanha.—Acts as an emetic: very doubtful efficacy.

Cannabis Indica.—Useful in menorrhagia.

Ergot.—If contraction is required, useful—not in all forms of hæmorrhage; said to have fatal effect on child: it must be long given to have that effect. It is said to be deficient as a nervous stimulant, and to have a sedative effect on the heart's action. If hæmorrhage is present, give ergot, when the head is on the perinæum; after head is expelled, to expel the shoulders; and lastly, when the insertion of funis can be felt; but never give it previous to turning. Ergot is better as a preventive of hæmorrhage; opium more useful to redeem from the consequences of extreme loss of blood.

Stimulants.—Doubtful if syncope is not doing more good than rousing from it; if progressive sinking, give brandy in tea-spoonfuls quickly, according to effect; effect observed rather than quantity given; mixt. camph.; sol. carb. ammon.

External Stimulants.—Bottles of hot water; oven plates, warm; mustard plasters; friction.

Mechanical Remedies.—Cold is of more use as a stimulant than as a refrigerant; ice should be used in bladders to the hypogastrium, not cloths wet with iced water, as the chilliness from moisture often depresses; ice in vagina very effective—the only difficulty is the introduction; some go so far as to recommend it placed in the uterus, which in my opinion is better let alone; long-continued ice-application to a part might endanger its vitality; water poured from a height on the naked hypogastrium is often of great advantage; cold water injections into vagina and uterus more easily accomplished than introduction of ice; cold injections into the rectum; evaporation of ether. sulph. over the part; at the same time, heat to the extremities; mustard plasters between shoulders.

Tampon is applicable to early abortions, if there is no hope of saving the ovum; temporarily in accidental hæmorrhage; doubtful in placenta prævia; advantageous in menorrhagia, but positively injurious after delivery.

Object, to prevent escape by accumulation, and so close the vessels; the best plug is a silk handkerchief—a corner first pushed in (previously soaked in vinegar), and gradually the whole handkerchief in-

troduced; two, if necessary, for the vagina should be packed full to the os, and then secured by a T bandage; not to be left more than twenty-four hours; bladder must be attended to, and the catheter passed if required.

Alum Plug.—A piece, three inches long, passed high into the vagina; to be removed with coagula (which soon becomes offensive) in a few hours.

Discharge of Liquor Amnii.—Rupture of the membranes is often useful in latter months, in accidental hæmorrhage, and sometimes in placenta prævia; uterine contraction soon begins. Rigby, Merriman, and Ramsbotham have frequently succeeded by this, without having to turn.

Clear Uterus of its Contents.—If failure attends rupture of the membranes, it only remains to empty the uterus; the means depend on the position of the child; version, forceps, or crotchet; in early months, the finger is sufficient; indeed, previous to the sixth month the hand should not be introduced into the uterus.

When the Hand is in the Uterus.—After the contents are cleared out, the hand should not be withdrawn till the uterus contracts firmly upon it; a slight rotatory motion is an excellent stimulant.

Outward Pressure and Grasping Fundus.—By a sort of kneading or grasping the fundus outwardly, contraction is often secured; outward pressure may be required for some hours, and in this the accoucheur should not trust to attendants.

Pressure on the Aorta has been tried successfully.

Bandage or Binders.—Much advantage is derived

from well-applied bandages, but they should be relied upon rather as a means of support, and preventive of recurrence after contraction has been secured by other means, than as a means to arrest hæmorrhage. Mauriceau advised bandages on arms and legs to maintain vitality in extreme cases; when a bandage is applied, a pad should be placed over the uterus.

Galvanism.—Dr. Radford and Dr. Ramsbotham have used galvanism, and speak in high terms of its efficacy. Dr. Radford's opinion is of the highest value in such questions: further trials are necessary to test its utility. Dr. Simpson does not report favourably upon it; the great difficulty is not having an available apparatus without much loss of time.

VARIETIES OF HÆMORRHAGE.

Menstruation during Pregnancy.

Many cases have been recorded of this hæmorrhage, by Dewees, Whitehead, and others. It almost invariably arises from abraded or ulcerated os or cervix uteri: sometimes it leads to misconception as regards pregnancy.

Treatment.—Light touches with the nitrate of silver, in the manner proposed by Meigs, is the best treatment, and under which it easily gives way.

Hæmorrhage with Abortion.

It may be fatal at this period: cases recorded by Ingleby, Denman, Whitehead, &c. For causes, *vide* article ABORTION. This form of hæmorrhage is the most frequent.

Treatment.—Quiet; kept cool; cold acidulated drinks; lead and opium combined; ipecacuanha; tannin; matico; cold; alum plug; tampon; ergot; and, if extreme, remove ovum by the finger, or placental forceps.

After-Treatment.—Restorative and nutritive.

Hæmorrhage with Hydatids

May occur at almost any period of pregnancy, more particularly from the third to the eighth month. Flooding occurs; hydatids perceived; frequent recurrence reduces the system.

Symptoms.—Similar to pregnancy, but peculiar; uterus larger in proportion to time elapsed; elastic to touch; no quickening remembered; no usual stethoscopic signs; no well-formed cervix; *ballottement* a failure; hydatids seen, make doubt certainty.

Appearance.—Vesicles like peas, or larger, floating in reddish fluid; in considerable numbers; with an attaching pedicle; sometimes circular, at others elongated or pear-shaped; have three coats—1st, serous, 2nd, transparent, 3rd, mucous; injected with vessels; containing transparent fluid; in some of a pink colour; not coagulable; in utero, said to be contained in decidua, and floating free, or attached to ovum; their expulsion usually attended with hæmorrhage; liable to recur until dangerous; the uterus has been known to expel all at once, when the danger is less; large amount of fluid (in which they float) is common; may attain many pounds (from fifteen to twenty), and may be retained for years in utero.

Prognosis.—Usually favourable, but not necessarily

so; depends on age, continuance of discharge, its effects; often followed by phthisis.

Treatment.—Before the seventh month, manual help not necessary; tampon; cold; ergot. *After* the seventh month, pass the hand, and clear the uterus of its contents; bandage and compress; lochia and milk may appear.

After-Treatment.—Mineral tonics; generous diet.

Hæmorrhage, with Fleshy Moles.

The management and treatment exactly the same.

HÆMORRHAGE, ACCIDENTAL.

Accidental Hæmorrhage occurs before delivery, and after the sixth month; occurs once in 82 cases; fatal one in $3\frac{1}{2}$; caused by separation of placenta; hæmorrhage sometimes extensive, in others limited; according to the extent of separation, though a small separated surface my produce fatal hæmorrhage.

Cause.—Blows; falls; violent shocks; fatigue; mental emotions; straining; lifting; plethora; uterine contraction, where placenta is attached; morbid state of placenta; tight funis, from being wrapped round the body or limbs.

Symptoms.—Hæmorrhage; faintness; sinking; vomiting; cold extremities; small, feeble, rapid pulse; hurried breathing; sense of fulness; if uterine contraction accompanies it, the discharge is less; rarely immediately fatal; syncope restrains, and patient rallies; surface blanched; cold sweat; countenance sunk. In

extreme cases, dimness of sight; ringing in the ears; sighing; tossing about; fatal syncope; or convulsions.

Diagnosis.—If placenta presents, it may occur independent of period of gestation; in accidental hæmorrhage, uterine contractions diminish bleeding, but in placenta prævia each pain increases the amount.

Treatment.—If no pain or opening of the os, bleed, but not largely, and wait; kept quiet in bed; cool wet cloths to the vulva, or ice-bags over the uterus; infus. rosæ, with sulph. acid. dil.; cold acidulated drinks; weak solution of nitrate of potassæ. If excitable, nervous, use opium, or acetate of lead and opium; cold enema; alum plug; tampon. *If stubborn*, rupture membranes; ergot. *If alarming*, version or forceps; last resource, perforation. Tampon not to be relied on, as internal hæmorrhage may be going on; avoid dilating the os, unless great necessity calls for it. If asphyxia occurs, rally before delivery; transfusion; great care in applying bandages and compresses after; stay with patient some time after; examine from time to time if any fresh discharge.

HÆMORRHAGE FROM PLACENTAL APOPLEXY.

Internal Hæmorrhage.

Between uterus and placenta; placenta still attached; liquor amnii without colour; may ultimately appear externally; amount of blood usually not large, but sometimes very large; general character very dangerous, even though discharge small; occurs during pregnancy or in labour, but not of frequent occurrence.

Symptoms.—Sickness; fainting; pale, cold limbs;

pulse rapid and feeble; restless; feeling of fulness; gasping; no external bleeding; a swelling observed outwardly where placenta is situated.

Treatment.—Rupture membranes; ergot; if these fail, pass the hand and turn. *No tampon is allowable.*

HÆMORRHAGE FROM PLACENTA PRÆVIA.

Hippocrates spoke of its danger; Guillemeau advised prompt delivery; Mauriceau thought the placenta had fallen; La Motte thought the same; Portal describes it, and advocates speedy delivery; Gifford describes it; Smellie alludes to it; Roederer describes it accurately; Levret recommends version; Rigby, sen., treated of it with other cases; in 1822, Kinder Wood revived the question, proposed detachment of placenta, and then leaving to nature the rest. In 1845, Dr. Radford and Professor Simpson reopened the question, which gave rise to considerable controversy. This hæmorrhage occurs about 1 in 500. The same case again liable to it.

Fatality.—To mother, 1 in 3; to child, 1 in 2.

Variety.—May be only partially or completely over the os; this implanting cannot occur without hæmorrhage, and often shows itself about two or three weeks before labour; it may occur as early as the sixth month, and as late as the full period.

Cause.—Separation of placenta from its attachment by uterine action.

Prognosis.—If left to itself, fatal, at least generally; powerful contractions have forced both fœtus and placenta from the uterus, and so saved the patient.

Symptoms.—Hæmorrhage during pregnancy, without

apparent cause; little pain at first, but progressively increased; amount of discharge various; first attack seldom fatal. Dr. Lee records a fatal case.

Diagnosis.—Examine; if discharge ceased, wait, but be in readiness; examination produces discharge, therefore do as little as possible, still, be certain before withdrawing the hand; do not mistake a coagula for the placenta, such may lie in front of it; the placenta has a rough feel; if wholly over the os, no membranes can be felt; if only part over, the membranes will protrude on one side; placental presentation defeats the test of *ballottement*. Rigby says, partial attachments occur early, the wholly attached in later months (doubtful); pains increase discharge, but discharge may occur without pain.

Treatment.—Varies with existence of hæmorrhage, period of pregnancy, amount of attachment, and state of os uteri.

Indications.—1st, To restrain discharge; 2nd, To empty the uterus. *In early months*, rest, horizontal position, light clothing, cool diet, saline aperients, cold enemas, keep in readiness for recurrence. At the sixth month, delivery sometimes occurs unaided; perforation of the membranes recommended. If attachment is only partial, rupture membranes, and some say give ergot; but if version is necessary, ergot renders it more difficult. If os dilated, and discharge heavy, version at once, and speedy; if not dilated, wait till it is, *but not a moment longer than it is dilated.* The operator to be guided more by the yielding of the os than its apparent size; the placenta may to some extent prevent dilata-

tion. At the seventh month the os is seldom dilated, or prepared for it.

When to interfere.—By amount, frequency, and suddenness of discharge, and by the effect of hæmorrhage, and by the dilatability of the os; better interfere a little too early than too late. If os not dilatable, alum plug; be careful that internal accumulation is not going on; watch surface and countenance, test the pulse often, and be on the alert for the *feeling of bursting;* relieve bladder by the catheter, and leave patient for as short a time as possible. When dilatation of os comes on, be ready to turn (*vide* VERSION); in a large majority of cases the feet will be found on the mother's right side, posteriorly. Avoid perforating the placenta, for if the object be turning, it loses time, augments flooding, destroys vessels on which the vitality of the fœtus depends, and puts obstacles in the way of the head and body passing; therefore, in turning, go on one side of the placenta, the free side, if there is one; hæmorrhage lessens as the breech engages, but it may be no less internally; deliver gradually, not too rapidly; be certain of contraction; deliver placenta, if necessary; apply compress-bandage, and cold, if required. Sometimes after entire delivery, and the patient somewhat rallied, the hæmorrhage is renewed; renew compress, and give stimulants; try to define if syncope arises from a sudden gush, or after-draining; the latter more fatal and difficult to rally from.

Mode by detachment of placenta entirely, and leave the rest to nature.—This practice, proposed by my much-respected master in 1822, and followed up with energy

by Dr. Radford and Professor Simpson, in 1845, is founded on the fact, that naturally the placenta is sometimes expelled before the fœtus, when flooding immediately ceases. Statistics prove this practice immensely advantageous. According to Professor Simpson, 141 cases, 1 in 44 dies; old practice, 1 in 3, of the mothers. In 19 out of every 20 cases, flooding ceases when placenta is detached.

This practice is applicable if hæmorrhage be great, rupture of membranes ineffective, turning inapplicable, os not sufficiently dilatable, fœtus not viable, if exhaustion too great for version, if child is dead, in primiparæ.

Said to be objectionable—in seventh month; hæmorrhage great and os not dilatable; violence in detaching as great as in version (*doubtful*); if left to nature, days may elapse before expulsion; fever may arise (*mere supposition*); in dead fœtus (*not correct*); loss of maternal life not lessened (*statistics prove the contrary*); encourages indolent practice, and screens inability (*worthless arguments*); increases difficulty in mal-presentations (*barely possible*).

General summary.—If no exhaustion, or just begun, turn and deliver as soon as the os will permit; size of half-a-crown piece, and of a yielding nature; if not, wait, and watch closely. In extreme exhaustion, rally, if possible, before turning. If os rigid, use *tampon*, but watch, lest internal accumulation be going on; but the most available and successful practice is (particularly where exhaustion threatens) to detach the placenta at once.

HÆMORRHAGE AFTER BIRTH

May arise from not sufficient attention to uterus after child is expelled; from delivering shoulders too quickly; from accumulation behind placenta whilst it fills the cervix; from inertia; from irregular action; and lastly, from adherent placenta.

The best preventives are, to attend to the uterus by compression, as it is emptied of its contents; not to deliver arms and shoulders too rapidly; deliver the placenta by a twisting motion, and see the uterus contracts well after. If hæmorrhage still follows,

Treatment.—Cold douche; pressure; firm bandage; clearing out clots; opium; external and internal stimulants; close watching; last resource, transfusion.

HÆMORRHAGE FROM RETAINED PLACENTA.

Retention may arise from inertia; irregular action (hour-glass); adhesion; flooding, not always. The placenta has remained for days without bad symptoms; but it is always a source of danger, from hæmorrhage or constitutional irritation; it is bad practice to leave it (*vide* RETAINED PLACENTA). Hæmorrhage more or less constitutes the great danger, removal of the retained mass is the only relief.

Symptoms.—Uterus larger than it ought to be; easily felt over the pubis; like a flabby, half-filled bladder; the flooding arises from placenta being *only partly detached;* if wholly adherent, there is little or no hæmorrhage; grasp the uterus, and blood gurgles forth externally; pulse low and rapid; patient restless.

Treatment.—Friction over uterus; cold cloths; ice-bag outwardly, iced water inwardly; ergot; if symptoms are urgent, extract the placenta without delay; if hæmorrhage trifling, delay, but not longer than one hour; patient not safe until it is removed; delay gives rise to apprehension, and involves the character of the attendant; it is easier to extract immediately after delivery, the parts being relaxed, than to wait; the patient suffers less by the operation, and has less exhaustion to contend against; never let the hand leave the uterus after placenta is removed, without ensuring contraction, or coagula will supply its place; whilst extracting, let an attendant press on the uterus outwardly; mostly the uterus contracts, and expels hand and placenta together; if syncope, rally first, or the extraction may hasten the patient's death.

HÆMORRHAGE FROM IRREGULAR OR HOUR-GLASS CONTRACTION.

True hour-glass form of uterus is generally a fallacy; it is mostly a stricture behind the os; may arise in other parts.

Causes.—Rapid delivery; tedious labour; over-distension; unnecessary pulling at the cord; sometimes two strictures said to exist (doubtful); the true hour-glass form, the rarest variety.

Symptoms.—Per vaginam, placenta embraced behind cervix; on entering one chamber uteri, the cord leads to its enclosure in another further distant; be careful to define from rupture, recollecting the placenta seldom escapes with the child in rupture; the contraction some-

times easily overcome, sometimes very firm; if there is flooding, interference is necessary.

Treatment.—If symptoms not urgent, give an anodyne, and wait; if flooding, proceed to extract; when the hand arrives at stricture, give chloroform, and on the moment of relaxation, extract, and let the assistant remove the chloroform.

HÆMORRHAGE FROM ADHERENT PLACENTA.

In every respect, as regards manual assistance, as Retained Placenta. Recollect, however, to examine placenta after delivery, in both cases. If a portion, however small, remains, it is a source of imminent danger. I have seen severe hæmorrhages arise from extremely small portions left behind, as well as the worst forms of irritative fever from the absorption of the putrid mass.

Treatment.—Remove the remnant at all hazards; support the system, if much exhausted; check inflammatory action, if any; be careful to apply compress and bandage; correct fœtor by injections of chamomile tea, or a weak solution of chlorid. sod.; if local inflammation, leeches, poultices; calomel and opium.

After-Treatment.—Ventilation, cleanliness, diet of a nutritious character, and tonics.

HÆMORRHAGE AFTER DELIVERY OF PLACENTA.

Very dangerous; insidious; unexpected; about half-an-hour after complete delivery; is either concealed or apparent.

Symptoms. — Sudden pallor, faintness, retching;

feeble, unsteady pulse; tossing about; wants air; respiration quick; sighing; gasping; crying out, "I am dying," often followed by the fact. The belly suddenly enlarged to equal size before delivery, soft, and fluctuating; gurgling sound on pressure; blood gushing at vulva, in clots or in fluid; external form detected on napkins, and belly not so large.

Cause.—Inertia; excessive debility; said to occur after ergot—I never found it, though my experience of ergot has been extensive; heated atmosphere; clot plugging up os; too much clothing; mental emotions; excitements. I do not consider these three latter points much to the purpose.

Treatment.—Press firmly over fundus, powerfully, with a pad (not with warm hand), for hours, if required; the colder the compress with iced water, the better; cold douche from high elevation; inject cold water into the uterus; alum plug; compress aorta; if controlled, firm bandage and compress; do not leave the patient for some hours; watch closely. If clots distend the uterus, *they must be cleared out;* if on the brink of death, the introduction of the hand may be doubtful, but it ought not to arrive at that—if it should, give opium, ergot, brandy, ammon., externally and internally; hot bottles to extremities, and mustard plasters; apply a breast-pump to the nipples, in imitation of child, to excite sympathetic action; last resource, transfusion.

HÆMORRHAGE WITH CONTRACTED UTERUS.

Resulting from excess of vascular action; with red face; strong pulse; possibly might arise from attachment of placenta near os, with vascularity; has been found in connexion with a very small portion of placenta, just lodged in the os; in lacerations of the os; intra-uterine polypus; and from thrombus near the os.

Treatment.—If a portion of anything left, remove it by finger or forceps; venesection; alum plug.

HÆMORRHAGE WITH POLYPUS.

Not of frequent occurrence, and if the usual modes of suppressing the hæmorrhage succeed, it is better to defer any operation for the removal of the polypus until the uterus returns to its normal condition; still, I can conceive a small polypus irritating and producing hæmorrhage, which if it assumes a serious character, better get rid of it by operation, than wait to endanger the patient (*vide* UTERINE POLYPUS).

SECONDARY HÆMORRHAGE

Occurs oftener than is supposed—generally within thirty days after delivery. Dr. Putman gives a case forty-two days after: I have generally found it from the tenth to the fourteenth day. I had a severe case at Liverpool, occurring on the fourteenth, and again on the seventeenth day after, reduced to the last ebb of life, but ultimately recovered. Not often fatal, but some fatal cases have been recorded by Roberton, Boivin, &c.

Cause.—Relaxation; inertia, which may last days;

retention of clot, or portion of membranes, or placenta; polypus; premature rising; excitement; softening of uterine fibre; aneurismal sac in walls of the uterus; thrombus.

Treatment.—If any portion remain, remove it; alum plug; pressure; ice bladder; tampon; low temperature; cooling diet and drinks; rest; horizontal posture.

After-Treatment.—Nutritious diet; tonics.

HÆMORRHAGIC PROSPECT AFTER DELIVERY.

The uterus may be hard, and apparently firmly contracted, and yet hæmorrhage occur—*vide* Gooch, Ingleby, and Porter. It may feel larger than natural in primiparæ, and yet not dangerous. The large, doughy, flabby form, sluggish to contract under friction—always a suspicious character, and connected with flooding; feeble systems; long previous illness; over-distension by plurality; excessive liquor amnii; generally disposed to hæmorrhage as well as multiparæ; again, alternating contraction and dilatation, always a dangerous prospect.

AFTER-TREATMENT OF FLOODING.

Insist on horizontal position for at least two or three days; rising in bed dangerous; slide clothing under, rather than raise the patient; head level with body, not too low, but not raised; drinks and food all to be cool, and given frequently, in small quantities; allow sleep, but not without a competent person to watch for bad symptoms; pulse felt repeatedly—if quick and jerking (hæmorrhagic), be on your guard.

PRACTICAL REFERENCE TABLE FOR TREATMENT OF HÆMORRHAGE.

During pregnancy, previous to labour.	During pregnancy.	Cauterize os; gallic acid, tannin, matico, oxid. argent., acet. plumbi, opium.
	With abortion.....	Horizontal position, light clothing, cool drinks, acet. plumbi and opium, antim., ipecac., tannin, gallic acid, matico, cold, alum plug, tampon, ergot; remove ovum.
	With hydatids ...	Tampon, alum plug, cold, ergot; clear out contents, if severe.
During labour.	Accidental	Rest, body and mind; lead and opium, alum, tannin, cold, enema, alum plug, tampon, rupture membranes, ergot, version, forceps, perforation, bandage, compress, and transfusion.
	Excessive show ...	Rest, astringents, cold.
	Placental apoplexy	Rupture membranes, ergot, version.
	Placenta prævia ...	Rest, rupture membranes, detach placenta, and leave to nature.
	After birth of child	(From inertia). Friction, cold affusion, ice, ergot, introduce hand. (Irregular contraction). Friction, cold, introduce hand, chloroform. (Adherent placenta). Detach and remove, cold, pressure, ergot.
	After placenta ...	Cold douche, long external pressure, ergot, introduce hand, bandage, opium, external and internal stimulants, drawing breasts, transfusion.
After delivery.	With firm contrac.	Ice in vagina, alum plug, bandage.
	With polypus ...	Ergot, pressure, introduce hand, alum plug; if extreme, remove polypus.
	Secondary hæmorrhage	Remove bits remaining; watch, rest, pressure, look out for inversion, ergot, ice, alum plug, lead, and opium.
After-treatment.	Insist on	Horizontal position, head low, cold food and drinks, food often, and in small portions, allow sleep, but with careful watching.

HÆMORRHOIDS.

Piles or hæmorrhoids are of very frequent occurrence in females, and particularly so after labour; are very painful, and attain considerable size; occur in relaxed, indolent, and constipated habits, in early months, about the time of labour, and after delivery.

Symptoms.—Itching; weight; pain and inflamed state of parts; throbbing; heat; pain in defæcation; distress after; tenesmus; bloody discharge; bearing down. In some cases, the pain of a dull, continuous nature; blue, livid tumours.

Terminations.—May recede, inflame, and lastly, slough.

Treatment.—Avoid operations till some time after labour; return the protrusion; apply leeches, poultices, fomentations, injections, opiate ointments; after some time has elapsed, if there is much prolapse, I have found the most valuable application to be touching the mucous surface with nitric acid, then smearing the part over with lard, and return the prolapsed part; one dressing is generally sufficient.

HARE LIP.

When this abnormal condition of parts prevents the child from sucking, the question arises, Should an operation be performed soon after birth, or wait till the fifth or sixth year? Unsightly as the case appears, I am inclined to wait; but not longer than the second or third year. The operation is best done by wrapping the child, arms included, in a long pillow-case, when its

struggles are ineffective; the operator seizing one side of the lip with the left thumb and finger, then with a sharp bistoury pierce the lip at the junction above the fissure, and cut downwards a clear incised edge; repeat the operation on the opposite side, so as exactly to correspond (some curve the incision; it is said to lift the centre of the joined lip more neatly). The edges are neatly approximated by one or two needles, according to circumstances (the small sewing needle the best); when in position, wrap a turn or two of waxed stay-silk round the ends, in the direction of the figure 8; then cut off the points of the needles with wire nippers; water dressings are all that is necessary; the needles to be kept until union is perfect. If there is no deficiency of palate, and the operation neatly done, it is scarcely perceptible in after life.

HEAD, IMPACTION OF,

May arise from mal-position, or tumour within the pelvis, and which cannot be disengaged by the hand or forceps. The only alternative for this case is Embryotomy (*vide* that article).

HERNIA.

This accident sometimes complicates labour when hernia is present, and protrudes. The treatment consists in reducing the rupture during the absence of pain, and sustaining a firm pressure on the part whilst the pain is present.

HYDATIDS.

(*Vide* HÆMORRHAGE WITH.)

HYDROCELE, CONGENITAL.

Hydrocele, before and after birth, is common, but does not (that I am aware of) ever assume a size to inconvenience labour. A water-dressing night and morning often cures; if, however, it fails, a few punctures with a fine acupuncture needle may be necessary, with a continuance of the cold water-dressing. The most useful application I ever tried was equal parts of liq. ammon. acet. and water, which often succeeds without the necessity of puncturing.

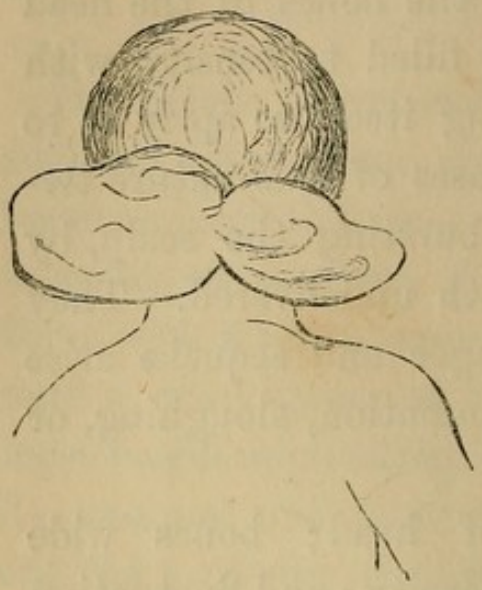
HYDROCEPHALUS.

Large size of the head, arising from advanced ossification or accumulation of fluid, is of frequent occurrence; few practitioners but have met with cases. The bones may be so firmly ossified as not to be able to mould themselves into the entrance of the pelvis; great patience is necessary, and if aid be required, it will be by forceps, or perforator, and crotchet; or, it may be so filled with fluid as not to be able to make good its descent. The amount of fluid frequently extends to three or four pints, and the circumference of the head frequently up to twenty-four inches. I have now by me a cast of a child which I delivered some years ago, the circumference of the head of which measured thirty inches; the child was recently dead when born, which may account for the fact that it was born without perforation, or extra manual assistance, showing what a little patience will accomplish: the integuments were

very loose, and projected before the bones of the head so far through the pelvis, and filled to tensity with the fluid, yet the whole moulding itself so aptly as to be born without mutilation. Cases of this nature terminate by slow expulsion, by bursting the scalp, by rupture of the uterus, or by death undelivered. They generally require aid. The danger and sequelæ arise from pressure, followed by inflammation, sloughing, or fistula.

Diagnosis.—Great volume of head; bones wide apart; fontanelles widely open; tensity; and fluctuation (though not always). Be careful not to mistake imperfect ossification for hydrocephalus.

Treatment.—The delay advisable in natural labour, might be fatal here, without advantage to the child. If natural efforts cannot succeed, which may be soon known by *no advance*, perforation must be resorted to, as forceps are liable to slip. It is often really necessary to perforate to avoid contusion, inflammation, laceration, and sloughing; to avoid exhaustion, as the child, if born alive, seldom lives, or if it lives, the disease is sure to progress to a fatal termination; because the child's value to society is as nothing; and lastly, as the mother's life is at stake against that of a diseased child. Therefore there ought to be no hesitation, in a clear case, to perforate. I have under my treatment at this time a child which was born with a peculiar hydrocephalic tumour over the occipital bone, very large, and tensely filled with fluid; it had been tapped twice: the first time the contents were taken away rapidly, and it was with difficulty the child rallied: it soon filled again.



I then tapped it slowly; the child was again near sinking, again it rallied, and the tumour is as large as ever; there is no doubt of its hydrocephalic nature, as the fontanelles are tense before tapping, and sink into a hollow immediately after. Tapping has been resorted to in chronic hydrocephalus, and with considerable success, rather better than one-half recovering. If it is necessary to adopt this operation, which is only justifiable during early infancy, it should be done with a very small trocar, a little on one side the median line, about the centre of the anterior fontanelle, and the water drawn off slowly, and a roller compress applied round the head afterwards. The *danger* is not in the evacuation of the fluid, but the subsequent inflammation; the secretion is liable to return. From the supposition that the disease arose from want of resistance, compression by bandages and adhesive straps have been used successfully, and deserve trial.

HYDROTHORAX, CONGENITAL.

Very rarely congenital; in a case recorded by Roux, the chest contained a pint of fluid, but was born without evisceration. It is scarcely probable it would ever require any such interference: at all events, if it did, the child's life could not be put into competition with

the mother's, with a disease of so fatal a character attached to it; so there would need no hesitation on that point.

HYMEN, IMPERFORATE, AND MORBIDLY THICKENED.

Impregnation is deemed impossible without injury to the hymen; cases, however, have occurred—twice to myself, and others are on record—where the hymen was found perfect at the time of labour. In most cases the advance of the head breaks it down; occasionally it may offer a long resistance, particularly where it is morbidly thickened, as is sometimes the case. In either case the *treatment* is very simple—simple incision with bistoury or scalpel: if it is necessary to do this, be careful to support the perinæum well, or the incision may be the commencement of a serious laceration, extending to the *fourchette*.

I have had a case of morbidly-thickened hymen which remained undiscovered till the age of sixty-one years. Singularly enough, this lady was married for the first time at the age of sixty, and for ten months subsequently every attempt to consummate marriage failed. The early history of this case developed the fact which, in my opinion, was the cause of this abnormal feature. When about fourteen years old, from some slight injury, a severe attack of inflammation of the vulva occurred, which was with difficulty subdued by leeches, lotions, and purgatives. The whole period of menstruating life, from fourteen to forty-eight, was

passed without presenting any difficulty; and the only result from the previous inflammatory attack was this very thickened state of the hymen. From the general appearances of this case, I concluded the only difficulty lay in this thickened membrane, all other parts being normal. The entrance to the vagina was not larger than to admit a crow's quill; into this aperture I introduced the probe-pointed bistoury, and slit the hymen in different directions; and afterwards passed, daily, a large dilating bougie, increasing the size until one sufficiently large was passed to ensure every facility for future marital intercourse.

HYPOSPADIAS.

Hypospadias is when the urethral entrance opens in any part of the penis, from the scrotum to the glans, except the natural situation of the orifice; the most common malformation of this character is immediately under the glans: in this position procreation may go on without operation, but which would be impossible, if the orifice was placed near the root of the penis.

Operative Treatment consists in pushing a fine trocar in where the natural orifice should be, until it joins with the remaining part of the canal naturally formed, keeping in the canula for the exit of urine, at the same time inflaming the unnatural orifice with nitrate of silver, so as to close the aperture; it will be necessary to withdraw the canula sometimes for a short time, and smear it with unctuous matter, and re-introduce it; if much irritation, fomentations and poultices, and give

for drinks mucilaginous fluids. I advise no operation of this kind if the unnatural orifice is near the scrotum.

INFLATION.

When an infant is still-born, recover it, if possible, by artificial respiration. That is, by closing the nostrils, and blowing in at the mouth with a small tube of any sort (a common bone clyster pipe); when the chest is filled, remove the tube, and press the chest on each side with the hands, to expel the air blown in: repeat these attempts alternately, until respiration is established. This operation should not be relinquished, though unsuccessful, for at least an hour; and if any prospect offers, for half an hour longer. For additional means, *vide* ASPHYXIA.

KEPHALEPSALIS.

This instrument, invented by Mr. Simpson, of Edinburgh (not Professor Simpson), at the suggestion of Dr. Campbell, to cut away pieces of bone in reducing the head, something after the plan of Dr. Davis's osteotomist, is thirteen inches and a half long; cutting part, two inches and a half; the handles, eleven inches. Whatever is cut by it is retained in its grasp, and extracted without injury to the soft parts. Notwithstanding the high opinion of Dr. Campbell, this instrument remains comparatively but little known. The objection I have to its general adoption is, that its cutting parts are too extensive; and difficulties are experienced in its application, by having to prevent the parts being included which are not intended to be

severed. It is however, with great care, a very useful instrument (*vide* EMBRYOTOMY).

LABOUR COMPLETED.

Stay an hour after; if there has been flooding, *two hours*. Satisfy yourself as to inversion, rupture of perinæum, hæmorrhage, contraction of uterus; darken the room, allow no company, nor any attempt to change bedding or clothes for some hours, unless very wet, and then it must be done quietly, without the patient's assistance; diet very plain and simple for three first days; sleep allowed early, but watched, lest hæmorrhage occur. Second visit within twelve hours; inquire after urine, lochia, bandage, &c.; examine child's navel; aperients on the third day, if required.

LABOUR, TEDIOUS OR DIFFICULT.

Tedious or difficult labour; head presenting; and prolonged beyond twenty-four hours; not completed without assistance, manual or instrumental. In 23,758 cases, 653 were prolonged beyond twenty-four hours—about 1 in 36; mostly in primiparæ; but those having had many children are not exempt; protraction alone increases danger. The hazard of protraction is not with the first stage so much as the second and third. Some families seem prone to it; delicate habits, deranged digestion, mental depression, are liable to it, and yet no particular feature of this sort attends phthisis. The great causes of protraction are, inertia of the uterus, and rigidity of soft parts.

Inertia of the uterus, or deficient contraction, attends delicate, exhausted primiparæ. Many of these cases, by the exercise of a little patience on the part of the accoucheur, and a little encouragement to the patient, not unfrequently do well; for though the expulsive force may be small, the resistance may also be trifling: thus a cool apartment, a cup of warm tea, cheerful conversation, change of position, a little walking, moderate use of stimulants (if the pulse is weak and low); with such attentions the case may get through to completion, without much trouble. I believe the great remedy is opium. I give a pill of two, or two and a half grains of recent soft opium, or one drachm of the tincture in mucilage, and by such a dose at once suspend uterine action, and obtain sleep; the patient waking after to accomplish more energetic efforts. The same advantage attends opium, if pains are trifling and ineffective; in some cases, instead of a lull from pain, it has the contrary effect of rousing the action of the uterus to effective efforts. I should also advocate chloroform in these cases as a very efficient stimulant. If, on waking, the pains are not renewed spontaneously, a stimulating enema often restores the action; at such a time there is no harm in waiting, the longer the rest, the greater energy will be manifested at the resumption of pains. Should, however, these means fail, the ergot of rye must be given, and the best preparation is the infusion made on the spot, pulv. secal., one drachm, ad aqua f. six ounces; half to be given, and the other half in twenty to twenty-five minutes, if the first dose does not appear likely to complete delivery. In giving this medicine,

be guided by these principles:—1st, Never give it to save your own time; 2nd, let the os be largely dilated; 3rd, avoid giving it in contracted pelvis; or if the presentation cannot be felt; or in mal-presentations; or where the soft parts are rigid; or where there is hydrocephalus or other enlargement; or if there is considerable excitement, vascular or nervous; and it is seldom allowable in primiparæ. On the contrary, it may be given if labour ceases from mere want of contraction; if head or breech present; if os is well dilated; if pelvis is of natural or average measurements; if no unusual size of child; and no unusual excitement. It is advisable to consider the applicability of the forceps, when using ergot, in the event of its not producing the effect expected, and those instruments, or the tractor, rendered necessary. Much has been said and written on the effects of the ergot on the life of the child. I do not know if my success arises from the fact of *always* giving the ergot in *infusion*, and never in powder or tincture, although I have given it extensively for thirty years, being one of the first to introduce it to English practice (*vide* cases in "Medico-Chirurgical Magazine," 1824); yet I have never seen the deleterious effect spoken of on the child; and I feel assured that the two doses I advise, given at the interval of twenty or twenty-five minutes, never can have that effect on the child's life some writers have supposed. I do wish it to be understood, however, that I do not include its being given as an abortive, where it is continued for some time, and undoubtedly exercises a baneful effect on the

embryo. If it affects the child under other circumstances, it is because it is given too early, the doses too large, and repeated too often; or, if given in powder, there is something in the gummy resinous matter of the secale from which the patient escapes if given in infusion (*vide* "Medical Times" vol. vi., 1842). If the case be a proper one for the exhibition of the ergot, and *it should fail*, then instrumental aid becomes necessary, tractor or forceps. Pains brought on by ergot differ in character from uterine pains, usually more energetic, continuous, and expulsive: there is no recession of the child between pains, after ergot; in fact, the pain is scarcely ever absent; the effect of this remedy, however, soon passes off, seldom lasts half an hour, or at most three-quarters; therefore, if the first dose is not likely to complete delivery, it should be repeated *only once more*. I was consulted some time back, at Sheffield, on the inquest of a case of ruptured uterus, said to have arisen from the improper use of ergot. The effects of the ergot were scarcely ever manifested, as the dose was extremely small; the rupture took place five or six hours after the ergot was given, and subsequently a stimulating dose of opium, to which equal blame might have been as reasonably attached. The post-mortem, however, showed abundant cause for the rupture, independent of either ergot or opium. The uterine structure softened by long-standing disease, and the pelvis had a sharp and projecting edge at the entrance of the upper aperture, reducing its diameter, although the pelvic cavity was capacious; in addition, the union

at the symphysis pubis, at its upper and posterior part, had a sharp projecting process, altogether presenting a formidable opposition to the uterine mass, already softened down by disease of long standing. Dr. Radford has the merit of proposing galvanism as a remedy for inertia, and reports favourably of its effects. And of late, the tincture of Indian hemp has been stated to be more speedy, more evanescent, more energetic and certain than ergot. I cannot vouch for this from my own experience; but borax, which has also some reputation, I never saw any decided effect from.

Irregular Labour is also a cause of delay; uncertain intervals between pains; parts rigid; other parts soft; soon exhausts the patient; the presentation may change some little. In these cases, a good dose of opium; or what is better, the effects of chloroform.

Rupture of the Membranes prematurely also causes tedious labour, and is often followed by still-born children, and the necessity for instrumental assistance; premature rupture is an indication of preternatural presentation.

Excess of Liquor Amnii causes delay by enfeebling uterine action. This may be restored, if the *os be fully dilated*, by rupturing the membranes; but care is requisite to see the presentation is right, and that no mechanical obstruction is in the way. If rupture is necessary, do it in the interval of pain, and high up, lest the funis should fall down.

Thickness and Toughness of Membranes also delay labour considerably. I have seen cases where the fingernail was incapable of rupturing, and required a probe.

Obliquity of the Uterus.—A cause of retardation; the left lateral obliquity most common; the anterior or pendulous belly, by pitching the os towards the sacrum, according to Dewees, has caused the case to be mistaken for imperforate os uteri; in such cases, try the patient on her back, and avoid attempts to draw the os forward.

Mental Depression or Excitement always influences the progress of labour; easily remedied by encouragement; or if troublesome, chloroform.

THE SECOND DIVISION OF CAUSES ARISES FROM TOO GREAT RESISTANCE.

Rigidity of the Os.—Mostly in primiparæ, or those advanced in years; rigid fibre; vigorous habits; sometimes in multiparæ. This state is imposed by too early rupture of membranes; free use of stimulants; frequent examinations; excitements; plethoric habits; inattention to bladder and rectum; scirrhus; and diseased os uteri.

Treatment—according to cause; free use of mild cooling drinks; cool temperature; avoid bearing down; quiet; laxative enema; bear in mind the bladder. Where there is a plethoric habit, severe pains, heat, tenderness, full pulse, rigid os, venesection the only remedy, provided it is not carried too far, only sufficient to produce coolness and relaxation of parts; remembering that abstraction of blood robs future pains of their energy, and if much blood be lost in the last stage, the patient may become prostrated: an average quantity is about sixteen ounces. If it is (as it must be in some cases) not advisable to bleed, chloroform has been considered to act well, but in this form I have no ex-

perience to offer; but I have found a little nausea with warm water, or a weak solution of antim. tart. (but object to vomiting), very relaxing; ungt. of belladonna to the os, as advised by Chaussier, may be of service, but the faintness and vertigo sometimes attendant on its use lead me not to advise it, except with great caution; warm baths, safe generally, but might produce hæmorrhage; the warm douche to the os has been found by Professor Simpson to be an excellent application; enemata of warm water, with or without opium; vagina well larded; avoid artificial dilatation; incision of os in extreme cases has been advised, but its propriety is very questionable.

Rigidity of Vagina and Perinæum is another cause of resistance to be treated precisely similar to the last.

Cicatrices or Bands, if strong, not likely to be overcome without incising with a bistoury, but be careful to avoid rectum, bladder, large vessels, and support the perinæum well, else a laceration may extend from the incision.

Thickened Hymen: to be treated as cicatrix, and with same precautions.

Conclusions. — Male children more frequently the cause of tedium in labour, the diameters being larger; more deaths occur of mothers from male births; more complications; duration of labour always longer with male births; so far the results of tedious labour are but seldom serious to mothers or children.

The results to mother and child are more serious: why, it is not very easy to explain, unless that in the first stage the parts affected are more confined to a locality, whilst the second is more constitutional, a greater variety of tissues involved.

1. *Powerless Condition of the Uterus itself* arises from a debilitated habit, often in first confinements; sometimes after hours of pains, the action of the uterus will cease, and cannot be restored; women of irritable nervous temperament are liable to such cessation in the second stage.

Mental Emotion suspends uterine action, even in the second stage; and though usually resumed after an interval, occasionally it is not, and then becomes serious.

Morbid Condition of Uterine Structure influences uterine action, sometimes considerably; even rheumatism may interfere seriously with forcing-pains in the second stage, so as to detract from their power.

Tumours not only act mechanically as an obstruction; have been known also to render uterine contraction powerless. In all these cases, mismanagement will increase the tendency, as certainly as a little judicious care may lessen, if not entirely avert, the evil.

Treatment.—The cause is the delay, but it is not the delay, but the urgency of the symptoms, that decides on the propriety of interference. Having ascertained the condition of the patient, the question will be, How much time has been lost? and again, How much longer can we wait without compromising the safety of the

case? Having so far satisfied inquiry, then follows, Is interference called for? If so, what sort? And lastly, How soon to begin? If the pulse is above 100, feverish, head not advancing for want of force, it is probable that natural efforts will not accomplish the object, or if they do, the patient may do worse than by interfering: then interference is proper.

The Time for Interference depends on the rapid increase of unfavourable symptoms, and prospects of the child's life; if these are extreme, the quickest mode of delivery is advisable; but if the symptoms are not of a very extreme character, though it may be desirable to deliver, yet the means may be less prompt, and probably a short delay may not increase the danger. As the life or death of the child is a question of great importance in these cases, I refer the reader to the article (FŒTAL DEATH) previously treated on. If the child *be dead*, further delay is unnecessary, and the mother's safety the only remaining consideration. On the contrary, *if living*, that life should have a chance of continuance, by employing means (if possible) that will not involve the destruction of the child; the mother's life, however, must have the first consideration, even at the expense of the child's life.

There are Three Modes of Delivery — Tractor, Forceps, and Crotchet.—The best is that which is best calculated to effect delivery with least injury to mother and child. The tractor is a most valuable instrument, used *as such*, but as *a lever* I do not approve of its use; and consider it (in rash hands) a most dangerous instrument. Many prefer the forceps; there are cases in

which *one* of these instruments is peculiarly applicable, and where the other would be disadvantageous. The mortality of the tractor cases I have no means of ascertaining, except that in my own practice I do not recollect a single death after tractor delivery. The mortality of the forceps is estimated at about 1 in 21. Where the case admits, the crotchet should never be resorted to, if there is a chance for either tractor or forceps. If the child is dead (certain), the crotchet may be an easier delivery than by either tractor or forceps. If the case be watched well from the first, the time for instrumental interference is the more likely to be well-timed, and the case will probably do well; but the case may have been neglected, the shock may end fatally, and generally within the twenty-four hours without a rally; or inflammation from long pressure may terminate in pelvic abscesses or sloughing, fistulæ, and sinking; or peritonitis or hysteritis may ultimately arise; all or any of these evils may be avoided by timely assistance. After this class of labours, vaginal douches of tepid milk and water, pledgets of lint smeared with cerate between the labia, or poultices to the vulva, may be necessary. In these cases, unnecessary interference is to be guarded against, and the almost equal evil of hesitation to act, when the proper time for action arrives; let your judgment be guided, not by the severity of symptoms so much, as by their effects on the system. The merits of the tractor, forceps, and crotchet, with the cases to which each is applicable, will be considered under their separate heads.

LABOUR, PREMATURE, INDUCTION OF.

Now generally admitted as occasionally necessary; not often fatal, to the mother, 1 in 16, to the child about 1 in $2\frac{1}{2}$.

Danger.—Compression of the cord, mal-presentation.

Objections.—Uncertainty of pelvic measurements; uncertainty of exact period of gestation; liability to mal-presentation; and lastly, probable long period of labour, from the cervix uteri not being obliterated.

Available.—In such pelves as will not allow a full-grown fœtus to pass, and yet by this step one viable may pass; as a rule, antero-posterior diameter $2\frac{1}{2}$ inches will justify induction of premature labour, as the bi-parietal measurements of the head at the thirty-third week will be $2\frac{3}{4}$ inches; at the thirty-fifth week, $3\frac{1}{8}$ inches; and at the thirty-seventh week, $3\frac{1}{4}$ inches. If the antero-posterior diameter be 3 inches, wait till the eighth month; if $2\frac{3}{4}$ inches, wait till the seventh and a half month; if only $2\frac{1}{2}$ inches, limit waiting to seventh month; lower measurements than these must terminate in abortion, or Cæsarian section. If a twin case can be of a certainty diagnosed, the completion of pregnancy can be approached nearer, relying on the probable less size of the fœtuses. In some cases, the child dies at a certain period of pregnancy, if that period is a viable one the induction is justifiable. I have known three in succession die at the seventh month; in the next succeeding pregnancy I induced premature labour as near the period as possible, and that child lived, and

is still living. It is also admissible where there is excessive vomiting, effusions into serous cavities, strangulated hernia, convulsions, disease of the heart, aneurism, or hæmorrhage. There may also be a contraction of the opposite diameter, or exostosis of the pelvis; and lastly, fibrous tumours, cancer, rupture of uterus previous to labour, from some obstacle.

Mode of Operating.—For all that is necessary *vide* INDUCTION OF ABORTION, previously treated on; except in addition, an injection of warm water to the os uteri, and the application of galvanism: but on neither of these have I any experience to offer. Labour occurs in from one to four days; sometimes considerable nervous excitement precedes premature labours.

LACERATION OF PERINÆUM.

Extensive lacerations are rare; trifling ones more common than generally allowed, particularly in primiparæ; whilst, generally, I infer carelessness in extensive laceration, I also admit that it may occur during the most careful attention; if slight, of but little moment; if extensive, life may be rendered truly miserable.

Extent.—Sometimes the posterior wall of the vagina may be torn without injuring the true perinæum; the rent appears larger whilst the parts are distended, than afterwards proves to be the case. The first class of cases, to the extent of an inch from the fourchette, is not often attended with inconvenience; another division, from fourchette to rectum, the sphincter ani being entirely uninjured—these are more serious; a third

division is where the rent is between fourchette and rectum, both ends being uninjured; the last division, severing fourchette, sphincter ani, and recto-vaginal septum, the worst of all. The rent may start at one point, and end in two, like the letter Y; or it may take a double course at once, like the letter V.

Causes of this accident are numerous:—1st, Violent uterine action before external parts are properly prepared; unequal pressure; use of instruments; rigidity; old cicatrices; thickened hymen; rapid descent of the head; exostosis; malformation; mal-position, or presentation, and excessive bearing-down efforts.

Symptoms.—If the injury is but slight, no bad effects will arise from it; on the contrary, if extensive, there is involuntary discharge of motions; a feeling of bearing down of the pelvic viscera; procidentia uteri; inability to stand; great tenderness; and the healing process interfered with by the lochia, and discharges from the bowels passing over the lacerated parts.

Treatment, Preventive.—The first and most prominent duty of every accoucheur is to support the perinæum whenever it is in a distended state by descent of the head; this support must not be a violent opposition, but a moderate pressure, such as the case calls for, by the counter-pressure; more or less, according to circumstances, but never so much as to retard the natural progress of labour. Again, the common practice of supporting the perinæum with a napkin *is most absurd*, as nature provides a secretion of mucus to lubricate the parts, for the purpose of facilitating nature's operations;

and the application of a napkin, by way of support, will absorb all that secretion; rather let the bare thumb over the anterior edge of the perinæum be the only support, whilst the two first fingers are placed on the vertex, to regulate the advancement, and prevent its being too rapid. In addition, let the perinæum be well lubricated with some unctuous material, particularly where the parts are hard, dry, or rigid; indeed, I never saw a case that was not benefited by the perinæum being smeared with lard, not only *outwardly*, but also *within*, during the interval when there is no pressure upon it; the subsequent advantages are immense. In morbidly thick hymens, incise, but be careful to support afterwards; caution the patient not to strain unnecessarily when the head is mounting the perinæum. Chloroform has been recommended as favouring dilatation, or rather relaxation; but if its aid has not been sought previously, I think it will be scarcely needed at this period, except in some cases of extreme rigidity, when it may be tried with advantage.

Curative Treatment.—The accident having happened, perfect rest must be insisted on; the parts kept as clean as possible; the knees kept together; and catheter used whenever the urine is to be discharged; sutures put in to secure the rent (quilled, the best); treated by water dressings; the bowels confined by opiates for some time; in very bad cases, from ten to fourteen days; position generally on the side. Some say collodion should be tried; but I do not see any advantage from it. The diet should be so ordered as not to be productive of much fæcal accumulation, and the best is gum, hard

biscuit, rice, &c. The directions for suture are similar to those for fistulæ, a piece of elastic gum catheter instead of quill for cylinder; the sutures may be removed about the seventh day; and the urine should not be voided without catheter for at least ten days. These radical attempts may fail to cure; then compresses and a spring-bandage the only remaining reliefs.

LACERATION OF VAGINA.

This laceration is often an attendant on rupture of the uterus; it however may exist whilst the uterus is uninjured. This accident is rarer even than the rupture of the uterus; and, like the latter, requires the same treatment, and is nearly as dangerous; most frequent in primiparæ, with rigidity. Lacerations of this kind may happen whilst the head is in the cavity of the pelvis.

Symptoms.—Some little pain in the vagina, with smarting, followed by inflammation; after which, a cicatrix is formed.

Treatment.—Leave to nature, with emollients; if it is likely to extend, during labour use forceps; support the perinæum; afterwards, poultices; enemata; great attention to keeping the parts clean.

MEMBRANES, RUPTURE OF.

Premature rupture of the membranes is generally injurious, and a cause of delay, inasmuch as it substitutes for the beautiful, elastic, and wedge-like form and action of the bag of waters, the rigid and irritating

hardness of the head upon the os uteri: therefore it is advisable, for young practitioners especially, to avoid rupturing the membranes prematurely; for in a large majority of cases, the time which is expected to be saved is often, on the contrary, unusually delayed, and thus a process that was perhaps slowly and steadily advancing, is at once prolonged to a most tedious and distressing length, and sometimes accompanied with symptoms that may compromise the safety of the patient, as it has already compromised your character for rashness and professional inability. Children are frequently still-born, and instruments more needed, after too-early rupture of the membranes. (Dr. Lee also adds that, after such practice, preternatural presentations are more common.) There are, however, circumstances where rupture of the membranes is justifiable: these will be treated upon under their separate heads.

MOLES, HYDATIDS, ETC.

These are either blighted ovum, fleshy moles, or hydatids. In the two former instances there is but one, but in the latter there may be many. Avoiding historical and theoretical matter, the—

Symptoms are simulating pregnancy in early months, but there is no fœtal movement, no fœtal circulation, no *ballottement;* pressure gives pain; vaginal discharge bloody; health in general not much disturbed. An effort to expel contents follows, when the symptoms are those of abortion, with more or less hæmorrhage. These cases may be distinguished from pregnancy by

the points already stated; it is said that occasional hæmorrhage is the chief distinguishing mark: from *physometra*, by the want of resonance and by the feeling of weight; from *hydrometra*, by the less amount of accumulation, and less distinct fluctuation, with less feeling of distension.

Treatment.—None until uterine efforts to expel; if hæmorrhage be extensive, plug; give secale cornut.; if the size is large, the hand to be introduced, and the mole, &c., cleared out; but if not large, it will be unwise to use the hand; flooding treated generally as in hæmorrhage before labour; if the hand be introduced, be sure to clear all away; apply the binder, and manage as in labour cases where there is flooding.

NÆVI MATERNI

Are of two kinds, blotches or stains, or more elevated developments.

Treatment.—According to character: compression, refrigerants, styptics, cautery, artificial inflammation, ligature, and excision. In small tumours over hard parts, compression combined with cold; styptics (alum the best), vaccination, is also worthy of trial; as also cautery: quick lime, argent. nitras, caustic potash, and nitric acid. A seton has been often successful, as well as excision by the knife; if pediculated, the ligature; and do not operate in any way until the child is some age.

NIPPLE, RETRACTED.

Supposed to arise from pressure of stays, but often exists from infancy. The accoucheur should always ask to see the nipples, particularly in primiparæ, and if found retracted, the occasional application of the breast-pump is advisable previous to confinement; or if that is not at hand, a quart bottle filled with warm or rather hot water, then emptied, after which apply the mouth of the bottle over the retracted nipple. This application, with an occasional smearing of olive oil, will be sufficient to prepare the nipple for its duty, and prevent much and unnecessary suffering.

NIPPLES, SORE.

These are often very annoying, and difficult to heal, and most frequent in primiparæ; sometimes in form of simple cracks, sometimes involving the nipple and its base in one excoriated surface; in severe cases, the nipple rendered useless in future confinements. The accompanying inflammation not unfrequently giving rise to mammary abscess. To prevent this, it has been recommended, previous to confinement, to bathe the nipple frequently with cold water, or a weak solution of alum, brandy and water, green tea, &c. These precautions may all be defeated by the child being too often applied to the nipple, particularly if the child's mouth be aphthous.

Treatment of Sores.—In recent cases, emollient oils; cerate; butter; glycerine in aqua rosæ; bibor. sodæ

in elm tea; the sulphates of zinc and copper, in weak solution; brandy or rum and water; creosote, three drops in an ounce of water; tinct. catechu; sol. tannin; tinct. gall. alep.; friar's balsam; liq. plumbi diacet.; solut. opii; nitr. argent.; collodion, and many others, have all their special advocates. I have generally found some of the simplest remedies the best; but it is necessary to protect the nipple whilst healing with a teated shield, for if the contents of the breasts are not regularly drawn off, more serious consequences to the breast may result.

NYMPHÆ, ELONGATED.

A supposed natural feature of the Bosjesman tribes, and others; in this country, if elongated, it is looked upon as abnormal, and may give rise to irritation and troublesome excoriation, and the remedy consists in excising the elongated part by the knife; bleeding, however, may be profuse, and must be guarded against by touching with caustic, and stuffing the parts with lint.

OS, CONTRACTED, MINUTE, OR IMPERFORATE,

Previous to pregnancy, may be the cause of dysmenorrhœa. In labour, there are many cases recorded of extremely minutely-contracted *os uteri*, giving rise to much tedium; yet nevertheless, though the prospect was most unpromising, have given way to bleeding, nauseating medicines, and have ultimately been delivered of living children; therefore care and patience may

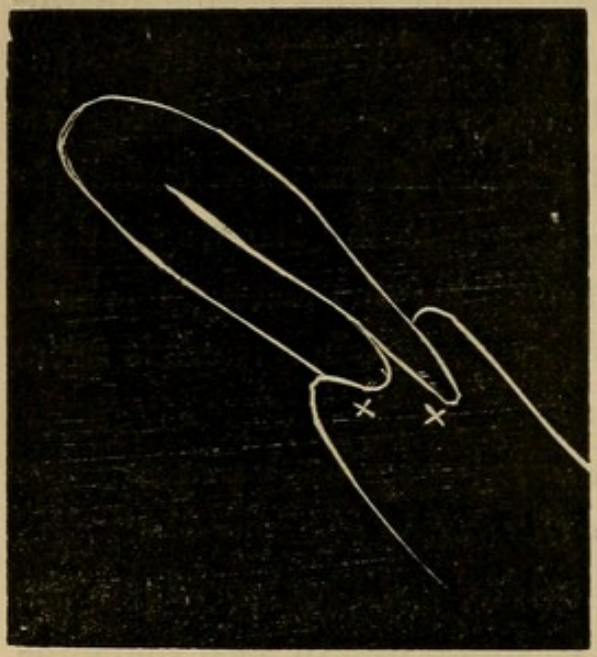
often carry the accoucheur through this class of cases; but there are also cases on record where the os has been wholly obliterated, a circumstance that seems incompatible with pregnancy; it may, however, be so extremely small as to defy discovery, and yet exist. Now it is evident the delay in such cases may endanger rupture of the uterus, for it is sure to give way in its weakest part; it is not improbable but that, as labour advances, the os may yet show itself, when there is some hope that it will give way.

Treatment.—If the delay begins to develop symptoms that appear to compromise the safety of the patient, and if bleeding and nauseating medicines have no effect, the last resource is with knife to make one or two incisions in the situation where we should expect to find the os, or if there be an undilatable and almost obliterated os, to make one or two incisions from its edges. It is encouraging to be able to state that this operation, formidable as it appears, is not near so dangerous as might be supposed. In eleven cases, nine mothers were saved, and five children. In two of these cases, where death followed, greater delay had been allowed than was prudent.

OS, AMPUTATION OF.

I cannot better illustrate this operation than by the following case of my own, published in the "Obstetric Record," vol. i. p. 290:—Priscilla T——, aged forty-five, was sent to my private hospital for uterine disease, for which she had been treated variously, but in the end was told there was no cure. On examining with spe-

culum, I found a peculiar elongation of the anterior lip of the os uteri, of at least two inches in length, the tip



of which was ulcerated, and had the appearance of the annexed sketch; the uterus was considerably prolapsed, causing her much annoyance in passing urine and in defæcation; the discharge was most offensive. Her constitution had been sinking for some time: every symptom indicated considerable depression, increased by the thought of her complaint being incurable. For some days, I gave her the quinine and citrate of iron, and an occasional blue pill, with marked benefit to her general appearance. Whilst taking these medicines, I introduced a medicated pessary every night, consisting of iodid. plumbi, grs. x., cera flav. ℥ij., axung. ℥ss., div. in pessos iv. After a few days, both local and general appearances improved, but slowly; I therefore determined on amputating the lip that was ulcerated, which I did by seizing it with a pair of flat-mouthed forceps, and dragging it gently but steadily forward, I severed the lip on a level with its posterior fellow, with one stroke of the bistoury; little or no bleeding followed; the part was touched with tinct. fer. mur., twice each day, and the former medicines continued. At the end of three weeks she returned home to continue her me-

dicine and use a zinc wash twice a day. In a month after she visited me, quite well, free from prolapsus, and her general health quite restored. On examining, per vaginam, no trace of disease or malformation existed. Deep ulcerations of the os and cervix not yielding to local or general treatment, and the cauliflower excrescence of the os, may require a similar operation, but will be treated on particularly, under separate heads.

OSTEOTOMIST.

This instrument is one of those sometimes required in Embryotomy (*vide* that article), to break up the bones of the fœtal skull, more particularly at its base, or when the bones of the skull generally are more than usually ossified and difficult to bring dowr by the crotchet. I must confess I have not seen a case where the crotchet failed to do its work: still, it is possible such requirements may be necessary; indeed, any instrument for extraction *per vias naturales* is preferable to Cæsarian section. The bone forceps, and osteotomist of Dr. Davis, however, are ingenious instruments, and the latter, by taking pieces out of the bone at every stroke of the handles, tends to lessen the mass to be afterwards extracted, and the piece so cut out is brought away enclosed in the jaws of the forceps, without any injury to the soft parts. In the sketch will be seen the mode of its operation (*vide* EMBRYOTOMY).

OBLIQUITY OF THE UTERUS.

This obliquity, whatever be its character, has a tendency to retard labour, by destroying the agreement of

axis between the uterine cavity and the pelvis, or, in other words, where the os uteri does not present itself in the usual manner in respect to the brim of the pelvis.

Examination.—Os uteri found at the extreme (right or left) of the transverse diameter, or pointing towards the sacrum; and if there is an opportunity of observing externally, the uterus will have an oblique character.

Treatment.—Change the position of the body: if the os is at the sacrum, the fundus uteri will be forward or pendulous; a change to lying on the back will generally rectify the position; where the os takes the extreme right or left, the position must be to lie on the opposite side; these changes, with patience, will mostly succeed: but still there are cases which position will not rectify: in the pendulous character, it may be necessary to lift the front of the abdomen with a towel or bandage, until labour is sufficiently advanced to engage the head in the upper aperture in the right axis. Baudelocque recommended the os uteri to be hooked forward, whilst the above support and change of position were tried: but it is necessary to state that such practice is generally condemned by British surgeons as mischievous; patience, with change of position, will be found sufficient in almost every case, and it will be one of great extremity to justify further interference. There is, however, a species of obliquity recognised by Dr. Hamilton, causing considerable delay; it is when, during dilatation, the anterior lip of the os uteri is caught between the head and symphysis pubis, and its retraction prevented: thus the os dilates posteriorly,

but not anteriorly, and is drawn tight over the vertex. The remedy is simple : in the absence of a pain, whilst the os is soft and dilatable, push with one finger the anterior lip over the vertex, and keep it there with the finger for two or three pains, when the labour will proceed more naturally and rapidly to its termination. One caution is necessary—if it require force to remove it, it had better be let alone.

OVARIOTOMY.

The extirpation of the diseased ovary is rendered necessary by the extensive morbid enlargement to which that organ is so frequently liable. Disease of the ovaries is much more common than is generally supposed. During the last ten years, I have myself examined eight hundred and fifty cases of ovarian disease; of this number, two-thirds were of the right ovary, and one-third left; one-third of the whole was connected more or less with some uterine disease, and two-thirds pure ovarian disease, of one or both ovaries. The cases where both ovaries were implicated were not more than one in twenty, and those almost wholly connected with uterine disease. Of the character of the tumours, about one-fourth of the whole was of a solid lobular character; more than half consisted of solid matter, with one or two largely-developed cysts; and less than one-fourth of cystic character chiefly, that is, with little or no solid material. I have not seen more than five or six cases where it could be said that one or two cysts existed, *and no solid matter*. This is of the

greatest possible importance in determining on the operation of extirpation. This very formidable operation, which has no parallel in modern surgery, was first practised by the Americans, but even to this time not very extensively; it was subsequently taken up by Mr. Lizars, of Edinburgh, with indifferent success; lastly, in 1842, I introduced it into England, and was the first to extirpate *by the large incision;* and, notwithstanding much vexatious opposition, and greater misunderstanding and gross misrepresentations, I have had the good fortune to secure a larger operative and diagnostic experience than any other person: in fact, the number of cases I have diagnosed and operated upon, exceed the numbers of recorded cases from other parties, native and foreign. I have now operated seventy-one times, and the general results are as follows:—71 *cases*, 49 *recoveries*, 22 *deaths*. Taking these cases in groups as they occurred,

The first 20 cases, 8 died, 12 recovered.
The second 20 cases, 6 died, 14 recovered.
The last 31 cases, 8 died, 22 recovered.

Thus, the mortality has been gradually lessened.

Of the first 20, deaths 1 in $2\frac{1}{2}$.
Of the second 20, deaths 1 in $3\frac{1}{3}$.
Of the last 31, deaths 1 in 4.

Here, as it might naturally be expected, experience has gradually lessened the mortality in my own practice from 1 in $2\frac{1}{2}$ to 1 in 4. And I have a confident hope that it will be reduced still further, from improved diagnosis, experience in operating, and lastly in the

mode (which practice only can command) of after-treatment being better understood. The great number of cases that have been diagnosed by me is accounted for by the fact of their being sent from almost every part of the British Isles by medical men for that especial purpose; and this applies to the operations, as well as the diagnosis. Mine, then, are not the cases of any particular locality; they are the product of Great Britain at large. Indeed, two cases were from the opposite side of the Atlantic. It is not my intention, however, to go into any lengthened account of the history, progress, and minute particulars of this disease in this work, having one now in the press especially devoted to the results of all my operations and experience on this very important question. I must therefore confine myself to a limited view of several points to be considered, and with as much brevity as possible. I feel constrained to dissent from the opinion of Safford Lee, Esq., "That the married are more liable to this disease than the single." Of the 850 cases, the majority of at least 50 were single; but I am disposed to think, generally speaking, their numbers will be about equal. Again, as respects age, I think the two extremes of menstruation most *productive* of ovarian disease, though it is found most frequently at the decline of menstruation; but it must be borne in mind that it may have existed many years. The duration of the disease is very much shorter than generally allowed; although occasionally cases are found that have existed for many years, a very large proportion terminate their career in a comparatively very short time.

Causes.—This disease may have existed long, and its presence not suspected; consequently the cause is not known. Among the principal may be stated—1. The effects of labour; 2. Suppression of menstruation; 3. Excitement of matrimony; 4. Cessation of menstruation; 5. Irregular menstruation; 6. Abortion; 7. Exposure to cold; 8. Falls or blows, falling down stairs feet foremost, striking the sacrum against the step, accidental blows against the abdomen; 9. Undue pressure, as washerwomen carrying mugs or tubs, the edge against the abdomen; 10. Violent fits of anger; 11. Sudden suppression of eruptions. I do not think, with S. Lee, that labour is the most productive cause; I have found it to be the suppression and cessation of menstruation. Pregnancy frequently co-exists with ovarian disease, showing clearly that one ovary is sufficient for the purposes of procreation.

Growth.—The progress of ovarian morbid growth is occasionally, though rarely, very slow; but on the average seldom exceeds two years without completing its termination some way.

Pathology of ovarian tumours is not well understood; the seat of disease is disputed.

Varieties.—The simple cyst, attached to the ovary or broad ligament, either by a distinct pedicle of its own, or rises from a broader base. The single cyst is extremely rare, as I have before stated; I have not observed more than *five or six* out of eight hundred and fifty cases. Such cases do not create much disturbance, and are the only ones cured by accidentally bursting, and sometimes, though rarely, by tapping.

Cyst from breaking up of the Graafian vesicles.—This is a much more frequent form of ovarian disease than the simple cyst, the developed tumour showing a number of cysts, the small breaking up into larger ones; no remains of the ovary are to be found; in fact, the tumour is the ovary enlarged; it is in these that hair, fat, &c., are to be found. I have, however, dissected many, but found nothing of the kind; the fluid of these is generally coffee-coloured, and the tumour often very large. I have removed many from thirty to forty pounds, and once, with the contents, upwards of seventy pounds; this form of disease is more uneven or lobular than the single fluid cyst, and its contents more varied. Mr. S. Lee speaks of large cysts formed in the abdominal cavity attached to the liver, omentum, and peritonæum. I have not seen any cases of that character, but have seen the abdomen filled with hydatids: such no doubt have existed, and presented all the symptoms of ovarian disease. A case, recorded by Mr. S. Lee, from its contents and attachment to the uterus, was evidently the result of an extra-uterine fœtation.

Multilocular Tumour.—This variety has but little fluctuation, from the number of tense cysts and their semi-solid contents; this form has a very irregular surface, and the contents of no two cysts are exactly alike; in many, pus is found. Little good is derived from tapping.

Size of Tumours.—I have scarcely ever removed a tumour with its contents weighing less than twenty-five or twenty-seven pounds; but from thirty-five to forty pounds is very common: whilst I have removed

as much as seventy-three pounds at one time. In the seventy-one operations I have been engaged in, I have not removed less than two thousand pounds in weight.

Character of Tumours.—The coats of some are enormously thick and fibrous, others thin and membranous; on their exterior, whitish, shining, like a muddy pearl, often with a tinge of light blue; the cells or cysts are of every variety, from the appearance of a honeycomb or sponge, to bags of enormous capacity. I have frequently found pedunculated masses like polypi hanging within larger cysts. Hydatids are said to be found in ovarian cysts. I have not found any, but have frequently found them in the abdomen, along with ovarian disease. Bloodvessels to supply are generally large in the pedicle; as to vessels as large as a finger branching on the surface, as some state, requires qualification; their flattened character makes them appear larger than they really are. But it is the supplying vessel in the pedicle which should guide the opinion as to its vascularity, and I have never seen it larger than a goose-quill, and seldom more than one vessel.

Adhesions sometimes do not exist at all—indeed, in many cases, such is the feature; others are moderately adhered, and others very extensively so. When I first commenced my operations, I was inclined to think more seriously of adhesions than I do now; in fact, many cases were rejected at that time as unfit for operation, which, if now presented to me, I should not hesitate to operate on, as with the large incision there is room to overcome any reasonable amount of adhesions which any other kind of operation will not allow of.

(Always excepting pelvic adhesions, which are at all times difficult to encounter, as well as dangerous.) Adhesions are of two kinds:—1st, Fibrous bands, attaching the tumour to some other viscera; these are easily separated with a bistoury, and no hæmorrhage or sore remains, *but these fibrous bands would be productive of immense mischief if the tumour was dragged through a small opening, as in Dr. Bird's operation.* 2nd, Broad patches of adhesion of the tumour to the abdominal parietes. These are of a more serious character, but if recently formed are easily peeled off; if of long standing, and very fast, can be dissected off, or, as I have latterly preferred, cut round the patch and leave it on the peritoneal surface, where it produces little or no disturbance. It is a curious fact, some of the very worst cases of adhesion I ever had, recovered as well and as rapidly as any other.

Contents of the Cysts.—I do not attach much importance to the inquiry into the vast variety of matters, solid and fluid, found in the cysts, as it bears little on either the treatment or the operations concerned.

Effects of Pressure.—Whenever the mass is large, much inconvenience arises to the viscera from pressure: thus there is retention of urine, constipation, prolapsus ani, and uteri, vomiting, difficulty of breathing, ulceration of viscera, perforation, &c.; and if small, sometimes interferes with process of labour.

Symptoms.—Whilst the mass occupies the pelvic cavities, the symptoms are different to when it occupies the abdominal cavity. *Early Symptoms.*—Deep-seated pain in one groin; bearing-down weight sensa-

tion in pelvis; a feeling of fulness in the abdomen; throbbing at the anus, particularly on voiding fæces; some numbness of the limb on the side affected; occasionally slight loss of motion; œdema seldom occurs; hæmorrhoids; irregular menstruation; fluor albus; os uteri as yet *in situ;* tenderness above pubis, rather to one side; slight tumefaction above the pubis; on pressing finger on one of the lateral walls of the vagina, high up, slight pain is felt; this pain more distinct through the rectum; constipation; flatulency; desire, but inability to pass urine; symptoms simulating pregnancy; breasts fill out; areola darkens; morning sickness; most symptoms aggravated by the period of menstruation. *Advanced Symptoms.*—Some symptoms before spoken of relieved; the bladder is forced out of its position, and therefore its functions are not improved; frequent desire to pass small quantities, or suppression; tympanites; sickness; œdema in the legs (only when the case is extreme); dyspnœa; fluctuation not always felt; belly shining on its surface; when lying on the back, even if one entire cyst, it veers to one side; if lobular, still to one side, and irregular in its outline, and always a prominent centre; the ensiform cartilage may be forced upwards till dislocated; and the ribs so raised, that I have seen them after an operation, over-arching, like the edge of an open umbrella; if one cyst, distinct fluctuation; if many cysts, fluctuation more obscure and confined; if solid masses intervene, scarcely any fluctuation; much ambiguity about fluctuation, which only experience can comprehend; movements in the abdomen, attributed by

writers to many causes, have only one origin, and that is flatus in the intestines, sometimes beneath, at the sides, or at the top of the tumour; dulness on percussion, arising from the tumour being placed in front of the intestines, preventing resonance; where there is adhesion to the parietes, on sliding the parietes over the tumour there is a feeling of crepitus; slightly flattened lobular masses here and there, or collected in a mass, like a bag full of turnips of different sizes; sometimes unyielding, at others giving way as on the surface of a fluid. *Per Vaginam:* The vagina elongated; os uteri displaced; os drawn upwards, and laterally, towards the diseased side; the uterus should feel free, and of normal size, and be moveable in different directions, unless packed by the superincumbent weight of the tumour above; if the tumour occupies the pelvic cavity, or a part of it, the walls of the vagina are pressed close, and the os more than usually displaced; I have found the uterus almost pushed outwards, or lying across the vagina, with the fundus forced upon the rectum.

Diagnosis.—In the early stages it may be mistaken for retroversion, or retroflexio uteri. The situation of the os will soon decide: if natural retroversion, it is out of the question, it being invariably forced backwards and upwards when retroverted. From retroflexion, or bent upon itself, like a retort, it is easily detected by the uterine sound. From ascites it is distinguished by the system enjoying a better state of general health; by the lateral bearing; from its duller fluctuation and percussion; irregular surface; vagina

funnel-shaped and elongated; and the os tilted on one side. In ascites, the abdomen is uniformly regular, not veering to one side; general health worse; fluctuation acutely clear; when erect, the lower part of the abdomen tense; when lying on the back, the prominence of the belly slightly flattened; borborigmi heard; œdematous effusions into other parts, particularly the legs. In pure cystic cases—that is, with one or two large cysts—the definition from ascites is a little more difficult.

From Pregnancy.—By commencing on one side; by menstruation appearing, though irregularly; vaginal examination finds the uterus not enlarged, and mobile; no fœtal pulsation, except, as is sometimes the case, where pregnancy co-exists with ovarian disease.

From Cystic Tumours not Ovarian, it is very difficult to define; perhaps the best test is the uterus not veering to one side, as in ovarian; also, the more uniform character of the abdomen; the history; menstruation less interfered with; and less dulness on percussion; the rarity of these cases will make up for the difficulty of definition. As to a cystic tumour within the uterus being tapped for ovarian dropsy, as mentioned by Sir Ev. Home, I confess the case appears too strange to be relied on; though the preparation in the College of Surgeons confirms the tumour, it is scarcely confirmative of the tapping.

Enlarged Uterus mistaken for Ovarian Disease.—Such has been, and may very likely be, mistaken for the lobulated solid ovarian disease, but not likely to be mistaken for any form of cysted ovarian disease; the

uterine sound is the best guide; the generally central character of the mass not veering to one side; vaginal examination detecting the size and weight of the uterus; the generally suppressed state of menstruation; the lobular character is less distinct and fewer in number, as well as less rounded in form; general health more disturbed; the complexion generally more sallow.

From Distended Bladder.—By proper attention to the symptoms, I cannot suppose it possible to mistake this for ovarian disease; history of the case would at once dispel every doubt.

Accumulation of Flatus has been mistaken for ovarian, and unfortunately operated upon for it. I can scarcely think, in the present state of knowledge on the subject, such an accident probable, unless where there is large deposit of fatty matter in the abdominal walls, rendering the usual symptoms very obscure and indefinite.

Enlarged Viscera.—Enlarged liver and spleen might possibly be mistaken for ovarian disease, but with careful attention scarcely probable; enlarged viscera generally leave the lower third of the abdomen free, whereas in ovarian disease that part is filled in preference: then the great point of difference is the great constitutional disturbance in visceral enlargements, with the comparatively trifling disturbance if ovarian.

Treatment. — In the simple cyst, unaccompanied by solid nucleus (a very rare form), there may exist some hope of termination without removal, by spontaneous bursting, tapping, or re-absorption; removal is not advisable, and yet these are the only cases

where the small incision could be applicable without doing injury to other parts. In all the other forms of the disease, treatment without removal is altogether fallacious, if not philosophically absurd. The materia medica has been ransacked from end to end in vain; bloodletting, local and general; blisters and counter-irritants; and yet what has been the *finale* in all largely-developed masses?—a steady onward progress of the disease, wearing the patience of the practitioner and the constitution of the patient, until death closes the scene, and hides the result of all their experiments. Of all the objects in the materia medica, iodine, iodide of potass., and liq. potassæ, have been most successful, but only as temporary reliefs, putters-off of the evil day; and *let it be remembered*, at the expense of the system. Iodine cannot soften ovarian masses without softening the general textures of the system generally, and thus reducing the chance of recovery afterwards, should radical treatment be consented to. As a palliative, the liq. potassæ is the best, and does the least harm for future proceedings. I. B. Brown's plan, founded somewhat on that of Dr. Hamilton, of Edinburgh—that is, of emptying the sac, exhibition of mercurials and diuretics, and then very tight bandaging, with a view of obliterating the cyst—has been tried, and said, in his hands, to have succeeded. I think it probable, in cyst cases, such might be the fact; but for solid masses, with or without cysts, it would be, not only worthless but cruel practice, as it could effect nothing, and the increased mass of adhesions would entirely put the case out of all prospect of relief by removal, if such

was wished. In my number of cases of 850, I have not seen twenty where such a plan could be, with any probability of success, proposed.

Tapping.—One of the most common methods practised for the amelioration or cure of ovarian diseases. The relief, however, gained by it is much more temporary and fallacious than generally supposed; the cyst, in a vast majority of cases, refilling with great rapidity, each successive tapping only adding to the rate of refilling, consequently the interval between becomes shorter and shorter, until the drain upon the system becomes so enormous, that the strongest constitution must soon arrive at a fatal termination. It is true there are cases that have been tapped a great number of times, from *ten* to *eighty*—these however are very rare, isolated cases, and offer no ground for argument in favour of tapping, either as a palliative or cure. The practitioner must look upon its averaged effects—and what prospect does this hold out? Simply that it is, in *nine* cases out of *ten*, an aggravation of the disease, and tends to rouse its powers and hasten life to a termination. I have not seen many cases that were exceptions to this rule; where tapping alone is resorted to, I believe nearly one-half die between the first and second tapping; very few survive the second, and still fewer exist beyond the third. I have long ceased to advise tapping, except under two circumstances—*First*, where there is a positive determination not to submit to the operation of extirpation, but to await the fatal termination of the disease under present circumstances; *Second*, when it is resorted to as a stage of the operation

and just preceding it, with the view of lessening the bulk of the mass to be extirpated; it has also another advantage, that of allowing the abdominal walls to assume a step towards their natural position. If tapping be done a couple of days previous to the operation, I believe the contracted integuments are somewhat less liable to peritoneal excitement; then again, the incision for extirpation is not required to be so large to effect the object. I shall not treat of tapping as a curative, or pretend to point out the times and seasons best for its adoption, simply because I believe it mischievous, and admissible only, as I have just stated, whenever all other means of radical extirpation are rejected, *or* as a part of the operation.

Mode of Tapping.—This simple operation scarcely needs description. If the prominence of the sac will justify it, I generally select a lateral position, somewhere about mid-distance between the umbilicus and the crest of the ilium. Many operators select below the umbilicus in the linea alba; but I have seen so many of these punctures followed by bad disposition to heal, as well as inclined to suppurate, that I never take that position if I can avoid it. Then, again, though I always use a bandage in ascites, I never use one in ovarian sacs, but, instead of it, I have the patient lying down at the edge of the bed; by this means the patient bears the emptying process better, feels more comfortable, is emptied quite as well, and I have an opportunity of completing my opinion on the case, by watching the peculiar subsidences of the tumour through the parietes, when adhesions, solid masses, smaller sacs, &c.

are more easily seen than at any other time. Sometimes after a sac has been emptied, another is observable, and the septum comes up to the point of the trocar, when it can easily be pierced. In tapping, avoid the large veins on the surface, and be careful to insist on the bladder being well emptied previously; if not naturally, by catheter. The amount taken by tapping is often considerable. I have frequently taken sixty pounds, and once or twice nearly seventy pounds, at a time: in one case, I took, on an average, sixty pounds at a time, for ten times; making 600 pounds in less than twenty months. But this is nothing to the case of Mary Page: 240 gallons at sixty-six tappings, in sixty-seven months. But Mr. Martineau's case of eighty tappings, producing 6831 pints (recorded in the "Philosophical Transactions," vol. lxxiv. p. 471), is, I believe, unequalled. These are, however, exceptions to the general rule; such may occur, but the mass in general sink. About two years is the average extent of life after first tapping; hence this rule should ever be adopted: *if you are necessitated to tap, delay the operation as long as possible, and only repeat it at the longest possible intervals;* and let it also be borne in mind, that effects as fatal as extirpation have followed tapping. The growth of ovarian tumours is generally slow, but after tapping, it increases with greater rapidity. The fatality after tapping arises from wounding a vessel in the parietes, on the surface of the tumour, or in the omentum, sometimes in front of the tumour. Death may also arise from inflammation of the peritonæum, or within the cyst. That cases may have been cured by

tapping, cannot be denied, but they are very rare; perhaps, if the sequel could be inquired into, the disease may have subsequently developed from other sacs. In fact, tapping is generally unsatisfactory, not unfrequently dangerous; very partial where there is more than one cyst; of no use if contents are viscid; the operation is subject to inflammations, adhesions, suppurations, exhaustions, frequent repetition, and death in almost every case.

Excision of a portion of the Cyst.—I have no experience to offer on this mode, and no encouragement is held out by the results of others.

Lessening the Tumour, and fixing large setons within it to suppurate.—I have succeeded in three cases on this plan—not as a choice, but as a matter of necessity—where the tumour was so firmly and so universally adhered, that its removal was out of the question.

Extirpation by the Small Incision, first performed by Mr. Jeffreason, of Framlingham, since by Messrs. King, Lane, West, Philips, and Bird. It must be evident to every person, that the cases applicable to this mode of extirpation must be very limited indeed: a small incision of from one inch and a half to two inches and a half, and the sac dragged through this aperture, when a ligature is to be placed on the pedicle. Now, what the experience of the above gentlemen may be I cannot say; but I can vouch, that simple single cyst without solid matter is a very rare form of ovarian disease; and it is quite clear that the cyst must not only be perfectly free from any solid masses (which is rare), but it must also be as free from adhesions (which is still more rare),

before it could be advisably dragged throngh a small opening. If any of these gentlemen had seen a tithe of the cases I have, they must have confessed the utter impracticability of applying this as a general mode of extirpation, except in very few cases; to drag a sac through a small opening, without knowing what mischief is doing internally, by the probable adhesions to the vital organs to which the sac may be attached, in addition to masses sometimes situated in various parts of a sac, would require such an opening to be enlarged, even if every other feature were favourable to such a step. In the large number of *seventy-one extirpations*, I have had three or four different medical gentlemen attending me in each case. I can state without hesitation, that not less than three hundred gentlemen have been witnesses to my operations; and the general expression of all has been (except in about two or three cases of single cysts), *what could the small incision operation do in such cases as these?*

The Large Incision Extirpation is the one I have always adopted, and never yet regretted; without adding one particle of danger to the small operation, as the inflammatory action will be the same in the small as in the large incision, I gain immense advantages; plenty of room for manipulation, the adhesions can be seen, their nature properly estimated; if fibrous bands, cut down with a bistoury, without fear of injury or hæmorrhage; if recent patches, peeled with the finger; if old and firmly organized, separated by scalpel, with the least possible injury; the sac and tumour can be removed entire; the contents of the sac, if escaped

into the abdomen, can be easily removed from it; the state of opposite ovary and the uterus can be ocularly ascertained. Opponents to the operation of large incision make *strange assertions;* one is, "that from sternum to pubis is unnecessarily large for an incision." Now what is the fact? that such an incision is *not often required;* but *if it is required,* do it without hesitation. The rule must be, *let the incision be in proportion to the solid masses to be extirpated,* and not have to enlarge it from time to time, on the principle of mercifully amputating a dog's tail an inch at a time. The operator by the small incision must often be placed in this difficulty; and although some state all their cases have been successful, how is it those parties refuse information, when asked, as to results? By the large incision, whatever difficulty presents, the operator is in a better position to meet it; and if he is not blinded by an undue apprehension of peritoneal inflammation (which, as I have said, is equally as great in one case as the other), he must estimate highly such palpable advantages. Lastly, if it were positively certain that the tumour was composed of only one or two sacs,—if the same could be properly defined, tapped, and thoroughly emptied,—if it were equally certain that no adhesions existed, except the pedicle,—if it were equally certain that the pedicle was a long one (*which is seldom the case in a single cyst, as it often springs from a Graafian vesicle*),—if the operator can be perfectly assured that no consolidation exists anywhere;—*then* I should say, Jeffreason's operation by small incision would be the proper one to be performed; but

in all other cases it would be impracticable and unwise to attempt it, if not absurd and injurious. But there is one consideration that narrows this question very materially—in single cysts there is often either no pedicle or a very short one, therefore it cannot easily (if it can at all) be drawn to the orifice of a small opening, *perhaps at some distance.* Again, if there are two or three apparent cysts, the probability is, there may be many more, and in all likelihood some consolidated mass somewhere yet to show itself, and of necessity requiring a larger opening. Lastly, I have seen single cysts as much adhered as I ever saw a multilocular tumour, and of a more vascular character; and again, I have seen entire solid masses without *any adhesion at all.*

Mode of Operation.—Having determined, in accordance with what has been laid down, that an operation is to be the result, it is necessary to state that the consent of the patient alone is not enough; that of her husband (if one) and parents (if any) should be secured. All the worst features of the operation, and its results, should be fully and fairly made known, the dangers fully estimated, rather against than for; and then, after all, the patient should rather entreat its being done than be persuaded to it by either relatives or medical attendant. If this course is adopted, there is not, or ought not to be, any disappointment, even though it may not succeed.

Preparatory Steps.—Let the patient have a gentle aperient, such as pil. hydr. grs. iij., with as much pulv. rhei. Then for a few days eight or ten grains of inspiss.

ox-gall, which has the tendency of doing away with flatus in the intestines, immediately preceding the operation; this is of immense importance, and will greatly facilitate the movements of the operator when called upon. The mind of the patient should be kept free from unnecessary excitement; a little but not too much exercise, if capable of taking any, and the dress light, easy fitting, and free from ligatures. If necessary, tapping precedes the operation to lessen the bulk.

Operation.—Room heated to 75°, bladder emptied; of this be positively certain—rather use the catheter than leave it doubtful; the after dress to be put on and rolled up under the arms, and protected by linen from being soiled; chloroform rather rapidly given, to secure its effects moderately early; when thrown over thoroughly to snoring, begin by a bold sweep with the scalpel (large size) in the direction of linea alba, from above umbilicus to the pubis, proportioning the incision to the size of the mass to be extirpated; in the first sweep the skin and adipose matter are fairly divided the whole length; now gently commence at one point, and get carefully into the abdominal cavity through the peritonæum; insert two fingers of the left hand, and explore; if all is as expected, take the curved bistoury and divide the peritonæum above and below, equal to the first incision. Some little ascitic deposit will now often show itself; let it run off; the tumour is now exposed; if of a blue or pearl-whitish colour, the diagnosis is correct. (If pink, it is probably uterine, when the question will be to extirpate or let alone.) Feel now round the tumour, sliding the hand over its surface

in every direction; if fibrous bands are found, separate with bistoury; if there are adhesions to the diaphragm, stomach, liver, or (much more likely) to the abdominal walls in broad patches, peel them gently off, as you would a retained placenta in utero, which in general is easily done, except from the abdominal walls and in front, where they are sometimes so firm as to require the scalpel, with which they can be separated; but in some cases the adhesion has been so strong, that I have with great advantage cut the sac round the adhesion, leaving a portion on the peritoneal surface; and this plan I believe enables me to undertake cases now, that I formerly deemed impracticable to remove. I feel certain I have rejected fifty cases at least, that, if offered me now, I should undertake without hesitation. Having cleared the mass of adhesions, lift the tumour forward and outward, and when from the cavity lean it towards the side where its pedicle is situated. If the pedicle is broad and thick, penetrate it at some thin place, pass a double ligature through it, and tie it both ways; if a long and well-defined pedicle, pass the ligature round it, and divide on the tumour side, and remove it. One word as to ligature. I use a double strand of the strong Indian hemp, well waxed, for the pedicle, using the surgeon's knot, and applying my greatest possible force to it. This point of the operation is of the greatest importance: if not effectually done, vomiting may unfix it, and fatal hæmorrhage result. One assistant should have the entire management of the chloroform; the operator must have entire confidence in his assistants, so that his own part of the work may be undividedly

attended to; the chloroform may be withdrawn or re-applied, according to circumstances; it is seldom necessary after the tumour is removed; the interrupted sutures can be put in without chloroform. In sponging the abdominal cavity to clear out any liquid that may be present, be careful to use old soft sponges, and the water to wash them should be just warm—that is, about 80° Fahr. Having cleared out the cavity, and examined the opposite ovary and uterus, bring the edges of the wound neatly together, beginning at the upper end, and place the interrupted sutures about an inch apart. For this purpose I use a single strand of moderately fine Indian hemp, well waxed, and tied with the usual surgeon's knot; the pedicle ligature is brought out at the lowest part of the incision; a few adhesive straps are now placed across between the sutures, so that they can be seen, and removed, if necessary, without removing the straps; one broad strap is now placed longitudinally on each side to keep the edges of the former straps down; a double fold of lint, covered with ung. cetacei, is placed over the incision, and fastened by another strap; a soft pad of old linen over the whole, and secured by a broad bandage, and to prevent its rising, the loops added round the thighs, as in the article BANDAGE, ABDOMINAL. Now carefully lift the patient into a bed which has been previously prepared. And here I would observe, that as the patient will be required to lie on her back for some days, it will add to her comfort if the bed is raised at the head so as to have a gentle incline, by placing a block of wood or stone, of about three inches thick, under each of the feet at the head of the bed.

As clysters and the frequent use of the catheter are often required afterwards, care must be taken to place old sheets, doubled up into eight folds, under the patient, so that they can be removed or replaced at any time, without making the bed uncomfortable, by keeping it free from being soiled. Sometimes it is advisable to receive the contents of the bowels on these doubled sheets, rather than raise the patient too much for the bed-pan. As soon as the patient is placed in bed, let the upper bed-clothing be rather light, except about the feet, which will require extra warmth, but this should be effected with flannels only; now lower the temperature of the room, darken it; give a pill of soft crude opium, two and a half or three grains, and enjoin perfect quiet. I have found it of the greatest use to get acquainted with the pulse for some days previous to the operation, as there may be some peculiarities that, if not known, might tend to lead to wrong conclusions afterwards.

Instruments.—The only instruments I use for this formidable operation are, 1st, two large-sized scalpels, one with a double, the other with a single, cutting edge; 2nd, a curved bistoury, with fixed handle; 3rd, a pair of strong broad-mouthed dissecting forceps; 4th, a female catheter; 5th, a moderate-sized trocar; 6th, curved needles; 7th, scissors; 8th, fine and strong Indian hemp; 9th, yellow wax; 10th, three soft previously-used sponges; and lastly, adhesive straps.

After-Treatment.—The pulse must be carefully watched, guided by its character, previously ascertained; the critical days I have always found to be the third,

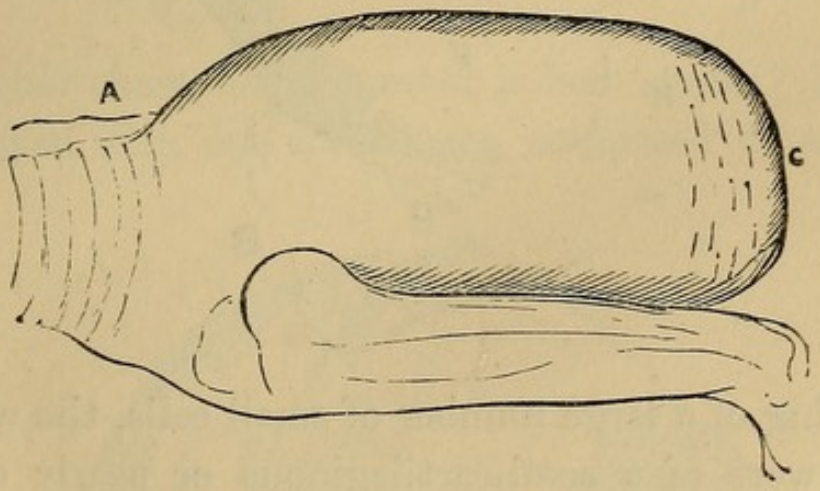
sixth, and ninth, from the operation. The *first* critical period is often decided by death from shock, inflammation, or accidental hæmorrhage; the *second*, from the result of inflammation or exhaustion; and the *third period*, more from exhaustion. One of the first and most distressing symptoms to contend against is vomiting, this is more alarming than fatal. Great caution is necessary in this operation, to prevent food from being given for three or four hours previous to the exhibition of chloroform, else the vomiting is immediate and excessive; the next cause is the excitement necessarily attendant on exposing the peritonæum, and the relief from pressure to which the parts have so long been subject; the third and last cause is the flatus indicative of peritoneal inflammation. In all these varieties the treatment will be nearly the same; the first, from chloroform being taken too near food, *ought not to arise;* but if the patient be long in coming under the effect, vomiting will occur from the amount received, but will soon subside. The vomiting from exposure of peritoneal surface, and relief from pressure, will also soon give way; but when the abdomen becomes tympanitic, and vomiting succeeds, it seldom gives way until the brush of inflammation is over, and the flatus expelled, causing the abdomen to subside. I never give medicine for vomiting, but take care that such efforts are not exercised on a stomach entirely empty, consequently, the simplest liquids are allowable, such as aq. gum. arab., toast water, or weak tea, which, being tasteless, if vomited again, does not prove disagreeable, and can be replenished; in fact, the whole

dietary for the first four or five days should not consist of more than these simple fluids, unless there is great exhaustion, when the use of a little beef-tea may be occasionally advisable. On the third clear day, I take out one-half of the interrupted sutures: that is, alternately, leaving the lowest suture, as well as the one at the umbilicus; on the following day the rest are taken away; this is best done by getting hold of the thread with the forceps gently extend it, and cut with a scalpel or scissors below the knot; the wound by this time is generally well adhered, except at the very lowest point, where the pedicle ligature comes out; still, it will be necessary to keep the parts firmly together by straps, renewing them daily, and clearing away the pus which generally begins to form on the third or fourth day. The wound wants daily attention, and the bandages adjusting, until the fourteenth or fifteenth day, when the pedicle ligature generally falls off, but in some few cases it remains much longer. For the first three or four days the bowels should be assisted by clyster, and the bladder by the catheter, as much as possible, to prevent any straining efforts for natural evacuations. I am very averse to bleeding, as these cases generally have too much prostration about them, and if bled much after the inflammation, they may sink from exhaustion. I have generally, with very few exceptions, controlled the inflammatory action by hot fomentations, depending much on the nausea always present to prevent its progressing too far: nevertheless, if the patient be young, of fullish habit, and not much reduced by the disease or hæmorrhage at the operation,

bleeding may be necessary ; as a general rule, however, I bleed but little. The stomach will be some days before it will bear solid food, I therefore prefer beef-tea, yolk of eggs, milk, as restoratives ; after the first clear week, a broiled mutton chop, or piece of boiled chicken. It is necessary to keep the patient for the three or four first days upon her back, that being the position of all others which can be borne for the longest time without changing ; and the less change of position for the first four days, the better. There is seldom any necessity for opiates after the first dose immediately after the operation ; there is, however, a tendency to restlessness, which, if extreme, and if the bowels are not confined, may require an opiate. Purgatives must not be given by the mouth for some time, the strongest allowable is castor oil, but the most useful is the inspissated ox-gall, which liquefies the material for evacuation, and prevents the formation of flatus ; for a little time the liver is inactive, but after it has been once roused, the ox-gall may be dispensed with. Immediately after the pedicle ligature separates and comes away, the wound closes, and no further attention is requisite, except as to the bandage, which it is necessary to wear for some time, or at least till the walls of the abdomen have assumed a healthy tensity. All the recoveries from this operation have been complete ; not one of them "*dragged on a miserable existence*," as a charitable reviewer, who knew nothing of the subject, was pleased in his statements to say ; but, on the contrary, their health has been extremely good ; some have borne three, some two, and three or four have had one

child each: all have got stout, and in every respect much improved. Although eleven years have elapsed, and seventy-one operations, of the forty-nine recoveries only *four have since died*, none within four years of the operation, most of them six, and all of them from causes totally unconnected with the operation. Only in one case have I seen the opposite ovary take on disease after the other had been extirpated, and that was apparently healthy at the time of the operation; and only in one other case was I obliged to take the opposite ovary away as well, and that case presented some curious physiological phenomena.

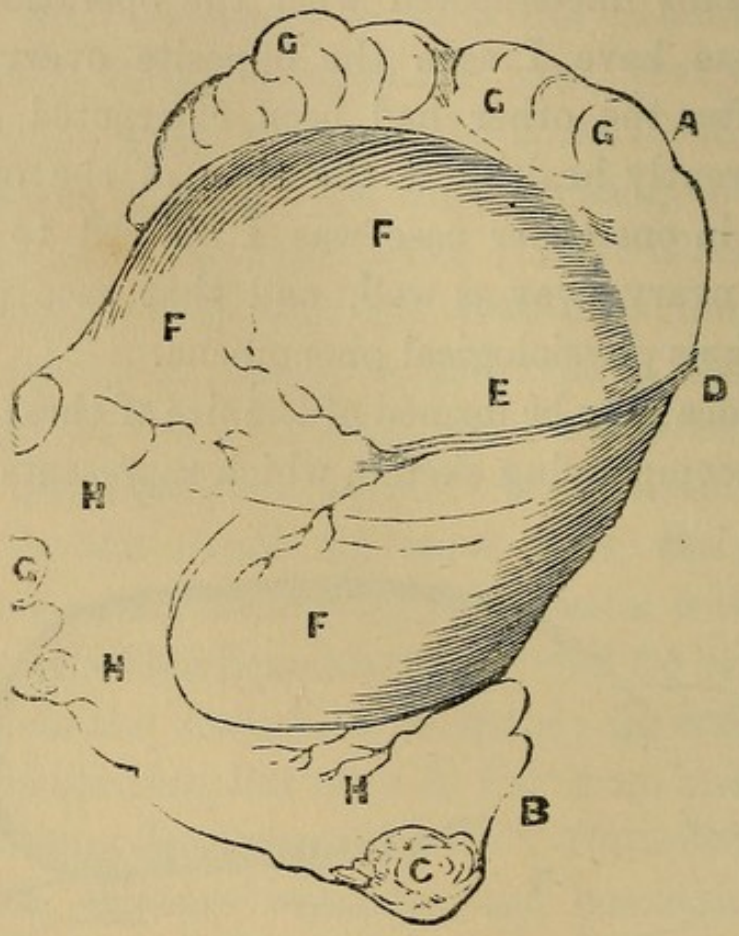
Some idea may be formed of the size of these tumours by the accompanying sketch, which represents the out-



line of an ovarian patient who submitted to the extirpation, and was the third case I operated upon. When laid on her back, the apex of the lower convexity of the abdomen was on a line with the knee at C, where the umbilicus was situated. A, the sternum. From sternum to pubis, along the convexity, measured thirty-eight inches; and the circumference of the body across

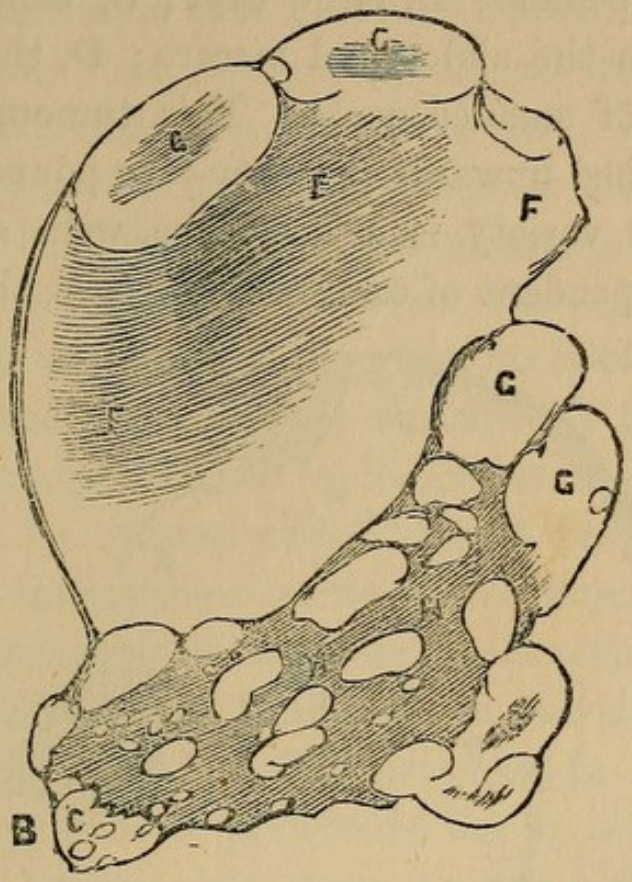
by the hips was fifty-one inches. The weight of the tumour, with its contents (being two immense sacs), was seventy-two pounds. This case is now living, in the best of health.

The next is a specimen of almost a solid tumour,

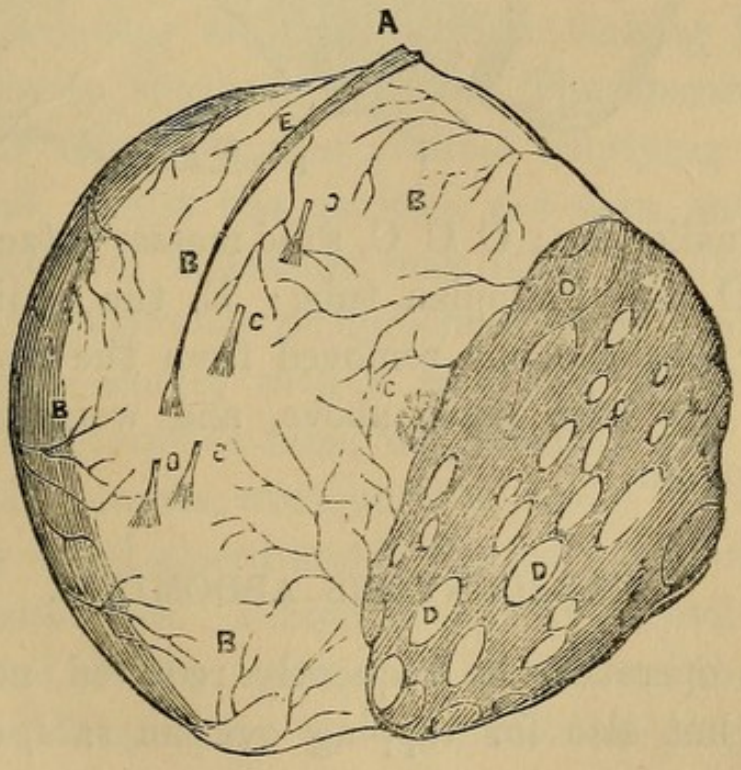


consisting of a large number of small cells, the walls of which were of a semi-cartilaginous or nearly osseous texture, and filled with contents of considerable variety. A, part near the umbilicus; B, part situated in the pelvis; C, ulcerated part; D, pedicle; E, Fallopian tube; F, large sac; G, smaller sacs; H, still smaller sacs.

The next figure shows a section of the tumour, with the comparative size of the sacs. The same letters of reference answer for both figures.

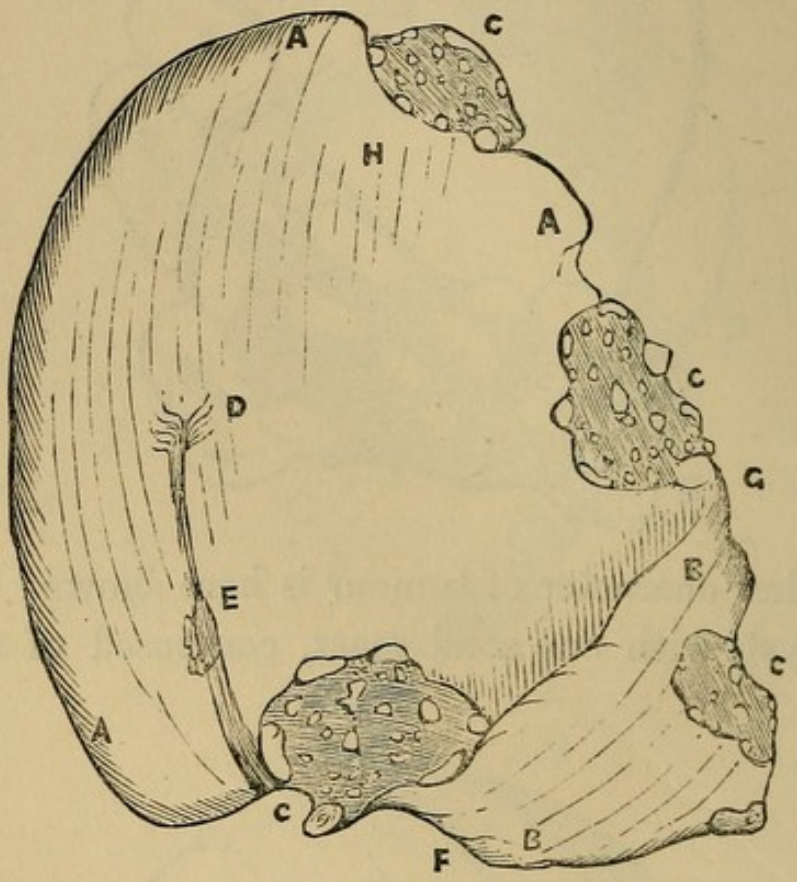


Another character of tumour is here shown; being a large cyst, with one solid mass, composed of smaller,



cysts. A, pedicle; B, large cyst; C, bands of lymph attached to the abdominal viscera; D, the solid part, composed of smaller cysts. This tumour, with contents, weighed upwards of thirty-four pounds.

The last variety is a large sac, with solid masses placed independent of each other. A A, the large sac;



B B, smaller sac; C C C, solid masses attached to the sacs; D, the Fallopian tube; E, the pedicle. This tumour was the one removed from the female whose outline has been given above, and weighed seventy-three pounds.

PARACENTESIS ABDOMINIS.

This operation is frequently required, not only in ascites, but also for tapping ovarian sacs, and is far

from being as simple as is generally stated. In ascites it has generally been advised by surgical writers to tap below the umbilicus, in the linea alba; but I have frequently observed that punctures in that position are slow to heal, and sometimes ulcerate, I therefore prefer the mid-distance between the crest of the ilium and the umbilicus, taking care to avoid as much as possible the veins on the surface. I believe this lateral position is followed by less mischances than the usual mode. In ovarian sacs I should keep the same rule in view, unless some particular prominence in the sac to be emptied, shows a better position for the puncture. In ascites I use bandages; in ovarian sacs I do not, for reasons stated in that article. In ascites the sitting posture is to be preferred; but in ovarian cases I prefer the patient laid down on the bed, on either side, or on the back; if very large, this plan has two advantages—1st, By far the most comfortable for the patient, preventing all that peculiar sinking feeling, and tendency to syncope; and 2nd, The operator has a chance of observing the gradual emptying of the tumour, and, whilst the parietes are thin and very flaccid, patches of adhesions may often be distinctly felt, if any. When the recumbent posture is adopted, I use a glass funnel with a bent leg, fixed into a vulcanized india-rubber tube, which easily and neatly conveys the contents, without the change of vessels, into a large vessel placed beside the bed; the trocar I use is of middle size. I hold it equally an evil to use one *too* small as *too* large; in the former, the fluid sometimes will not pass through, and the progress of

the operation is very tedious and fatiguing; on the other hand, if too large, the fluid flows off too rapidly, and is often productive of uneasy feelings of depression and syncope. Of the large number of cases, both of ascites and ovarian sacs, that I have tapped, I do not recollect one untoward accident. It is always advisable to sever the cutis with a lancet before piercing with the trocar; this prevents much of the sharp pain accompanying the piercing, as well as it enables the trocar to enter with greater facility. Always grease the canula and spear of the trocar before using them, and avoid by all means the slow boring process, like using a gimlet; let the motion be steadily and firmly onwards. One of the best proofs of having pierced a sac, is to watch the mouth of the canula; when the sac is nearly emptied, the mouth will turn right upwards, generally because the other end of the canula is fast in the collapsing sac; and as the aperture in the parietes remains the same, it will have this effect.

As I have stated elsewhere, tapping is not to be resorted to as a curative in ovarian dropsy; it can, at best, be but a palliative, where no operation is practicable, or will not be submitted to. The best time for tapping is just preceding the operation of extirpation, with the view of lessening its bulk and reducing the length of the required incision. For ascites it is often requisite. But in all cases the rule ought to be,—tap as seldom as possible. Let the size requiring it always be such as to produce uneasy breathing, difficulty of lying down, and pains. Little or no dressing, except a strap of adhesive plaster, is necessary after tapping; but a ban-

dage is necessary to support the relaxed walls, *particularly in ascites;* but in ovarian sacs, bandages must be avoided, if any operation is in contemplation.

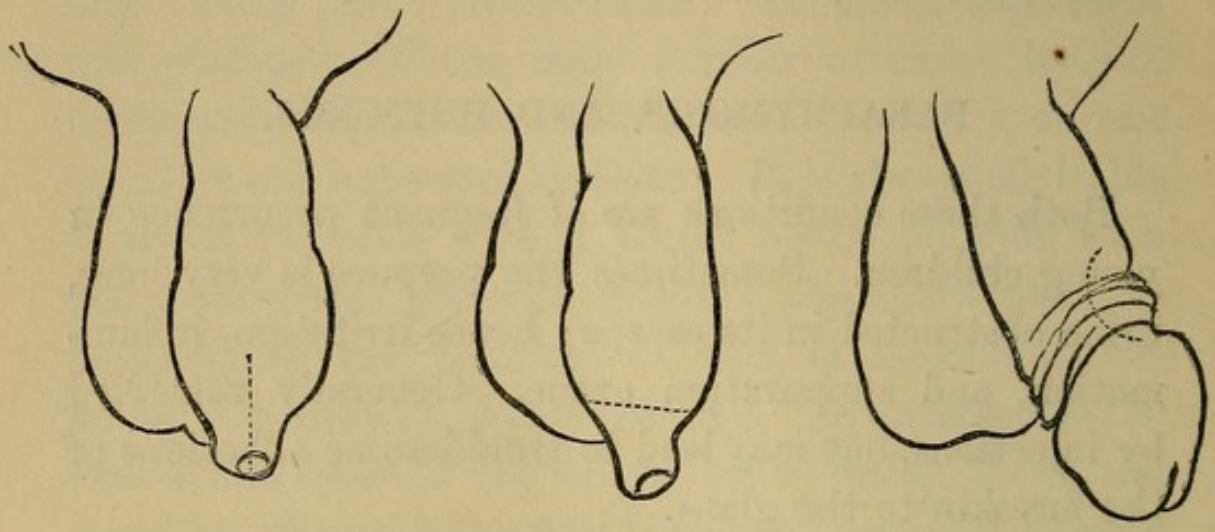
PARAPHYMOSIS, AND PHYMOSIS.

Both these conditions are of frequent occurrence in young children. Sometimes the prepuce is very long, urine obstructed in its escape; hence irritation, inflammation, and suppuration ensue. Generally remedied by injections, but may lead to troublesome adhesions of the foreskin to the glans.

Treatment of Phymosis.—Enlarge the orifice, or remove the prepuce entirely; but if the parts are much inflamed, defer any such operation until the inflammation is removed.

In Paraphymosis.—Compress the glans penis well on all sides with the points of the fingers, then press the glans back through the foreskin, drawing the latter forward at the same time; if the parts are well oiled, and no inflammation or great turgescence is present, it may succeed. Usually, when assistance is sought, the parts are much inflamed, swollen, and turgid, the prepuce often œdematous, requiring punctures to allow the serum to escape; in such cases the bistoury is carried behind the corona, and the prepuce divided. The entire of these operations will be understood by these figures:—1. Simple mode of enlarging orifice by probe-pointed scissors, or bistoury, in direction of dotted line from within outwards; 2. Drawing forward the point of the prepuce with the left thumb and

finger, and cutting away a portion at the dotted line; and in 3, The probe-pointed bistoury is passed behind



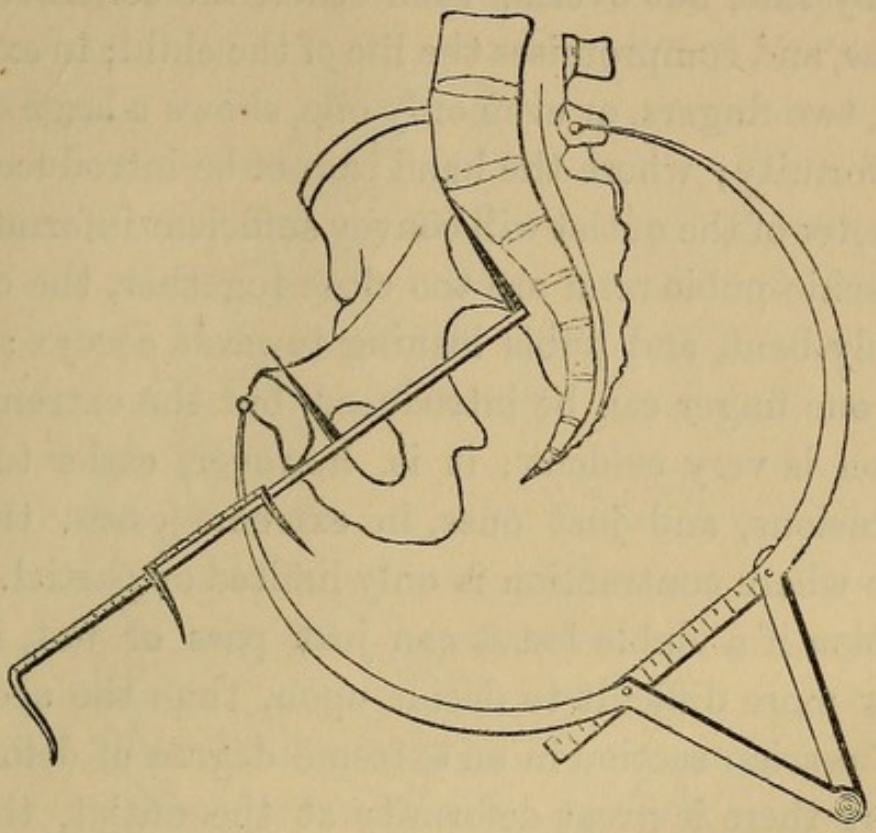
the corona, under the prepuce, and cut out. There is seldom any bleeding of consequence. If adhesions are formed on the glans, they will usually separate by a little force; if stubborn, they may require dissecting off. Water dressings, followed by emollients.

PELVIMETERS.

Whenever the pelvis deviates from its natural or normal measurements, it will become necessary to be made acquainted with the amount of deviation, and where situated, in order to estimate the difficulty which properly has to be overcome, and apply the means of doing it.

Pelvimetry is the measurement of pelvic capacities; for this purpose, various instruments have been invented, chiefly French, such as those by Baudelocque and Coutouly, as here shown. I believe, however, all the information necessary may be gained without these

instruments, which have never been estimated highly in this country. I think the measurement may be got



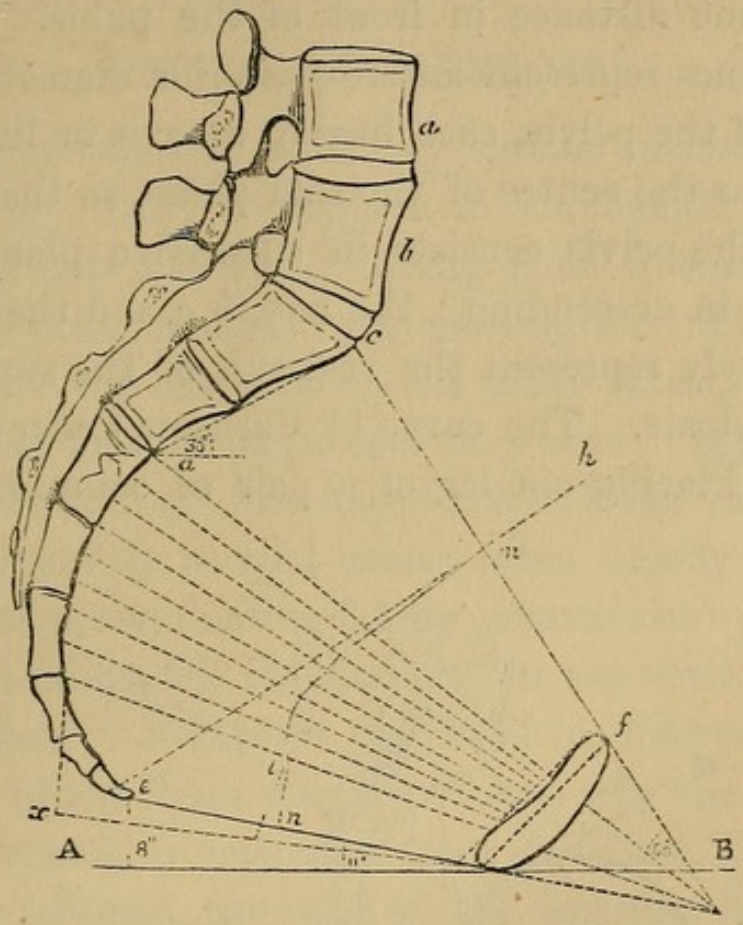
sufficient for the purpose by the fingers alone. If the single forefinger be introduced, and cannot reach the sacral promontory, there is no reason to doubt the capacity of the pelvis; but if it can be touched, it becomes doubtful if the head can pass, for, as a rule, the antero-posterior diameter will be short of three inches. Suppose the outlet and lower basin large, and the hand introduced, the upper aperture of a standard pelvis will allow the four fingers to stand side by

side, scarcely touching each other; but if they are pressed close, the brim is contracted; and if they cannot stand side by side, but overlap each other, the contraction is serious, and compromises the life of the child; in extreme cases, two fingers, or even only one, shows a large extent of deformity; where the hand cannot be introduced, the character of the outlet will convey sufficient information: the ischio-pubic rami are too close together, the coccyx sharply bent, and pubis leaning towards coccyx; often only one finger can be introduced, but the extreme distortion is very evident; it is, however, easier to draw conclusions, and just ones, in extreme cases, than in those where contraction is only limited or partial. The question if a viable fœtus can just pass or not, is infinitely more difficult to decide upon, than the necessity for Cæsarian section in an extreme degree of deformity. Where there is great deformity at the outlet, there is no chance of the upper aperture being free. Digital measurements are far more convenient, and equally efficient with the best instrumental means. In deformed pelves, not extreme, the accoucheur should be careful how he decides that a viable fœtus will not pass; close observation on the progress and symptoms is required; and recollect, too, that the child may be smaller than the average, and might pass the upper aperture, though a little contracted.

PELVIS, AXES OF.

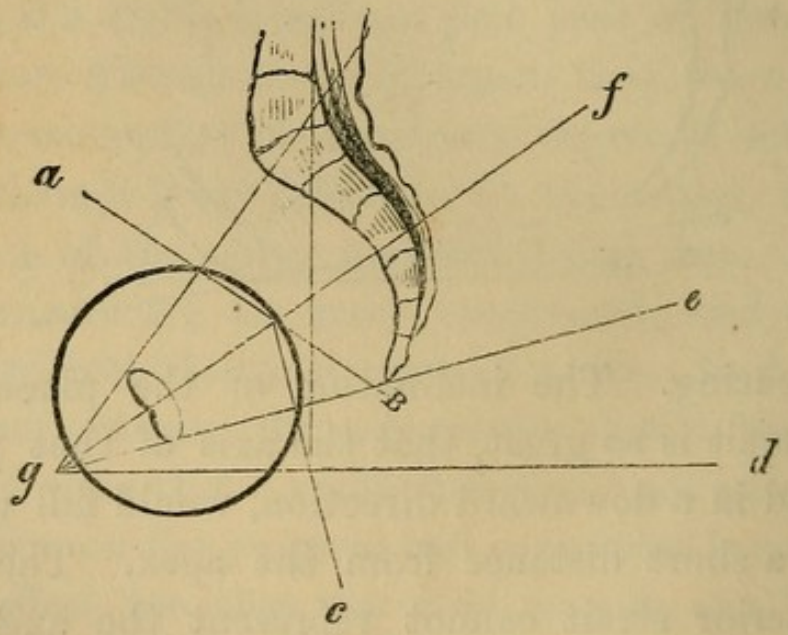
In all obstetric operations in which the pelvis is concerned, it is necessary to bear in mind the axes of the

pelvic canal, without which it would be dangerous to use forceps, lever, crotchet, or any other instrument. A reference to the adjoining figure will easily explain



their bearing. The inclination of the plane of the upper strait is so great, that the axis of that plane, if produced in a downward direction, would fall upon the sacrum a short distance from the apex. The axis of the superior strait cannot represent the axis of the pelvis. The axis of the lower strait—viz., a line falling perpendicularly upon the so-called plane of the lower strait, midway from the pubis to the coccyx—could not represent the axis of outlet. The antero-posterior diameter of the superior strait, and that of the inferior strait, approach each other at an inclination which causes them to decussate at only a short distance in

front of the pubis: as in the figure, in which A B represents the plane of the lower strait, B C the plane of the upper strait, and continued in front would touch at B, some distance in front of the pubis. The nine dotted lines represent antero-posterior diameters of the planes of the pelvis, each having an axis or line perpendicular to the centre of the said plane, so that the real axis of the pelvis consists in successive planes passed through in descending; the line, *h c*, and the line, *m n*, respectively represent the real axis of the superior and inferior strait. The curve of Carus is easier to understand. Placing one leg of a pair of compasses in the



middle of the posterior edge of the symphysis pubis, the other in the middle of the antero-posterior diameter, and a circle drawn as in the figure, passes through the lines *g*, *f*, *e*, *d*: the curve of this circle represents the real axis of the pelvis. If the operator makes himself familiar with the curve of Carus, he

cannot easily make any mistake in the proper direction of his efforts in the act of delivery, whether by hand or instruments.

PELVIS, FRACTURE OF.

This is an accident of a very serious character, but one not very likely to happen to the female. It may arise from outward force, falling from a considerable height, or being crushed by great weights. The injury may involve the contents of the pelvic cavity; and if the bladder, fatal consequences may arise. It is known by inability to move the lower extremities; pain, difficulty or inability to void urine; often bloody; violent inflammation, terminating fatally; sometimes by abscess, also often fatal; the bladder may be ruptured, another fatal accident. Fractures may exist in different parts; the crest of the ilium may be broken off; the os pubis may be broken, or separated from its fellow, across the obturator foramen, the rami of the ischium, &c. Crepitation may be felt on moving the limb, particularly if the finger be passed into vagina or rectum.

Treatment.—Recumbent position; a large, firm, and well-fitting bandage, embracing the hips; perfect quiet; free use of the catheter; limbs seldom moved; general bleeding and emollient enemas; great care in assuming the erect position, or in locomotion; may require a considerable time.

PERINÆUM, TO SUPPORT.

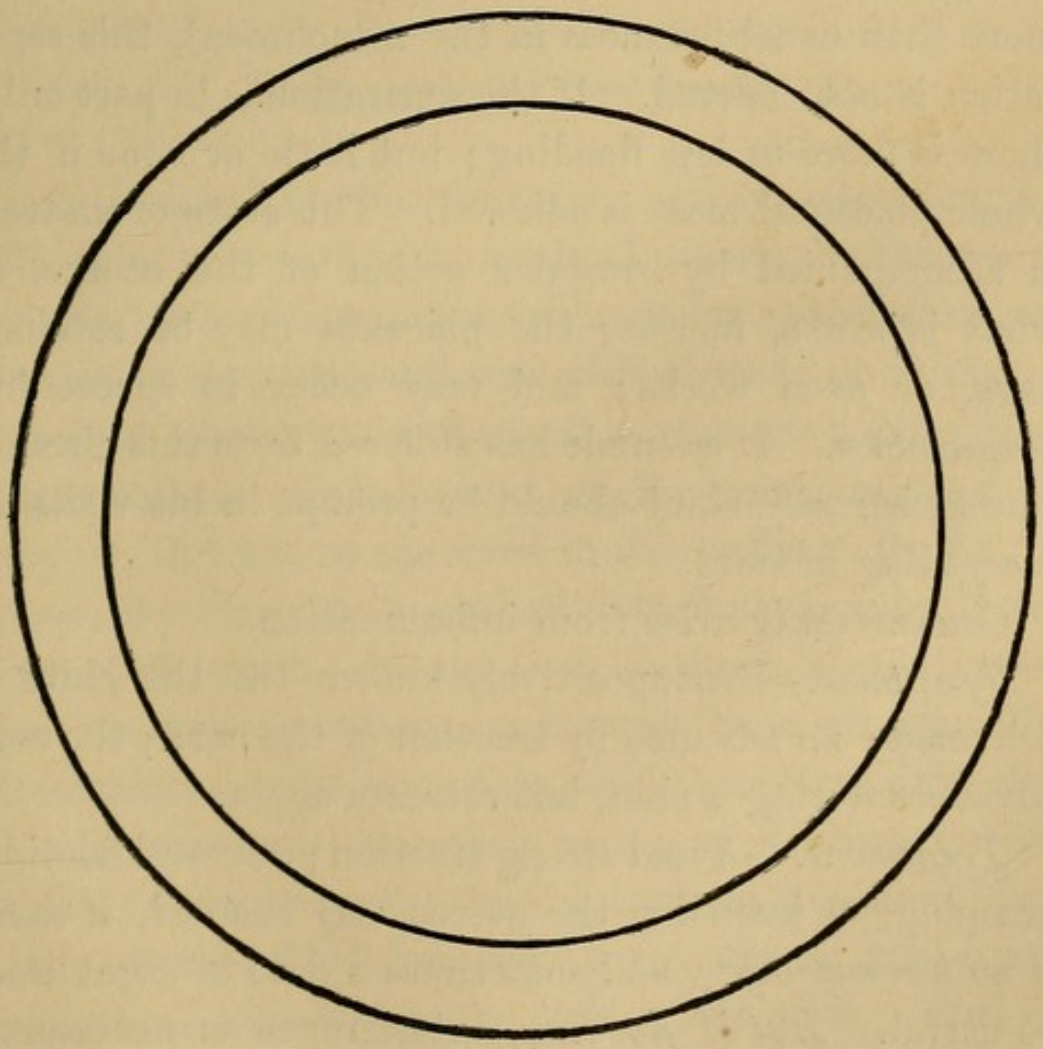
During the second stage of labour, it is said to be the duty of the accoucheur to support the perinæum, to prevent

laceration. In my opinion, this advice wants some little qualification. I believe it may be done too soon, and thus cause that which is intended to be prevented. The time *to support* is when the labia are beginning to be separated by the vertex, and the edge of the perinæum becoming thin. I always support by the two or three fingers, and use a little lard, which, if the mucus be deficient, is an excellent substitute. I deprecate most seriously using a napkin to press upon the part—first, because the pressure is not equal, and the accoucheur has no means of knowing where the pressure is most wanted; and lastly, which is of immense importance, it absorbs all the natural mucus, and thus increases the tendency to laceration, an accident in midwifery by no means rare, but in eight cases out of ten evinces bad practice. Dr. Pretty, in his "Aids during Labour," 1856, still perpetuates the error of absorbing the secreted mucus of the perinæum, by napkins used in applying the necessary support.

PESSARY, EMBEDDED.

It not unfrequently happens that pessaries are found embedded in the vagina, and sometimes are actually forgotten by the female wearing them. An occurrence of this kind fell under my notice in 1844, published at length in the "Medical Times," vol. ix. p. 371:—Mrs. Meek, aged forty-two, had a large iron ring, such as is used for coupling plough chains together, and of two ounces in weight, introduced by an old woman to cure a prolapse of the uterus, eight years pre-

viously, and it had got so fixed that it could not be removed, and false delicacy prevented her seeking other advice. At the time she consented to its removal, the ring was, with the exception of about half an inch, entirely embedded in the coats or folds of the vagina. The operation consisted in passing a ligature round the small bare part, which I accomplished with some difficulty by an aneurism needle with steel sliding spring. By this ligature, an excellent hold of the pessary was obtained (I should have observed that, for two days before the operation, the vagina had been dilated with sponges); the ring was now traced carefully round with



the scalpel; there was some hæmorrhage, but less than was expected. The foregoing figure is of the exact size of the original. A friend of mine removed a wine-glass, with the stem broken off, that had been introduced in a similar manner, but had been entirely forgotten by the patient (at least, so she stated). The case of Mrs. Meek soon recovered after the operation, and is now free from prolapse.

PLACENTA, ADHESION OF.

Usually the last efforts to expel the child detach the placenta: but sometimes, from morbid causes, or more than usual firmness in the attachment, this separation is not effected. If the separation is in part only, there is more or less flooding; but little or none if the whole placental mass is adhered. This state of matters is accompanied by irregular action of the uterus, or what is worse, inertia; the placenta may be retained days, or even weeks; and may occur in succeeding pregnancies. If a female has suffered from this circumstance, her attendant should be prompt in his visits at succeeding labours.

Cause.—May arise from inflammation.

Symptoms.—Not positively known till the child is delivered; no advance by traction of the cord; the cord advances during a pain, but retreats again.

Treatment.—Avoid strong traction; outward friction, grasping, or kneading the uterus may succeed, if there is *no hæmorrhage;* and sometimes a dose of ergot may be useful. *But if flooding,* interference is necessary:

pass the hand, search for the edge of the placenta, and peel it as you would the rind from the body of an orange; peeling must be done steadily, and somewhat quickly, but not rashly; for, bear in mind, the hæmorrhage is increased until the whole is detached, when it ceases. Some advise grasping the placenta, extending it as a cone, and twisting it off. This practice is not good; therefore, peel it in preference to any other plan, and take care the uterus contracts well after, and expels the placenta with the hand. Examine the placenta, to see if entire; no portion, however small, should ever be left behind, or secondary hæmorrhage may arise—an evil equally great.

PLACENTA, RETAINED.

As a sequel to the foregoing article, supposing the placenta, or a part of it, retained, it may be thrown off within twenty-four hours, without any putrefaction, and having caused no particular disturbance; or it may be retained longer, and putrefaction may arise, and general constitutional disturbance; or the placenta may disappear, and not be observed in the lochia. In the *first form*, there may be a gradual detachment, and sufficient energy to expel. In the *second*, there is rapid putrefaction, irritative fever, and often hæmorrhage, either immediate or at a later date; as late as forty days after. I was consulted respecting a case at Liverpool, whilst this was preparing for the press, where it occurred forty days after, and had returned three times; and I have seen three cases extend to thirty days after. The *last*

form of supposed absorption of placenta, I am disposed to think not so much absorbed as passed off by the lochia by slow degrees. This form is not entirely free from hæmorrhage, though not of the most serious character.

Treatment.—First arrest hæmorrhage, if any, by detaching the adhered portion; correct fœtor by injections of chamomile tea, or sol. chlorid. of soda; support constitution by generous diet, and bitter tonics; and check inflammation, if any; in separating the adhered portion, be cautious not to use too much violence; bandaging and compresses must be well applied; and in some cases, if there is nothing contra-indicating its use, the ergot may be of service in throwing it off.

PLACENTA, DELIVERY OF.

In common cases, never deliver placenta until the uterus contracts; there is often a slight cessation of pains after the child is born, which it is not necessary to interfere with. When contraction comes on, place one hand on the fundus uteri, with the other trace the cord to its insertion; if that can easily be felt, it is generally safe to deliver; there may, however, be some exception to this rule. Use gentle traction by cord, backwards towards the sacrum, and forwards towards the vulva; if any depression at the fundus, with the other hand, *cease traction at once*, as it is evident the placenta is still in utero, and there is no occasion for haste, unless hæmorrhage is present. This simple effort of gentle traction by cord is a better guide than the time that

has elapsed. If the placenta be still in utero, use friction. If traction be used without caution, the result may be hæmorrhage, rupture of the placenta, and inversion of the uterus. Extract the placenta, first towards sacrum, and second towards vulva; as it advances, twist it gently round, which will enable the membranes to come away entire, otherwise may be entailed the additional evils of fœtor, hæmorrhage of a secondary character, and irritative fever. Never leave the apartment without examining the placenta, and being convinced that no portion, *however small*, is left behind; be careful to examine more particularly the maternal surface.

PLACENTA PRÆVIA,

Or Placental Presentation. (*Vide* article, HÆMORRHAGE FROM PLACENTA PRÆVIA.)

PLACENTA, APOPLEXY OF.

This is defined to be an internal hæmorrhage between placenta and uterus, about the centre of the mass, leaving the edges of the placenta entire, so that the hæmorrhage does not colour the *liquor amnii;* it, however, may escape, and appear externally, mostly to a moderate extent, but sometimes the loss is very large; it is very dangerous, and often fatal; occurs as early as at the sixth month, and has been fatal at that early period. Fortunately, this accident is not very common.

Symptoms.—Sickness, fainting, pallor, coldness of the limbs, feeble and rapid pulse, tossing the head and arms

about, feeling of fulness, gasping, and generally no external appearance of hæmorrhage; an apparent swelling where the placenta is situated, of an elastic character, and conical form.

Treatment.—Rupture the membranes; give ergot; and, if the progress is slow, and symptoms alarming, version.

PLUG.

As the plug is frequently spoken of by obstetric writers, it becomes necessary to state how to make and apply the plug, and in what cases it is particularly applicable. For my own part, I am no advocate for plug practice, and should advise, when it is used, to be carefully watched, the pulse tested from time to time; in fact, only a man of experience should use it as a remedy: for though the hæmorrhage may disappear externally by an effectual plugging, it may be progressing internally, and when the attendant is fancying his difficulties over, a sudden gasp announces the death of the patient; it is said to act by accumulating the blood into a coagulum, and so close, or clog up the bleeding vessels (poor argument). Certainly it is not applicable *to floodings after delivery.* It is less objectionable in early miscarriages, if the ovum is really not likely to remain; as a very temporary expedient, it may be admissible in accidental hæmorrhage; it has been used in placenta prævia *pro tem.*, and in menorrhagia. If it is to be applied, the best form is one or two old silk handkerchiefs, torn up into three or four shreds each, well moistened with vinegar: introduce the end of one

on the finger-point, and stuff the vagina, at its upper part first, in every direction, and so on till the vagina is filled, and then secured with a pad to the vulva, and a T bandage. Care must be taken to be on the constant watch, not to let it remain beyond twenty-four hours, and use the catheter when necessary. An alum plug, that is, a piece of common alum (a lump), placed near the os, has been spoken of in recommendatory terms. It is however, liable to the same objections, and subject to the same rule, as the common plug, which, if I must use, I should prefer, as most manageable. An argument has been advanced in favour of the plug, where the os is rigid, and where it is desirable to wait for further dilatation, preparatory to emptying the uterus of its contents; if the hæmorrhage is not alarming, and such a state of parts exists, it may not be very objectionable; but certainly I should prefer a good dose of solid opium.

POLYPUS UTERI.

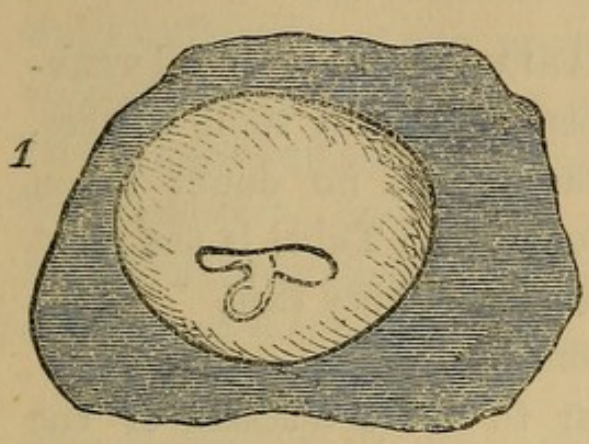
Tumours of various characters may form in the uterine and pelvic cavities; having already spoken of them generally, I shall here advert only to what is termed polypus uteri. These polypi obstruct the process of labour variously, according to their size, solidity, compressibility, and mobility. If small, the uterine exertions may overcome the obstruction; if large, but moveable, from having an elongated form, or pedicle, it may allow itself to be pushed above the brim, and enable the process of labour to continue uninterrup-

tedly; if large and soft (*sponge like*), its compressibility may admit of the child passing; but if hard, large, and with but little mobility, interference will become necessary. Again, if the attachment is high up in the body or fundus uteri, although not very moveable, it may allow itself to be moved above the brim.

Treatment.—If it can, by any manipulation, be removed out of the way, so as to allow labour to proceed, it must be done; the next chance is, to remove the tumour, by twisting it off at its pedicle, or passing a ligature round it, and removing it at once; if it is not of the character of polypus, it may have its volume reduced by trocar. If the tumour can neither be removed out of the way, reduced in size, nor be extirpated, the only resource will be craniotomy, and perhaps evisceration: but cases have occurred where the pelvis has been so packed, that even those formidable operations will not suffice, and the Cæsarian section must follow, otherwise the mother and child must perish. Polypus uteri, if known of previous to pregnancy, should be removed: many of them can be twisted off, others require a whipcord ligature, applied by a double canula. A short time ago I extirpated a large polypus from a lady at Runcorn, of one pound and a half in weight, attached by a very thick pedicle to the cervix, about an inch above the os: the ligature was eleven days in cutting it through, but the cure was complete; this lady has since been confined of a full-period child. (*Vide* HÆMORRHAGE WITH POLYPUS.)

Some of the forms of small, but exceedingly trouble-

some polypi, are here shown. 1. A very small pediculated tumour, just lying within the os, yet its presence, though small, may excite inflammatory turgescence of the os, with extensive hæmorrhage after sexual intercourse,



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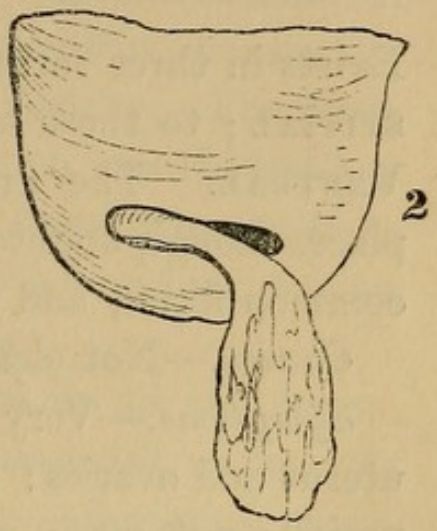

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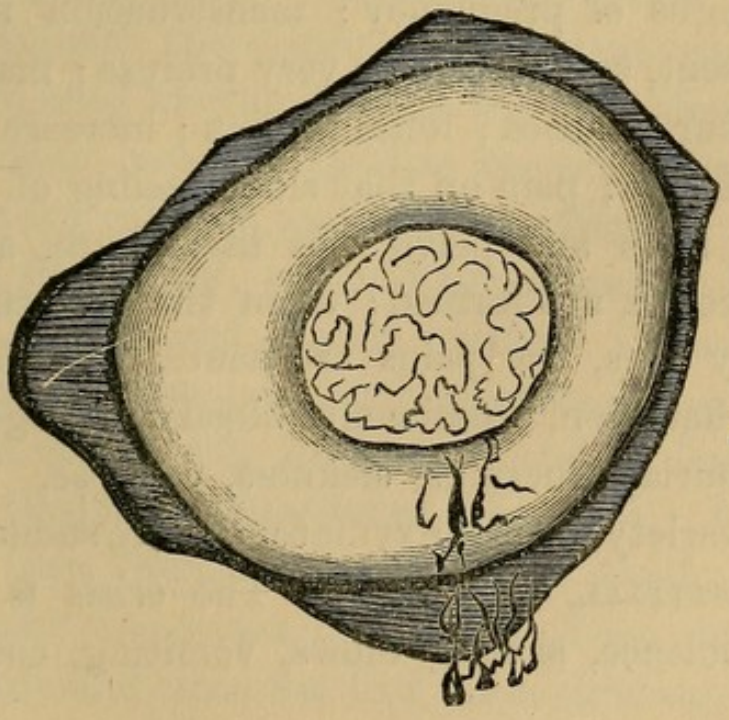

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or other provocation. 2. Another form, like a bunch of red currants, hanging out of the os, and characterized by frequent and alarming hæmorrhage, which, if not removed, drains the system. 3. The fibrous or cellular

polypus, showing itself within the os very large, with constant draining, sometimes gushes to an alarming extent.

PREGNANCY, EXTRA-UTERINE,

Exists in three forms—OVARIAN, TUBAL, and INTERSTITIAL; to these have been added, by some writers, VENTRAL. The first, Ovarian, has no doubt taken place, though doubted by some; the Tubal is the most common form; and the Interstitial very rare.

Causes.—Not clearly defined.

Symptoms.—Very similar to many diseases of the uterus and ovaries: many of them severe at an early period; not often very clear until the third month; irregular signs of pregnancy; menstruation may be regular, absent, suppressed, or very profuse; mammary changes occur; nausea; fœtal motion; increase of size more to one side; pain on that side; feeling of weight about the loins and pelvis; os uteri high, and not enlarged; cervix not formed; when the cyst ruptures, as it usually does, the pains are acute, with languor, debility, exhaustion, occasionally blood discharged from vagina, dysuria, tenesmus, sickness, collapse. In the TUBULAR variety, all these symptoms more sudden. In the INTERSTITIAL, very rapid. The crisis is accelerated by violence, shocks, blows, vomiting, coughing, sneezing.

Termination.—Generally in the fifth month, by either shock, hæmorrhage, or rapid inflammation; or the case may survive, and health in some degree be restored; pregnancy in some has occurred afterwards,

more than once. The extra-uterine fœtation may be retained from a few months to a great number of years; one recorded case of fifty-six years, another forty-six years. A pseudo-bony cyst may be formed; or an abscess, discharging its contents through the abdominal walls outwardly at the groin, or umbilicus, or into the epigastrium, colon, rectum, vagina, bladder. The fœtus rarely lives beyond the third or fourth month, but has been known to live to the ninth, developing itself as in usual pregnancy, even forming a decidua, and an attempt at labour at the usual term.

Treatment pretty nearly the same in all the forms. The rupture of the cyst should be retarded as long as possible, by avoiding violent exercise, alleviating irritation and pressure by venesection and opium. If rupture occurs, support the system; the patient must lie on a mattress, head low, binders, broths, and stimulants. If inflammation comes on, treat as for peritonitis—venesection, opium, calomel, and counter-irritants. After the rupture, fœtus dies; enjoin quiet, attend to bowels, use clysters, leeches, and, if pain, opiates. If abscess forms, be cautious of opening, lest hæmorrhage results. This, however, is not very likely to occur in long-standing cases. Gastrotomy has saved some lives. I performed it in a case twenty-five years ago, which succeeded; the female was unmarried at the time, but married afterwards, and since has had three children, but is now dead; the cause of death was typhus fever.

PRESENTATION OF THE ARM.

Variety, *shoulder, arm, hand;* occurs once in 261. One-half of children lost; one mother in nine.

Causes.—Excess of liq. amnii; peculiar shape of uterus.

Positions.—Either right or left hand, fœtal spine to mother's abdominal walls in front, fœtal spine to mother's spine; the right hand more frequently presented than the left.

1*st Anterior Dorsal Position.*—Right arm and shoulder at the brim, occiput forwards, head in left iliac fossa, back across the lower third of the uterus, breech upwards to the right, other arm at the back.

2*nd Anterior Dorsal Position.*—Left shoulder at the brim, head in right iliac fossa, breech to the left, feet and arms at the back.

1*st Posterior Dorsal Position.*—Left shoulder and arm at the brim, head and face in left iliac fossa, abdomen and limbs obliquely across the anterior of the uterus, breech to the right.

2*nd Posterior Dorsal Position.*—Right shoulder and arm in pelvis, head in right iliac fossa, breech to the left.

Symptoms.—The presentation difficult to feel, still more so in the primiparæ, shape of uterus irregular, larger transversely, parietes not so firm, head often felt in one iliac region, stethoscope finds the heart above one iliac, vaginally a hand felt. Before the child has engaged in the brim, the hand has been known to be

withdrawn, and the head has come down alone (which case has been mistaken for spontaneous evolution, a term that implies a fiction—*vide* article EVOLUTION, &c.). Hand sometimes felt beside the head, get an early knowledge of the presentation.

Diagnosis.—To know hand *from foot*, no prominent heel or round instep, finger ends more unequal than toes, thumb apart, joints of fingers larger, more motion in bending. *Knee from Elbow.*—Patella moveable and flat, olecranon sharp; if uncertain, draw down a little, but desist *if the arm;* position of child best known by the hand and the manner required for version. *Shoulder from the Head or Nates.*—Nates more fleshy, with genitals; head larger, and more globular than shoulder, with sutures and fontanelles; the shoulder known by clavicle, ribs, acromion, and scapula; of one point be certain, if fœtal spine be to the abdomen or spine of the mother. The palm of the hand corresponds generally with abdomen and limbs, and the thumb points to the situation of the head.

Treatment requires interference, or inflammation, rupture, exhaustion, and death may be the consequence of delay; it is a fallacy to hope for spontaneous expulsion. Announce a cross birth, and that possibly the fœtus cannot survive; be careful the membranes are kept entire as long as possible, by keeping the patient in bed; instruct not to bear down.

1*st Proposition—If Membranes are entire and Os dilated.*—Substitute another part for the one presenting, by which the progress of labour can be controlled; the only resource is version, which is justifiable even before

the os is fully dilated. Empty bladder and rectum; give chloroform; smear the hand and arm with oil or lard; place the patient at the edge of the bed, on her back, an assistant steadying the uterus with open hand; if none present, with one hand steady the uterus, with the other turn. It is a rule with some to be guided by the fœtal hand presenting; that is, if the right, *use the right hand;* if the left, *use the left.* The hand presenting can easily be ascertained as to its being *right* or *left* by the action of shaking hands, when the operator and fœtal hand will be palm to palm if *right*, back to palm if *wrong.* Some use the corresponding hand to the side on which the mother lies (if on her side); that is, right to right, and left to left. If the operator's both hands can be at liberty, hold the presenting part in one hand, and the other to be passed into a conical form along the vagina *during a pain*, and into the uterus *during an interval of pain;* get as far into the uterus as possible before rupturing the membranes; pass the hand along the abdomen and chest, guided by clavicle, and the insertion of funis; probably the foot is not far from this; if it be the one opposite to the hand presenting, it will be sufficient to turn by; if not, it will be necessary to seek for the other foot, taking care not to let the first foot go; use no searching exertions whilst the uterus is contracting; when the action has ceased, draw the limb or limbs steadily down, always over the anterior aspect of the child, turning the toes towards *the sacro-iliac junction.* Where turning has been delayed, pass the hand over the breech, gently extending the foot in the vagina at the same time;

deliver the hips, sweep the arms over the face, place fingers on maxillary bones and occiput, and complete as in a breech case. If membranes are ruptured, *and the os dilated*, lose no time; *if not dilated*, do not force the hand in, but bleed, give chloroform, and excite nausea by the sol. antim. tart. If membranes are ruptured and pains violent, passages hot and dry, the os swollen and tender, uterus tense, uneasy on pressure, pulse quick, thirst, &c., bleed and give chloroform. If chloroform is objected to, give a large dose of soft opium, three grains, or a hundred drops of tincture (the former I prefer if opium is to be used). If the hand does not recede as it ought, apply a fillet to the foot, and during an interval of pain, whilst applying traction to the foot, press upward the axilla. If auscultation tells the child is dead, there is less need of hesitation to eviscerate if the case be serious. *Spontaneous evolution* before the child is engaged in the brim is barely possible, after that impossible. Spontaneous expulsion may occur if the fœtus is smaller than the average, or premature, and pelvis capacious. Never trust to spontaneous expulsion unless in premature births, and certain of full capacity of pelvis.

PRESENTATION OF BREECH

Occurs once in 52 or 53 cases. Four varieties:—Sacro-anterior; sacro-posterior; left hip forward; right hip forward. Knee and feet presentations are all originally breech cases. Knees very rare—once in 3500; feet, once in 100. Breech cases not dangerous to the mother; fatal to one child in seven.

Symptoms.—Pains not so powerful, rather irregular, intervals longer; stethoscope indicates fœtal heart higher than usual; meconium on the finger after examination, but this *may* occur in other presentations; presentation, a soft smooth tumour, and if pressed upon will be found the tuber ischii; different from head by absence of sutures and fontanelle, and by the natal cleft with genitals; position of breech known by coccyx. The danger to the child arises from obstruction to cerebral circulation by pressure on the body; pressure on the funis impeding its circulation; placenta detached before respiration is established.

Treatment.—Announce a cross birth; prepare for infant asphyxia; let the patient keep her bed; avoid straining; keep the membranes entire as long as possible; be careful not to injure the genitals; avoid drawing down the feet, as they protect the cord from pressure if between them; let the breech advance slowly; the doubled breech facilitates the descent of the head, but if brought too quickly down, the chin leaves the breast, the arms extend to the side of the head, and the occipito-mental diameter is brought to the transverse diameter, and the delivery becomes a difficulty, as well as the death of the child almost certain; when the cord is within reach, pull it down a little,—if there is pulsation in it, there is no necessity for hurry, if putrid, leave the case to nature; if the pulsation is weak, render assistance by hand or forceps; with the finger over the shoulder bring down either arm, sweeping over the chest, then the other arm; when the head only remains, let an assistant compress

the uterus, and the body of the child resting on the accoucheur's right arm, pass two fingers to the upper maxillary bones on each side the nose, whilst two fingers of the left hand are pressed on the occiput, draw steadily with right hand, lifting the body of the child at the time towards the mother's abdomen, pushing up the occiput with the left, taking care to recollect the axis. If the sacrum presents to sacrum, the case may be left to nature, unless when the head is left, and the face does not turn into sacrum, a little assistance may induce it to do so. If the head be hydrocephalic, perforation may be necessary; and if the pulsation of the cord is absent, there needs no hesitation about performing it. Suppose such an accident as the body separated from the head, and the latter left behind? Some difficulty arises in delivery: pass the finger into the mouth, hold steadily whilst forceps are applied, then extract. If, in breech cases, the genitals are injured, attend to them by applying poultices, evaporative lotions, and a leech or two if necessary.

PRESENTATION OF THE CENTRES

Occurs very rarely.

BACK.—Known by spinous processes. *Remedy.*—Version (*vide* that article).

UMBILICUS.—Very rare. Known by soft abdomen, no bony point within reach, funis insertion felt. *Remedy.*—(*Vide* VERSION.)

STERNUM.—Known by bony plane, rib cartilages, and intercostal spaces. *Remedy.*—(*Vide* VERSION.)

SIDE.—Known by the intercostal spaces; be careful not to confound them with sutures. *Remedy.*—(*Vide* VERSION.)

PRESENTATION, OR PROLAPSUS OF CORD.

This accident occurs about once in 250 cases. Half, or rather more, of the children are still-born; but to the mother there is scarcely any additional danger.

Causes.—Mal-position, preventing the uterus properly embracing the fœtus; sudden discharge of the waters; small child; excess of liquor amnii; preternatural presentation; in the same number of labours, the breech cases are most frequently attended by this accident; excessive length of funis; placental attachment low in the uterus; too capacious pelvis; and irregular uterine action.

Prospect.—Death to the child, from pressure on the cord; asphyxia; if the child be small, and pelvis large, the cord may escape pressure; if the expulsive efforts are strong, and the time of labour short, the child may recover. It is also in favour of the child, if the cord lies at the sacro-iliac symphysis.

Diagnosis.—The cord may be pulseless, and the child live; but if putrefied, leave the case to the efforts of nature, and also if it has been long pulseless; prevent rupture of membranes as long as possible.

Treatment.—Pushing up the cord has but little success; fastening on a limb in utero is not advisable. Many plans have been suggested: enclosing funis in a bag; pushing it up, and staying with a sponge; Ar-

neth introduced the whole hand; forceps advisable if the os is sufficiently dilated; if the membranes are entire, rupture and turn; but if the waters are drained off, avoid turning; to turn successfully, the cord should pulsate, head disengaged, pains moderate, pelvis large, operator expert; turning is not advisable in primiparæ. In such cases place the cord, if possible, as near as may be to the sacro-iliac symphysis.

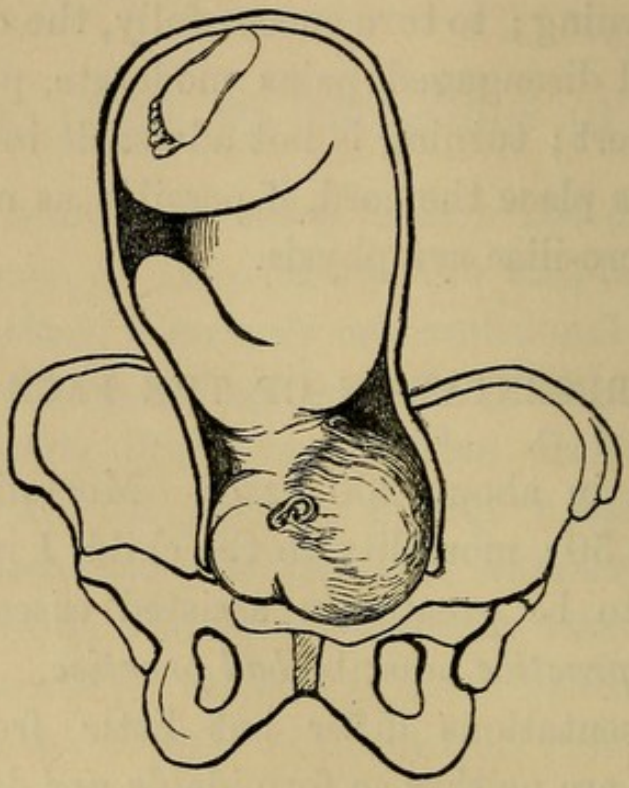
PRESENTATION OF THE FACE

Occurs once in about 200 cases. Mortality to the mother, 1 in 50; mortality to the child, 1 in 7. Mortality said to be greater in assisted cases; *if so*, a *meddlesome practice* must be *bad practice*.

Face presentations differ but little from natural labours, and are neither so formidable nor dangerous as the older writers supposed, and may, with few exceptions, be treated as natural labours. Cases, however, have occurred, where, from failure of maternal powers, version has been called for; or the forceps may be needed to complete delivery. There are four varieties:—1st, Right mento-iliac; 2nd, Left mento-iliac; 3rd, Mento-sacral; 4th, Mento-pubic. In the two former, the face looking down into the pelvis from the long diameters of the pelvis; in the two latter, the face looking down from the short diameters. The first position is here shown; the other three will be easily understood without sketch.

Right mento-iliac most frequent; left mento-iliac next in frequency; mento-sacral very rare, and soon

resolves itself into one of the former; mento-pubic also rare. Sometimes there is a fifth position, by the fore-



head sinking down more rapidly than the chin; by some called *presentation of the forehead.* The same sometimes characterizes one cheek.

If labour be moderately quick and effective, face cases generally do well, and the child is not endangered; but long pressure may induce effusion on the brain. When born, the face appears swollen and distorted. To define these cases from breech, bear in mind eyes, nose, and mouth, and their relative positions; and be careful, in examination, not to injure them.

Treatment. — These cases, if not interfered with, mostly terminate well; they require time and patience, seldom more is necessary; but in some the forceps, and

even perforator, have been called for, in consequence of exhaustion. Face presentations are accidental, and may be classed as preternatural; but as the female can expel the child with little additional difficulty from the usual vertex presentation, they can scarcely be regarded but as little differing from natural cases. The causes of these face-presentations appear to be deviations in the axis of the womb.

PRESENTATION OF TWO PARTS.

Hand with Head sometimes occurs, and is apt to arise from a wide pelvis. Watch the case carefully when the membranes rupture; press the hand upwards. If labour is far advanced, the hand cannot be got rid of, and therefore need not be interfered with; the labour is delayed, and care will be necessary that the perinæum is not ruptured by the olecranon of the child's elbow, from unequal pressure.

Arm with other Hand very rare; the hand pressed upwards. The arm presentation already treated on.

Head and Foot may arise from unskilful turning: secure the foot with the fillet, and press the head upwards.

Hand and Foot.—When these present, the case ends by breech or shoulder.

Remedy.—Traction by the foot.

Feet, Hand, and Breech; Head, Foot, and Hand; Hand, Foot, and Cord—generally requiring only traction by the foot.

PRESENTATION OF HEAD,

Or natural labour. In 32 cases, 31 are natural. This average is calculated from 295,933 labours. Presentations of the head, or natural labours, admit of considerable variety. The two principal are the Occipito-Anterior and Occipito-Posterior, the first of which is the most general. The Occipito-Anterior has three varieties — *Left Occipito-Anterior*, *Right Occipito-Anterior*, and *Occipito-Pubic;* this latter one has been doubted, and if it does exist, it is extremely rare. The second fundamental position has also three varieties—viz., the *Left Occipito-Posterior*, *Right Occipito-Posterior*, and the *Occipito-Sacral;* the last of these three has also been doubted, and at all events is very rare. In addition to these, there are other positions—*Left Occipito-Cotyloid*, *Left Fronto-Acetabular*, and the *Fronto-Pubic*.

Of the first general position, the *Occipito-Anterior*, of all the most frequent, from the weight of the occiput, occurs in about 70 cases out of 100 head-presentations: the rectum supposed to press the face to the right; child's back to the mother's left front of abdomen; fœtal abdomen to the right of the back; occiput behind ilio-pectineal prominence; anterior fontanelle to the right sacro-iliac symphysis; sagittal suture in the right oblique diameter; at its forward point is found posterior fontanelle; backwards the anterior fontanelle; finger touches first the parietal prominence. The head, in passing through the pelvis,

is subject to four conditions:—FIRST, *Flexion*, or forced on the chest; SECOND, *Rotation* on coming in contact with the sciatic ligaments; THIRD, *Extension* on its approaching the perinæum when the head leaves the chest and inclines backwards; and FOURTH, *Restoration*, or assuming its natural position. About twenty-nine or thirty per cent. of head-presentations are *Occipito-Posterior;* not so favourable as the first position—*first*, because the occiput passes over a larger surface; *second*, head is forced against the posterior of the pelvis; *third*, vertex cannot present until the chest fills the pelvis; *fourth*, expulsive efforts are not so effective; *lastly*, the forehead not so well adapted to the pubic arch, a full half-inch of the coccygeal pubic diameter being lost. The part first touched by the finger is, as a rule, the presenting part. In all natural presentations, the duty of an accoucheur is to exercise patience, to watch, to interfere as little as possible, to assist the indications of nature's efforts rather than dictate the means; in a vast majority of cases this will be sufficient; but if necessity or duty suggest interference, the operator must be qualified to meet the requirements of the case.

PRESSURE OF AORTA.

In the severer forms of hæmorrhage after labour, among the many means proposed, there is one that I have frequently found of considerable value—viz., the compression of the abdominal aorta, which can easily be accomplished by pressing the ends of the fingers

down upon it through the flaccid parietes of the abdomen. It may not always be effective, from the difficulty of bearing well down upon it; but it should not be lost sight of, if it is only to gain time to adopt other means.

PULSE.

In many stethoscopic manipulations, particularly in the question as to the existence of pregnancy, or if the child in utero be alive, it will be necessary to bear in mind the character of the fœtal circulation in comparison with that of the mother. From the best writers, it is stated, that the pulse of the fœtus in utero will be from 140 to 150, more frequently reaching towards the latter number; whereas the pulse of the mother will be from 80 to 85. Thus, then, it is evident, if a pulsation can be detected by the stethoscope through the abdominal parietes, of from 140 to 150, whilst the pulse of the mother only stands at from 80 to 85, it is certain that a child exists in utero, and *again*, that child is living.

RETROFLEXIO UTERI

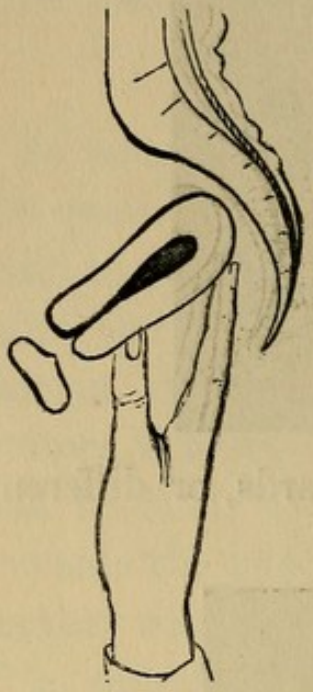
Differs from retroversion simply by the os uteri preserving its position; but the fundus falling depressed backwards and downwards, giving the whole a retort shape, and only occurs in the unimpregnated, its relief is by raising the fundus, preserving the situation of the os. This case seldom becomes extreme, and never liable to terminate so seriously as retroversion. As a simple definition of the different positions the uterus occasionally assumes, the sketches herewith will be amply suffi-

cient. Fig. 1, uterus normally situated. Fig. 2, fundus directed downwards and forwards, or anteflexion. Figs.

3, 4, 5, fundus downwards and backwards, or different degrees of retroflexion.

RETROVERSION OF THE UTERUS.

Not very frequent, but may occur in the unimpregnated uterus. This case is characterized by the os being immediately behind the symphysis pubis, and the fundus in the hollow of the sacrum; depressing the posterior wall of the vagina, whilst the anterior wall is pushed forward. Most frequent in the early months of pregnancy, whilst the uterus is in the pelvic basin; sometimes occurring suddenly, and sometimes gradually.



Causes.—Too ample pelvis; sacral curve too acute, giving prominence to the promontory; tumours; scirrhus; distended bladder; violent efforts in vomiting; defæcation; falls or blows.

Symptoms.—Retention of urine; pain and difficulty of defæcation; weight in the pelvis; bearing down; dragging pain in the groin; severe pelvic and abdominal pains, which, if not relieved, produce fever, vomiting, peritonitis; is sometimes fatal by irritation, inflammation, or sloughing; uterus across the pelvis, os behind symphysis, and fundus in the hollow of the sacrum; differs from retroflexion (*vide* preceding article).

Diagnosis.—Easily defined from ascites by catheter; from ovarian or other tumour, by the suddenness of its occurrence, and by the shape of the cervix.

Treatment.—Catheter direct backwards (elastic preferable); aperients.

Operation.—Chloroform; then hook down the os with the finger, and press the fundus upwards from the hollow of the sacrum, simultaneously. If this plan does not succeed in the supine position, place the patient on the hands and knees, and renew the efforts; sometimes a bladder introduced in the rectum, and afterwards inflated, succeeds. *When reduced*, lie on the side, quiet; keep the bladder empty by catheter, or stoop forward when doing it. Professor Simpson's uterine bougie, or sound, is an excellent instrument for many purposes; one of its uses, to restore the retroverted uterus, is well worth attention. Little explanation will be necessary, if attention be paid to the two diagrams here given. Fig. 1 is the uterine bougie or sound of Professor Simpson, nine inches in the bent stem;* flat handle, two inches and a half, marked one and a half inches from the point, and at every inch after to the handle; made of steel, silvered over. The application of this instrument to a retroverted uterus is easy to understand. To the left (fig. 2) the staff is introduced whilst retroverted, when, by a twist, the uterus is lifted round to its position, as in the figure to the right. When the uterus is in its normal position,

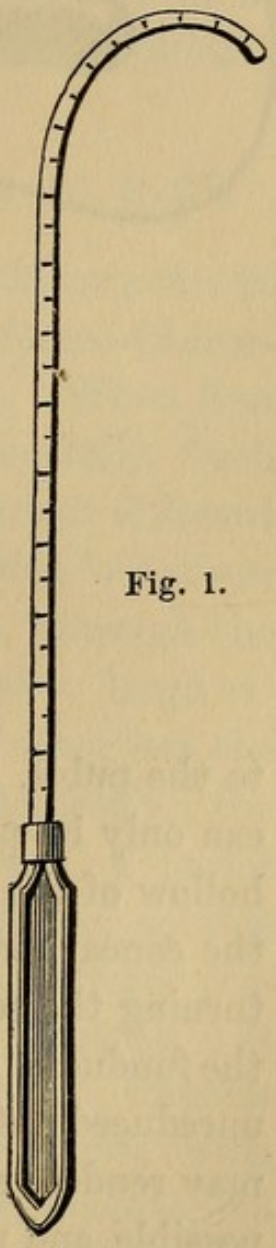
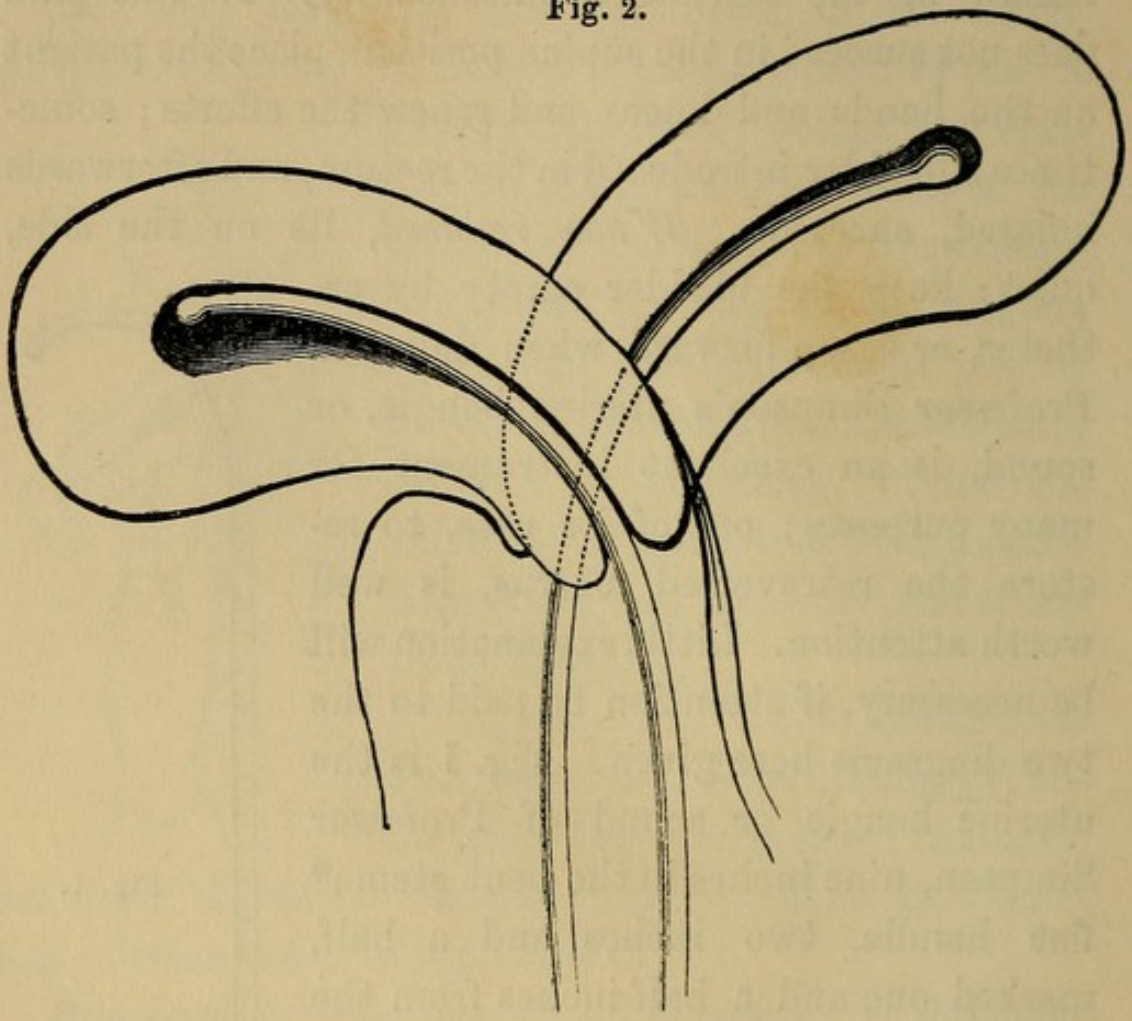


Fig. 1.

* The curve, as shown in this figure, is too sudden, and may be better understood by referring the reader to Fig. 2 in the next page, where the size and curve of the instrument are more correctly delineated.

the sound point passes upwards and forwards in the line of the umbilicus, and the concave part of the instrument

Fig. 2.



to the pubis. When retroverted, the point of the sound can only be passed backwards horizontally towards the hollow of the sacrum, with the surface of the handle on the concave side of the staff, towards the sacrum. By turning the sound round, we at once replace the uterus, the fundus of which can be felt over the pubis. If long unreduced, inflammations and adhesions may arise, that may render restoration hazardous. If reduction is impossible, and pregnancy exists, puncture the membranes, and thus ensure abortion. Gastrotomy has been proposed as a last resort.

RIGIDITY OF PARTS

May considerably delay the completion of labour; contusion from pressure, inflammation, and even sloughing, may result.

Treatment.—Avoid frequent and unnecessary examinations; ergot, or other stimulants; bleed; emollient enemata; warm fomentations; lard; chloroform.

SECALE CORNUT.: HOW AND WHEN TO GIVE.

I was one of the earliest to use the secale cornut.: in England, and reported cases in the "Medico-Chirurgical Magazine," in 1823, of its efficacy. When first introduced, the article was dear, but generally fresh and good; but now there is such a mixture of different years' growths together, that it is seldom effective: thus it gets into disuse, with a bad name, through the tricks of the trade druggist. I have had a large experience of its effects, and the result is, I never use the Tincture, considering it uncertain and ineffective, the spirit it contains being the main stimulant. I do not believe the true principle of ergot sought for, soluble in a spirituous menstruum; and yet Dr. Pretty prefers the Tinct. sec. cornut., as he says, because it is more convenient, and takes no time to prepare, whereas the infusion has to stand at least twenty minutes (with powdered secale cornut. the decoction can be made in five minutes). I never give the powder in substance, as I believe if it ever does affect the child, it is when used in that form. I always use the recent *decoction* (not

infusion), made on the spot. A ʒiss. to ℥x. of water, boiled down to ℥vi., half of which is given, and the remaining half in fifteen or twenty minutes, if the first dose is not likely to be sufficient.

Rules.—Never give it to save your own time; when the os is only partially dilated; when the pelvis is contracted; if presentation cannot be felt; in malpresentations; where the parts are rigid and unyielding; nor where a head too large, or hydrocephalus, is suspected; be careful not to administer it where there is pain in the head, an excitable, vascular, or nervous system; and I may add, it is seldom called for in primiparæ.

It is justifiable if labour ceases for want of uterine contraction, all other parts being favourable; if the head, or even breech, present; if the os be largely dilated (it is not necessary to be fully so); if the pelvis is of average size; if the parts are yielding; and if no unusual pain or excitement. I do not credit half the reports on the children being still-born after the ergot: where it has been properly administered, and in proper cases, I have seen no bad effects. I believe the decoction is improved by a grain or two of bibor. soda, and a few drops of spt. ammon. arom. Uterine pains from ergot are more energetic, continuous, and expulsive, and its effects soon pass off if delivery is not accomplished. Some bad effects are said to arise to the child; *if these exist*, they will arise from compression, asphyxia, toxæmia, &c. To the mother some have attributed fistulæ, rupture of vagina or uterus, cerebral disturbance, delirium, coma, retention of placenta from

irregular contraction: but I must confess that such results I have scarcely ever witnessed, and believe them rare, where care and judgment are properly exercised. Galvanism has been proposed as a substitute for the ergot in inertia, and is deserving attention; Indian hemp is said to possess similar powers, and by some highly praised: thirty drops of the tincture is spoken of as being speedy in action, more evanescent, but more energetic and certain: I have no experience to offer upon it. Where all fail, the termination will have to depend upon instruments.

SECRETION OF MILK.

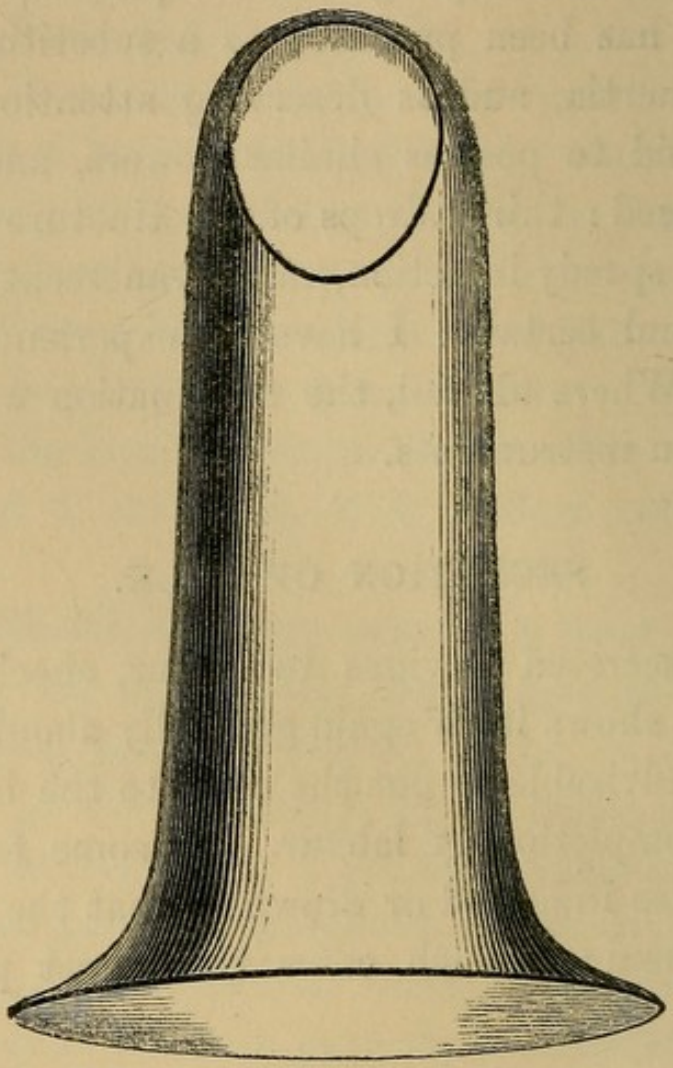
Usually secreted previous to labour, checked during labour, and shows itself again generally about the third day; it is advisable to put the child to the breast soon after the completion of labour. In some females the nipples are so indented or drawn in that the child cannot seize them; to such cases the breast pump is a great help.

SPECULA

Are exceedingly various, both as to shape, and the materials of which they are made.

Shape. — Tubular or cone-shaped, bi-valved, tri-valved, and quadri-valved. Materials: glass, glass covered with caoutchouc, and various metals plated over. The best, in my opinion, is the glass one, with internal looking-glass surface, and externally covered with caoutchouc, of the cone-shape, its introducing end having a long lip and a short one, edges incurved, and

the other extremity wide and reflected outward. It is not the easiest to introduce, but when that is accom-



plished, affords an ample and extensive view of the parts required, with plenty of room for manipulation.

SPINA BIFIDA.

An effusion of fluid between the membranes which cover the spinal marrow; often accompanies hydrocephalic affections; usually seated in the lumbar region; but may occur anywhere, from the base of the cere-

bellum to the sacrum, and even to the coccyx.* The tumour is whitish, opaque, semi-transparent, sometimes bluish, brown, or red; diminishes by pressure; and has a distinct fluctuation; the contents are serous; the spine is generally defective; the tumour often inflames, bursts, and is followed by paralysis of the inferior extremities, convulsions, and usually death shortly afterwards. In rare instances, cases have lived to the middle period of life, but extremely feeble and delicate, and wholly incapable of exertion; mostly death occurs before birth, or immediately after. The following malformations have been observed:—1. Absence of medulla spinalis, or spinal marrow. 2. Absence of the nerves. 3. Absence of brain and spinal marrow. 4. Division, more or less, of the spinal marrow. 5. Imperfect development of spinal marrow. 6. Double formation. 7. A central cavity in the substance of the spinal marrow.

Treatment.—Discharge contents very gradually, by small puncture, by passing a worsted thread through it, using compression afterwards. Some few cases are recorded as cured, but the prognosis should be very guarded, as but few do well; the slow discharge of the contents of the tumour is the only available means, with compression.

SPONGE TENT.

Sponge tents are used for insertion within the os, to effect premature labour; and are made by soaking fine sponge in mucil. acac., and folding it round a stiletto,

* The figure given at page 130 is an example of this disease affecting the spine immediately contiguous to the skull.

and then tied with a string; when dry, it can be cut into any form.

SYMPHYSEOTOMY.

It is almost needless to allude to this operation, as it is, by general consent of European accoucheurs, altogether abandoned. First projected by Sigault, in 1768. Of 49 cases, 16 mothers died, and 19 infants. Four of these cases were performed upon unnecessarily, as they were delivered naturally afterwards, and others suspected. The 16 mothers' lives were sacrificed to save only 5 children.

SYMPTOMS OF PREGNANCY.

There cannot be a question of greater importance, or of heavier responsibility to the obstetrician, than that of giving an opinion on the existence or non-existence of pregnancy, as it may affect the life, character, happiness, or fortune of an individual, as well as the peace of whole families. Symptoms of pregnancy, therefore, become an interesting and important inquiry, both physiologically and medico-legally. In studying this subject, then, we must bear in mind that pregnancy is often complicated with disease, as well as simulated by other diseases; the facts are often perverted through evil motives; and again without such evil intentions; the pregnant state is often concealed by both married and unmarried; pregnancy may be feigned to extort money; and lastly, the difficulty of defining pregnancy in the early months of gestation. Taking all these precautions into consideration, the following table it is hoped, will be a sufficient guide.

TABLE OF PREGNANT SIGNS.

1st and 2nd month.	3rd and 4th month.	5th and 6th month.	7th and 8th month.	9th month.	After.
Micturition.				Micturition.	The os a mere dimple—generally closed till labour commences—fundus sinks forward—in some primiparæ the cervix is slightly traceable.
Suppression menstr.	Suppression menstr.	Suppression menstr.	Suppression menstr.	Suppression menstr.	
Morning sickness	Vomiting	No sickness	No nausea	Vomiting, dyspnœa.	
Depress. umbilicus	Less depressed ...	Umbilicus effaced	Navel pouting ...	Navel pouts distinct.	
Tumefied mammæ	More tumefied ...				
	Darkened areola ...	Areolar of darker shade, follicles	Deeper shade of areola, follicles	Changes more distinct.	
			Milk	Milk streaks.	
Cervix larger and heavier.	Fundus above pubes	Prominence at hypogastrio			
		Fundus at or above umbilicus	Fundus at epigastrio	Fundus sinks.	
Descent of uterus				Cervix effaced.	
Kiestine	Kiestine	Kiestine	Kiestine	Kiestine.	
		Fœtal heart... ...	Fœtal heart... ...	Heart.	
		Placental soufflé ...	Placental soufflé ...	Soufflé.	
		Fœtal motion ...	Motion	Motion.	
		Ballottement ...	Ballottement in 7th month		
Os and cervix soft, rather oval and cushiony.	Os less easily reached.	Cervix shorter in 6th month, lost half its length.	Cervix very short, at the 8th month, $\frac{1}{4}$ inch long.	Piles. Œdema. Varices.	

TONGUE TIE.

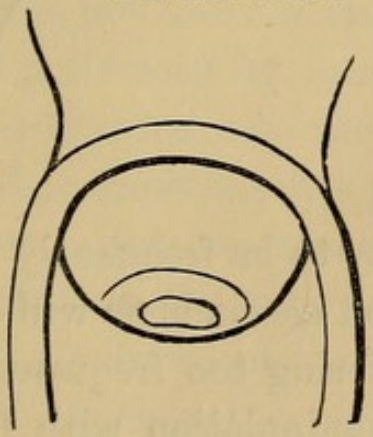
An operation of great simplicity, but not free from danger, from hæmorrhage. Place the fore and middle finger of the left hand on each side the frænum, and with a pair of blunt-pointed scissors divide the frænum rather downwards. Do not always divide the frænum when sent for; if the child can suck, do not interfere.

TOUCH.

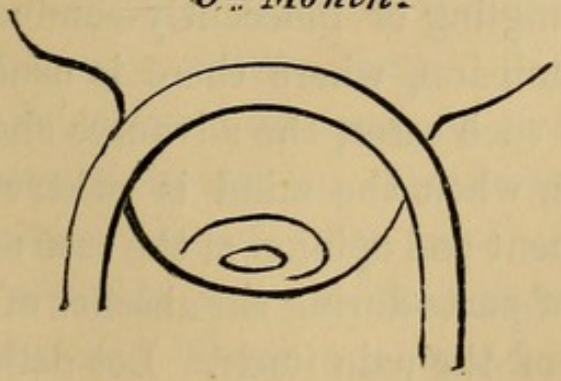
This operation is necessary under two circumstances: *first*, during the period of gestation, to ascertain its positive existence; and *second*, during labour, to judge of its progress. In the former, the female should be placed on her side, as in labour, or on her back, with her knees drawn up, or in a standing position; the operator sitting or kneeling. An accoucheur should never wear rings on his fingers, but should have his nails well pared, and be able to use either hand with equal facility, taking care always to use a little lard or pomatum. Indications by touch may be gleaned from the table of pregnant signs (p. 231). I may however state that, during *the first two months*, the uterus is heavier, lower in vagina, less moveable, size increased, feels softer, more spongy, and compressible. Care must be taken to define this from the *uterus just about to menstruate*, to which it bears considerable similitude—consequently the previous history must be closely criticised. *During the third month:* size, weight, and fixedness increase; fundus in the hypogastrio; cervix inclined backwards.

During the fourth month: fundus two inches above the symphysis; cervix higher; *ballottement* assists. *At the fifth month:* the fundus one inch and a half below umbilicus; hypogastrium projects; vagina narrowed and elongated; cervix elevated; fœtal motions discernible; *ballottement* distinct. *At the sixth month:* fundus at the umbilicus; the latter begins to project; vagina more contracted and elongated; cervix at the superior strait, shorter, less firm, and larger; *ballottement* very distinct. *At the seventh month:* fundus an inch and a half above umbilicus; cervix disappearing. *At the eighth month:* fundus at epigastrium; os uteri softens. *At nine months*, fundus sinks; cervix effaced. The os and cervix assume the appearances as here

3rd Month.

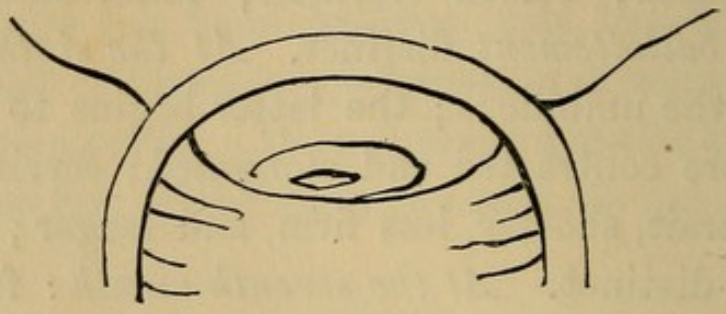


6th Month.



depicted at the third, sixth, eighth, and ninth month. In cases of labour, to ascertain its progress, bear in mind this axiom, that *meddlesome midwifery is bad.*

8th Month.



9th Month.

There is no necessity to be frequently examining in the early stages; a good accoucheur will draw just conclusions without interfering too frequently. There is no difficulty in the manipulation with females that have had children previously; but they are the only persons to detect a bungling or indecently-conducted examination. In primiparæ, where there is usually more fastidiousness in such cases, the advances should be made during a pain, when the mind is otherwise occupied; but the judgment and opinion of the case must be guided by the state of parts during the absence of pain, assisted by the effect of the pain itself. Let delicacy of mani-

pulation (and instituted only when necessary,) be the great guiding rule of practice. If the accoucheur would bear in mind, and act with a female as he would wish another accoucheur to act with his own wife, he cannot be far wrong.

TRANSFUSION.

There are many cases of extreme hæmorrhage, where, although the female may be successfully delivered, yet she may subsequently sink from the loss of blood previous to delivery. In such cases, it has been recommended by Blundell and others to transfuse a portion of blood from a healthy subject into the venous system of the sinking female. There are fourteen cases on record of its success, but there is also as large a number of failures. It is performed by means of a syringe and tube; the latter is inserted into the median vein of the arm, and blood taken from another person, and kept up in its temperature: fill the syringe; then force the contents gently through the tube into the vein, taking great care that no air is retained in the syringe, as only a small portion of air forced in with the blood, in all probability will be fatal. If the lips and eyelids quiver, or respiration becomes difficult, the operation must cease, or death may result; but if the countenance improves, the injection may continue until sixteen or eighteen ounces are thrown in: eight or ten ounces may be sufficient in some cases. The case will want close watching, as reaction may be in proportion to the amount thrown in. There can be no doubt of the

justifiableness of transfusion, if the case is sufficiently extreme to call for it.

TUMOURS, OVARIAN.

There are some forms of this disease that affect the female during parturition—viz., where a cyst or a portion of a cyst, passes into the recto-vaginal septum, and pushes itself forward at the posterior part of the vagina; or where the enlarged ovary prolapses within the septum. The descent of these tumours generally happens at the end of the gestative period, and mostly during labour; their disposition to fall is increased by the general relaxation of parts. If small, they may not materially interfere with labour; but if large, so as to fill the pelvis, some mode of displacing, removing, or lessening the mass, must be adopted.

Treatment.—Remove it above the brim, if possible, so as to allow labour to proceed; if this is not practicable, lessen its bulk by trocar. If solid and immovable, and large enough to block up the pelvic canal, we proceed to craniotomy, evisceration; or if still more formidable, the Cæsarian section.

TUMOURS, WATERY, OF THE PERINÆUM.

Fluid will sometimes become infiltrated between the vagina and rectum, sometimes to an extent to interfere with the evacuations from bladder and rectum. It is frequently the accompaniment of abdominal dropsy. It is ascertained by its distinct fluctuation, by losing its fulness on a recumbent posture being assumed, and

from its transparency when a candle is lighted and held near it.

The *Treatment* consists in removing it by puncture.

TUMOUR (OOZING) OF THE LABIA.

Sometimes attacking one, sometimes both labiæ; of firm texture; lobulated, fissured; raised a little from the surrounding parts; exuding a watery fluid, accompanied by troublesome itching; the fluid, sometimes mixed with blood, acrid, and excoriating.

Treatment.—Excision the only remedy. The constitution, generally debilitated, requires wine and nutritious diet.

TWINS

Occur in British practice about once in $65\frac{1}{5}$; Irish, once in 64. General, in 455,632 cases from various sources, showed one in $77\frac{3}{4}$. Triplets, 1 in 5840; quadruplets, 1 in 129,172. Quintuplets or more, still rarer. Dr. Hull, of Manchester, had a quintuplet birth; and Dr. Osborn found six at a *post-mortem* examination. Twins are slightly more dangerous than single births. To mother, 1 in 20; to child, 1 in $3\frac{1}{2}$. Twin pregnancies often result in premature births.

Signs uncertain; two fœtal hearts, pulsation not isochronous, form good evidence. Size very large, but may be confounded with ascites; ovarian enlargement; excess of liq. amnii; flatus; adeps; too prominent curve of lumbar vertebræ. Each child has a separate envelope and placenta, but the latter often forms but one general mass.

Children smaller than single births, on the average. I have seen both weigh sixteen pounds, but usually one child is less developed than the other. One of each sex is most frequent. It is a fallacy to suppose a twin female sterile; I know many instances to the contrary. Labour is generally slower; after the first birth there is an interval, for somewhat less than an hour, but which has occasionally been prolonged to many hours, even from eight to fourteen days, and in one case recorded to six weeks. The second birth (if the first has been properly managed) is easier than the first, as the parts are better prepared. Sometimes a large placenta, accumulated clots in utero, enlarged ovary, or spleen, have been suspected for a second fœtus; but by a vaginal examination properly conducted, the accoucheur will not be easily deceived.

Treatment.—Never leave the second fœtus in utero; avoid traction of the cord of the first child; be careful how the female is made aware of a second fœtus. After an interval of half an hour, use friction; if this does not rouse the action, rupture membranes, and in this case ergot is legitimate, as the parts are well prepared; if there is any faintness on the part of the patient, rupturing the membranes may be delayed a little. If superior extremity presents, turn; if head low, and no pain, forceps may be necessary; if the labour is delayed beyond three or four hours, the child will probably be still-born, and there is greater risk of hæmorrhage. Bandage is advisable after first birth; retention of placenta, and also hæmorrhage, are rather more frequent in these cases, and convulsions more complicated. If

the first delivery is rapid, the feet of the second fœtus often present, the second head not having time to descend; if feet present at first, be careful they are not belonging to both fœtuses; if both heads present, one must be pushed aside.

ULCERATION OF OS OR CERVIX.

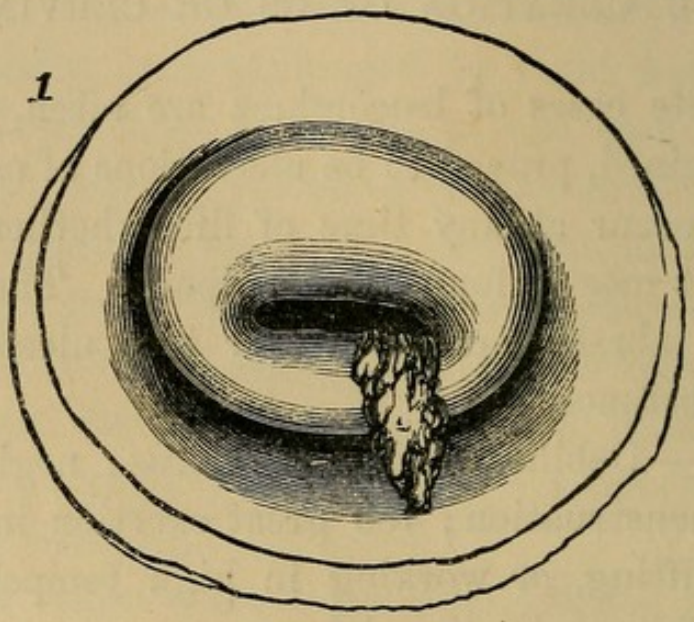
Obstinate cases of leucorrhœa are often, when carefully examined, proved to be ulcerations of os or cervix, and may occur at any time of life, whether pregnant or not, but mostly found in multiparæ. The case may be simple abrasion of surface, or true ulceration with loss of substance.

Causes.—Debilitated habit; coitus; neglect at the time of menstruation; too great exertion in standing, walking, lifting, or working in high temperatures; it may also follow abortion, labour.

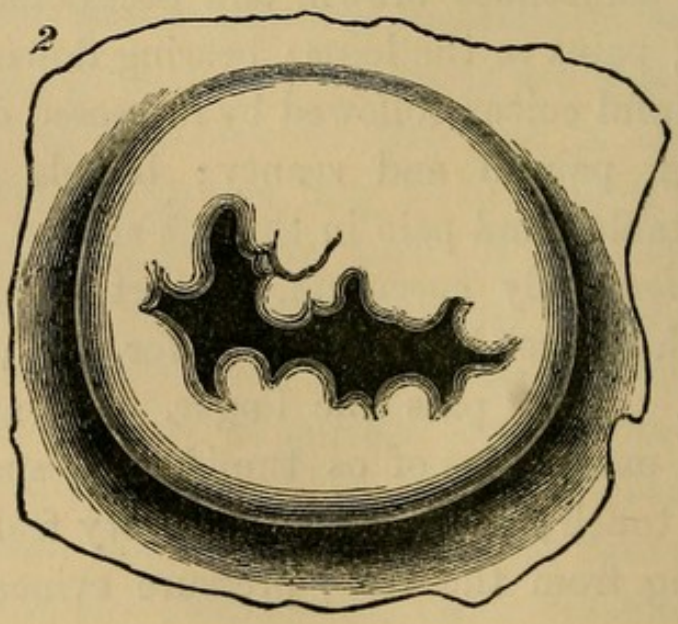
Symptoms.—Leucorrhœal discharges, varying, mucous, purulent, starchy; in colour milky, green, or yellowish, and sometimes brown, and occasionally tinged with blood; pains in the loins; bearing down; heat in vagina; painful coitus, followed by increased discharge; menstruation painful and scanty; bowels irregular; bladder irritable; and pain in the left side.

Exploration.—By speculum, patient on her back, covered with a sheet having a hole for the use of the instrument. First pass the finger. Os and cervix lower than usual; lips of os tumid, soft, spongy, and hot to the touch; if ulcerated, a velvety feel, and one part differing from the rest; pressure evinces tender-

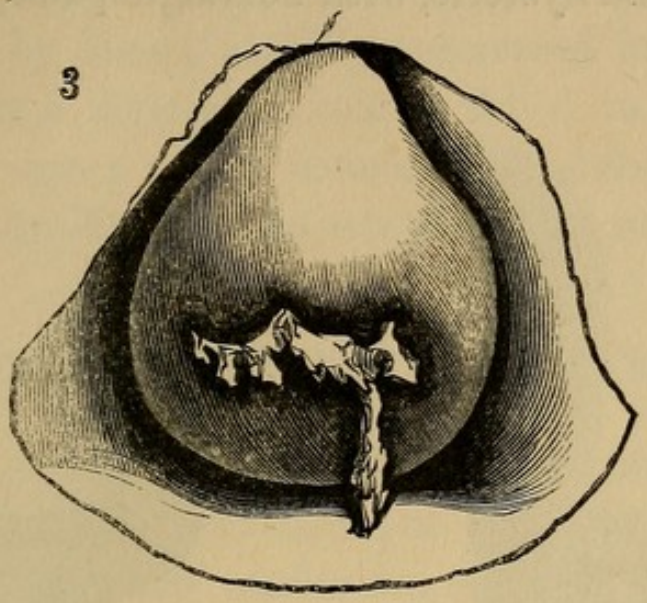
ness, except in long-standing cases, which are not very sensitive. With speculum, ulcer appears, sometimes very small, in others spreading to a large size, and extending to the cervix. Its colour, different shades of red, granular, and bleeds on being touched, with whitish patches and angry edges. Different appearances are



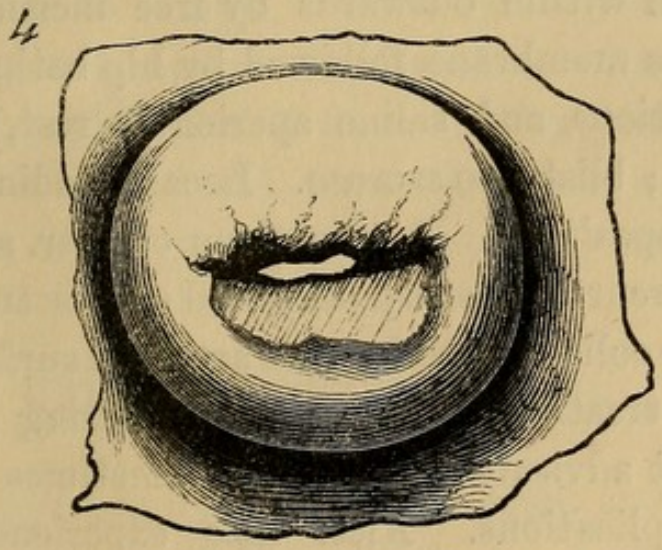
described as the granular, bleeding, cockscomb, superficial erosion, varicose, fissured, and follicular. Some



of the different appearances that are put on by the os and cervix are here given. 1. Inflammation of the

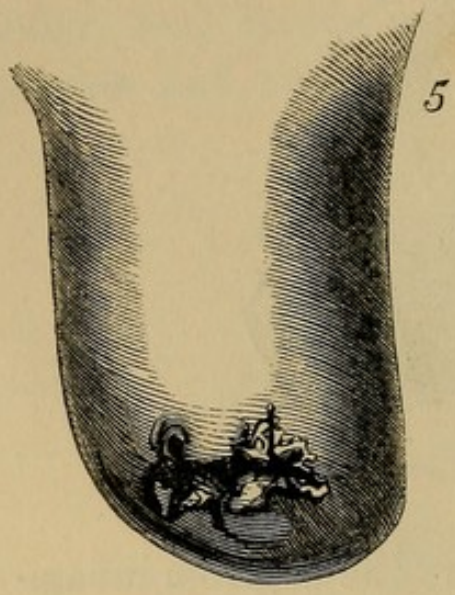


os, enlarged, congested. 2. Where the os, from inflammation, has lost its integrity, very uneven and papular.



3. Similar to Fig. 2, after caustic applications, and like Fig. 1, a flow of albuminous mucus from the orifice. 4. The os, with lower lip more congested than the upper. 5 (p. 242). An elongated neck with ulcerated os, lower lip most elongated. 6 (p. 242). Hypertrophy of the

neck, with irregular os. All these are accompanied with constitutional symptoms, more or less, chiefly dyspeptic and hysteric, with neuralgic pains, cough, and dyspnœa.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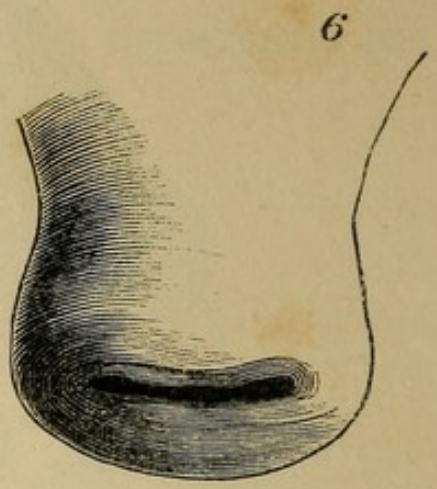
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Treatment.—If simple congestion, leeches, or cutting the os from within outwards by free incision through the mucous membrane, followed by hip baths and emollient injections, and saline aperients; rest, and sexual abstinence; blister to sacrum. Locally, iodine ointment, tannin suppository. Applications of nitr. argent., acid nitr. of mercury, caustic potass, and even actual cautery; of late also collodion, to form an artificial surface. These modes of treatment may be used during pregnancy, though not advisable; adhesions sometimes form after caustic applications. After long experience in these ulcerations, I feel convinced that in a vast majority of cases of this nature there is often a want of action in the liver, a great sympathy existing between the liver and the uterus; and when the action of the former is deficient, ulceration is almost certain to be the result in the os or cervix. The best treatment I have ever

found was an alterative pill of pil. hydr., and ext. hyoscy., in equal parts, combined with a small proportion of quinine, with light pencillings of nitr. argent., as proposed by Meigs, steadily persevered in, on alternate days for a little time, seldom failed to cure even very severe cases; and I cannot now advise anything better, or more likely to be attended with success.

ULCERATION AND FUNGUS OF THE UMBILICUS.

The cord sloughs or falls off about the fifth or sixth day; but if the nurse attempts to meddle with it sooner, it sometimes results in successive bleedings, tedious ulceration, and sometimes a troublesome fungoid growth. In some cases the cord has remained attached till the tenth, and even the fifteenth day. If the ulceration be simple, a little astringent lotion, as alum water, and occasionally touched with the nitr. argent., will suffice; but if there is a fungoid growth it will require a waxed silk ligature, which, well applied to its base, soon removes it entirely, and without danger.

URINE, INCONTINENCE OF.

This often arises from pelvic irritation and pressure.

Early Treatment. — Fomentations; leeches; belladonna; hyoscyamus; lupuline; tinct. ferr. mur.

Latter Treatment.—Little can be done beyond frequently emptying the bladder by catheter, to prevent involuntary discharges; and general tonics.

UTERINE POLYPUS.

When polypi exist, care should be taken to ascertain, in the interval of pain, and before the part presenting is engaged in the pelvis, how far it can be removed above the brim, out of the way, to allow the presenting part to descend.

Treatment.—If small, easily moveable, and compressible, there is a probability of natural efforts completing labour; but if the delay compromise the safety of patient, aid must be rendered, the mode will depend on the character of the tumour; if moveable, raise it above the brim, and keep it there till pains effect the descent of the presenting part past it, and this during the interval of pain; if not moveable, the tumour itself must be taken away by a ligature: if this cannot easily be done, and if its contents are fluid, lessen its bulk by a trocar or scalpel; if time is an object, the bulk had better be lessened immediately, than use a ligature. If solid, immovable, and incompressible, then it is evident the child must be interfered with; if small, the forceps may be sufficient; but if large, and extirpation not practicable, the only resources are craniotomy, and, if required, evisceration, but not if any other means promise practicability. The tumour-mass may be so large that craniotomy may not suffice, when the only alternative will be the Cæsarian section: even this is better than to leave the mother and child to perish, without an attempt to save life.

UTERINE TYMPANITES.

Physometra, or gaseous accumulation, in the uterine cavity, occurs under different circumstances:—1st. Supposed to be secreted by the lining membrane after disease (doubtful); 2nd. From the putrefactive process of a portion of the placenta; 3rd. From similar decomposition of the lochia. Mostly the os is closed, and the air pent up; in some few cases it is open, and emitting the gas as generated. *I know of no physiological phenomena by which a secretion of gaseous fluid can be explained;* and therefore look upon all these cases as arising from the effects of gas generated by the common process of putrefaction. Child-bed women, therefore, are the most liable. When it is stated that the lining membrane *secretes gaseous fluids*, I should suppose, where there are no remains of placenta or lochia to account for it, *the truth is, that the lining membrane secretes a fluid that, immediately on its secretion, runs to putrefaction.*

Symptoms.—Suppression of menstruation; enlargement of the abdomen, and milk secreted; accumulation, sometimes extensive; often forced away by blows, falls, sneezing, coughing, vomiting, straining, or bending suddenly forward; uneasiness, chiefly from bulk; sometimes heat and pain in utero; the functions of bladder and rectum interfered with; tumour elastic, clear loud sound on percussion; os mostly closed; when open, explosions of escaping gas.

Diagnosis.—From Pregnancy: No fœtal movement; no ballottement; by resonance; and by the character of pain. *From Hydrometra:* By elasticity; by reso-

nance. *From Ascites:* By resonance, and want of fluctuation. *From Scirrhus:* By elasticity, and by resonance.

Treatment.—Empty uterus of the air by elastic tube; syringe the uterus with tepid water, to remove the cause of putrefaction. Dugés recommends weak solutions of chlorine, or astringent solutions. I should suggest the plan of Churchill, a weak solution of nitrate of silver. Tonic medicines internally; mild alteratives, as Plummer's pill, chalybeate waters, &c.

UTERI, PROLAPSUS.

An accident of not unfrequent occurrence after labour. Often from rising too early after confinement, want of proper bandaging, violent efforts of straining and vomiting, even sneezing or purging. Varies in degree, from partial descent to complete procidentia. The causes are: relaxed fibre, particularly of the ligaments and vaginal coats; multiparæ are most subject to it, and after tedious or instrumental labours; the poor are more subject to this accident than the rich. I have, however, had severe cases of prolapsed uteri in very young females before impregnation.

Symptoms.—Sense of weight and uneasy pressure in the pelvis; fulness in the vagina; increased by the standing position; dragging pain in the loins; sense of aching in the iliac regions; increased lochial discharges; vesical and rectal uneasiness, with tenesmus; tumour in vagina. These cases, if neglected, go to great extremes; some terminate in irreducible procidentia, and become miserable objects in after-life.

Treatment.—Perfect rest for a considerable time; strict attention to the bowels; a course of tonic and astringent medicines will often remedy very bad cases, if taken within a reasonable time. It is never advisable to use pessaries, if they can by any means be avoided; but when the case assumes a chronic form, and has been long without any improvement by the usual treatment, pessaries must of necessity be resorted to. When the practitioner reflects on the rude, I may say truly barbarous, principles of the old-fashioned pessaries, I do not wonder at the general antipathy of the profession to their use. To be as brief as possible on this subject, I beg to observe, that at the meeting of the British Association, held in Manchester in 1842, I had the opportunity of proposing a new pessary for prolapsed uteri; a full description of the instrument, with accompanying remarks, was published in the "Medical Times," vol. vi. p. 323, in 1842. I need now only touch on some of the leading facts connected with it. It is well known the vagina is a passage of a certain capacity, with the uterus at one end, and the vulva at the other, and may be characterized by the two equidistant lines, Fig. 1 (p. 248) illustrating this subject. Now, so long as the uterus and vagina continue in a normal or healthy state, so long the walls of the vagina, the uterus, and vulva, preserve their normal and respective distances; but if by morbid changes these parts become relaxed, their proper position is lost, and great inconvenience arises (*vide* Fig. 2, p. 248). To remedy this, the old tribe of pessaries, balls, inflated bags, rings, &c., are introduced, with a view of keeping the uterus and

vulva at the required distance; and how do they accomplish this object? *by substituting a greater evil than the*

Fig. 1.

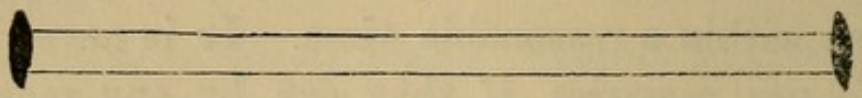
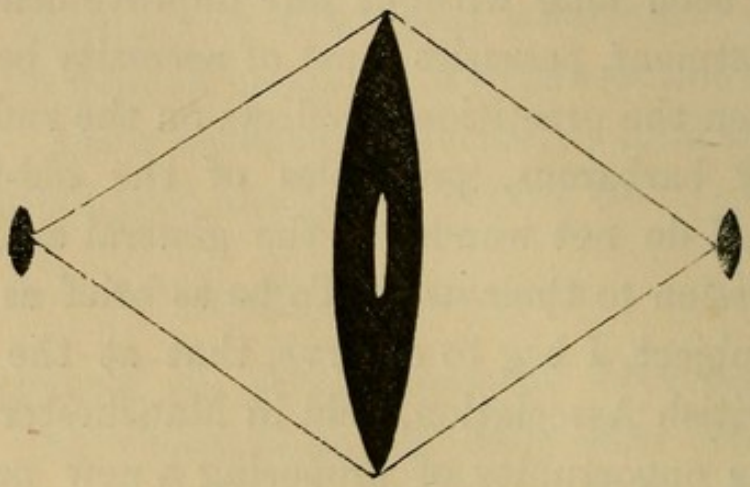
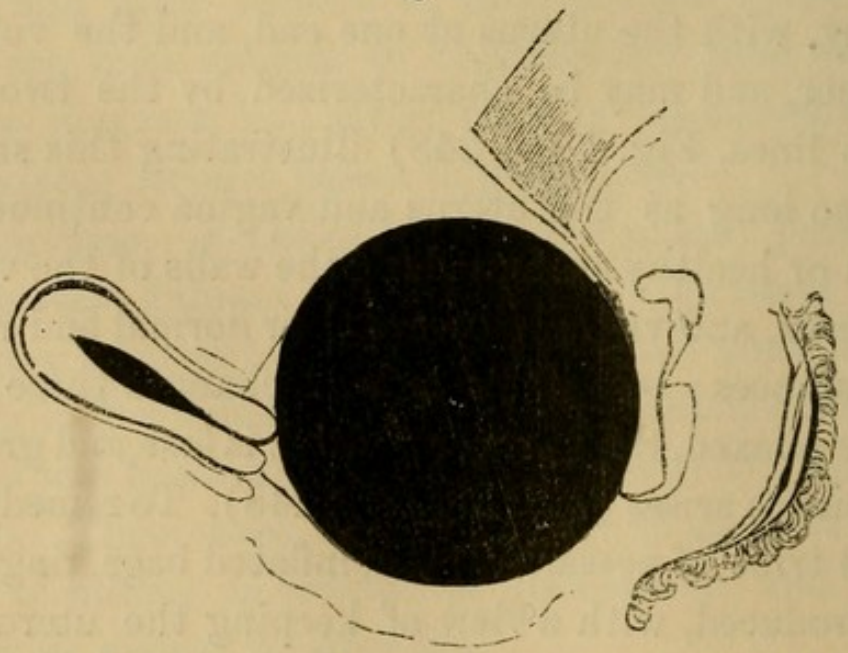


Fig. 2.



one sought to be remedied, by putting the vaginal walls still more on the stretch; and when removed, as they of necessity sometimes must be, the uterus falls down still lower, and puts the patient in a worse condition than

Fig. 3.



before, as will be seen by the ball, ring, or inflated bag

pessary, as in Figs. 2 and 3. Now it must be evident that a worse contrivance, or one more unfitted to suit the object, could scarcely be invented; and it would be far better never to use any pessary at all. The only legitimate support to the uterus, when prolapsed, is that which, whilst securing the support necessary, allows the vagina to contract to its normal dimensions; which it would be impossible to do by any of the old tribe of pessaries. The pessary I proposed, in the year 1842, is delineated by Fig. 4 (which has since given rise to

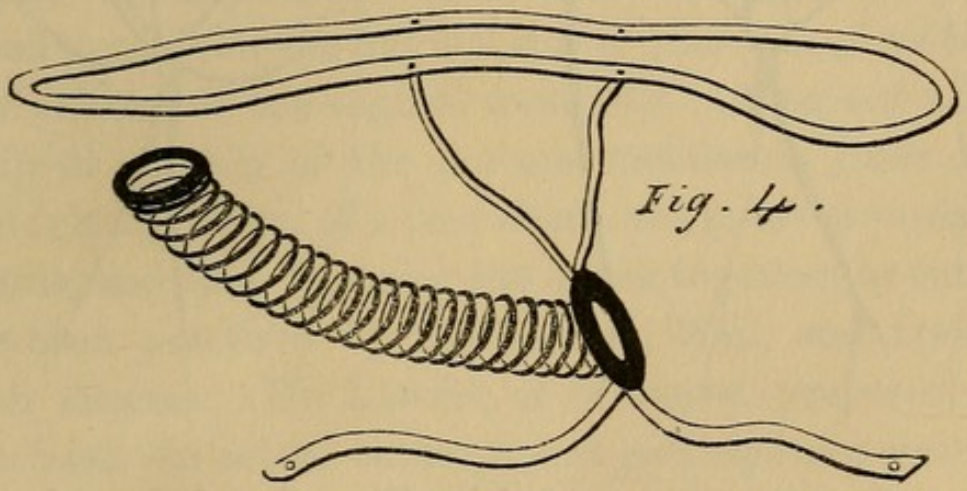
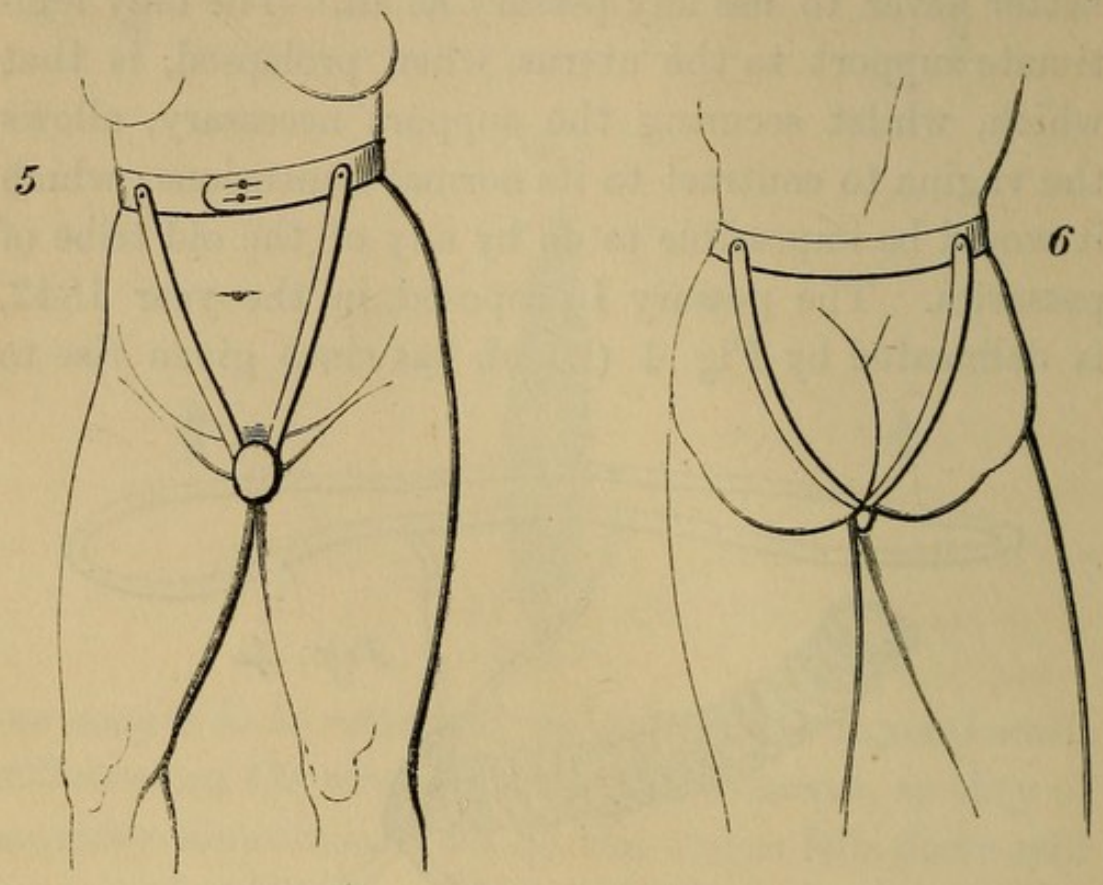


Fig. 4.

many somewhat similar), and has a curved, strong, silver, or german silver close coil of wire, covered for the first few days of its application with oiled silk.* At one end of the coil, next to the os uteri (when applied), is a thick ring for the os uteri to rest on; at the opposite (or vulvæ) end, a small shield; the whole secured by four straps, and a belt round the waist. It is obvious that all the intentions of a cure can be secured by this pessary; the vaginal coats allowed to become of their normal dimensions; the uterus preserved at its proper distance; and whilst these great points are

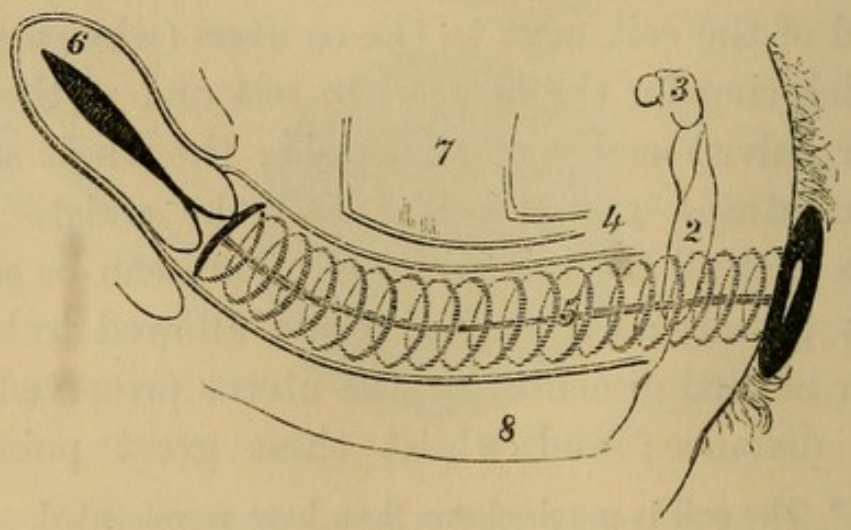
* The coil is much closer than here represented.

secured, tonic and astringent injections can be thrown up along the coil, to facilitate the curative intentions. When this instrument is applied, the front and back



view will be as represented by Figs. 5 and 6; and a section of the parts, showing the application of the instru-

Fig. 7.



ment internally, as at Fig. 7, where 1 is the shield at the vulva; 2, the symphysis pubis; 4, neck of the bladder; 5, the vagina, with instrument introduced; 6, the uterus, supported; 7, the bladder. The elasticity of this pessary is its great recommendation, and in this respect it is infinitely superior to the porcelain supporters lately introduced. Now with respect to porcelain pessaries, I may observe I am cognizant of two severe and almost fatal cases of hæmorrhage arising from the accidental breaking of such pessaries whilst in the vagina, their fractured ends causing serious lacerated wounds in the vaginal coats. The plan of reducing the calibre of the vaginal canal, by cutting out a long strip or section of the mucous membrane (*vide* EPISORAPHIA), rather of a pear shape, the point towards the uterus, and then bringing the edges together by suture, has been practised by Dieffenbach, Hall, and Ireland, with success. Dr. Lawrie, of Glasgow, proposed and practised the actual cautery on *a girl eighteen years of age*, to reduce the calibre of the canal. After this cruel operation, she was kept six weeks in a recumbent posture; but the prolapse returned, and was again cauterized, and kept *thirty-eight weeks in a recumbent posture.* Whether it ever returned again, we are not informed; the report of the case *only* extends to *three months* after. This case, I believe, carries with it its own condemnation. I would observe, on these modes, that if even they could be justified in aged females, after child-bearing period, they could on no account be admitted in younger females, where future child-bearing is probable. The surgeon should always bear in mind, that what he mutilates by actual cautery, or excises by

the knife, *he can never restore;* and that it is far more creditable to restore the healthy tone and function of any part, than to mutilate or destroy the texture by removal. Be this his motto; and if he is compelled by circumstances to use such cruel means, let them not be put in practice until every means have been tried to do without such assistance. In conclusion, I may add, I have scarcely ever seen a case (except in severe procidentia of many years' standing, and incapable of reduction) where my pessary has not been most effective; the ease with which it is worn, and the freedom from concussion by its elasticity, are its general recommendations. I have used it in a great number of cases, and always with satisfaction; and many of my medical friends and correspondents, both at home and abroad, speak highly of its use.

UTERUS, CANCER OF, AND CERVIX.

At the utmost, remedial measures are very unsatisfactory; and the patient, after every effort has been tried, sinks under insupportable sufferings; with such prospects, the most desperate remedies have been proposed, according to the extent of the disease, to excise the cervix, or extirpate the uterus altogether.

Excision of the Cervix has been frequently performed, both in this country and on the Continent, more frequently the latter. It appears that two-thirds of the cases operated upon have been lost, either by death soon after, or by the return of the disease and its consequences some time after. I believe, if the disease be truly cancerous, there is almost a certainty of its

return, sooner or later: and if so, the operation is not to be advised, unless there is some hope the disease is not fully developed as cancerous.

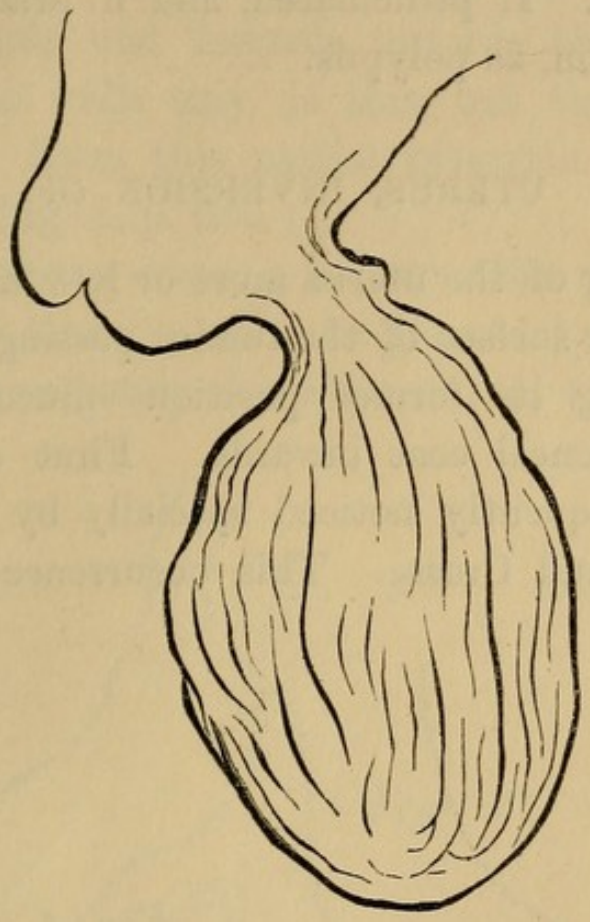
EXTIRPATION OF THE UTERUS ENTIRE has also been frequently performed, and with various success, for irreducible inversion, prolapse, and even *in situ*, but the mortality in all cases has been high. I have myself removed the entire uterus and ovaries through the abdominal walls, as in ovariotomy, in consequence of the hypertrophied uterus presenting itself along with ovarian disease, when operating for the latter: in this case a cul-de-sac was made of the vaginal canal, by interrupted sutures. This remarkable case (I believe the first ever performed) progressed favourably to the fourteenth day, was then able to sit up in bed, and enjoy a mutton chop, the sutures all away, when the nurse got some liquor, and being excited, removed her from the bed, with the intention of easing it, when the patient fell on the floor: peritonitic inflammation set in, and in twenty-four hours she died, and thus ended the brilliant hopes I had fostered of her recovery. I am, however, wrong in saying it was the first of its kind: for Gutberlat, in 1814, and Delpech and Langenbach, in 1825, had similar operations, but immediately fatal. The best mode of operation is similar to ovariotomy in detail. Per vaginam, it is necessary to draw down the uterus, and dissect posteriorly; ligaments on both sides will require ligatures to prevent hæmorrhage, and great care to separate the uterus from the bladder, and the part reflected upon the vagina. My last and earnest advice is, if of a truly cancerous nature, on no account to operate.

UTERUS, FIBROUS TUMOURS OF,

Are dense morbid growths; little constitutional mischief; peculiar fibrous structure; affects mechanical weight, &c. No ulceration, and are not malignant. Either non-pediculated, pediculated, or interstitial. Found of all sizes, to forty pounds in weight; mostly solid, sometimes, however, hollow.

Symptoms. — Principally weight; bearing down; aching loins; the functions of bladder and rectum interfered with; cramps; sometimes retroversion; menstruation irregular or suppressed; rarely menorrhagia. If pediculated, hæmorrhage may occur; and if interstitial, pregnancy may co-exist. In labour, difficulty from irregular action of the uterus; large discharge of mucus; breasts sympathize. Sometimes, in emaciated persons, the tumour may be felt through parietes; irregular form the principal guide; if low, vaginal examination will detect; the surface is smooth, dense, and insensible to pressure; growth slow. Must be distinguished from pregnancy by the want of fœtal motion, pulsation, and ballottement; from congestion, by being more defined and less sensitive; from scirrhus or cancer, by absence of pain, frequent hæmorrhage, and sensibility. From polypus it is more difficult to define, if near the cervix; indeed, occasionally, these pediculated fibrous tumours become gradually a species of polypi. From ovarian disease they are known by being harder, less mobile, and accompanied by less constitutional mischief. In examination per vaginam, ovarian

tumours press the canal laterally, which is not the case with fibrous tumours. (*Vide* Fig.)



Treatment.—Medical: little or none beyond attention to stomach and bowels, or any particular symptom that may become troublesome. *Catheterism* sometimes required: always use the elastic male catheter; if congestive symptoms, depletion; soap liniment, with opium, as friction to the abdomen; if vaginal discharge is profuse, some use astringent injections, but I must confess this an interference with an attempt of nature to relieve, and more likely to do harm than good. Medicines to promote absorption are advised, as some such tumours have been recorded *as absorbed.* I have however but little confidence in the plan. Mercury and iodine are

the only absorbents to apply, and it is a question if the remedy is not as great an evil as the disease sought to be remedied. If pediculated, and if practicable, treat by extirpation, as polypus.

UTERUS, INVERSION OF.

A turning of the uterus more or less inside outward, by the inner surface of the fundus passing through the os, reversing its former position—mucous coat outwards, peritoneal coat inwards. First described by Paré; subsequently noticed specially by Baudelocque, Newnham, and Crosse. This occurrence is rare. In

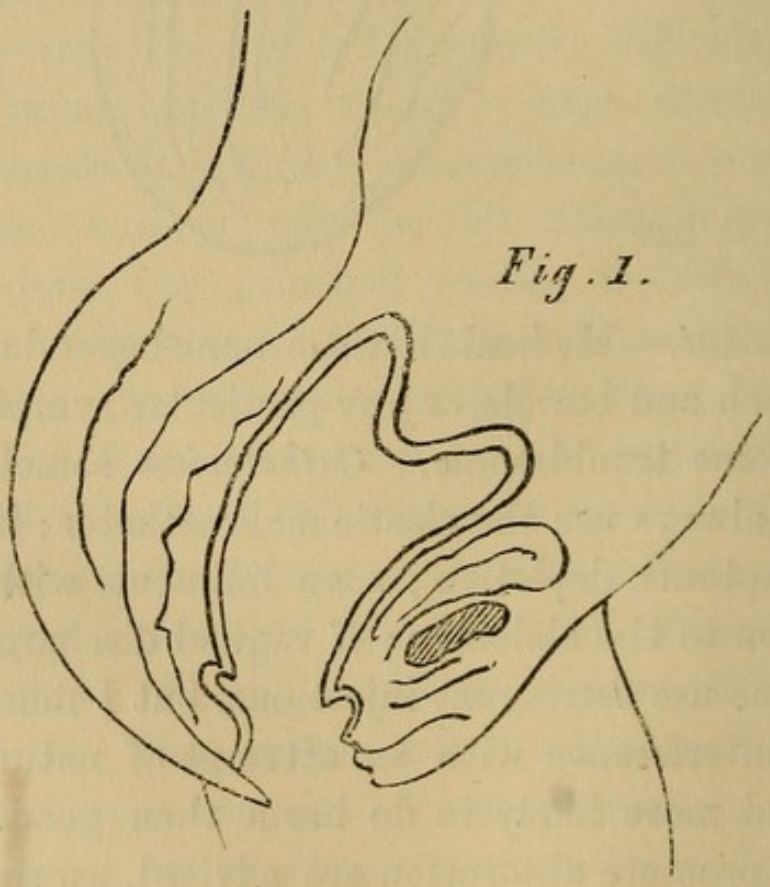


Fig. 1.

the Dublin Hospital it had not occurred in 71,000 labours. The danger is great, one-third proving fatal

either immediately or within a short time after—seldom a month. There are four varieties:

1. *Depression*—where a portion of the fundus uteri dips downwards and inwards towards the os. Any portion of the walls may do this, but the fundus is most likely. Even this partial inversion has proved fatal. (*Vide* Fig. 1, p. 256.)

2. *Introversion*—where a larger portion of the fundus has descended lower, so as to be grasped by the part of the uterus immediately above the cervix. (*Vide* Fig. 2.)

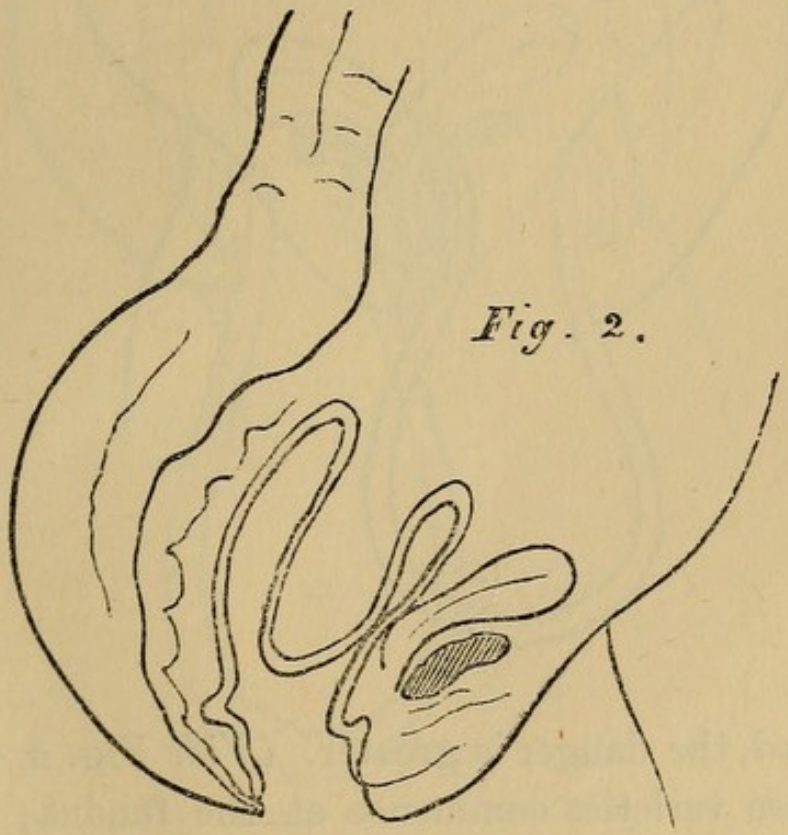


Fig. 2.

3. *Perversion*—where a portion, more or less, descends so low as to project through the os. Sometimes the whole mass passes through, as in the figure; still the os itself retains its situation. (*Vide* Fig. 3, p. 258.)

4. *Total Inversion*—where not only the whole body

of the uterus, but also the cervix, is completely inverted, but still retained within the labia. If much

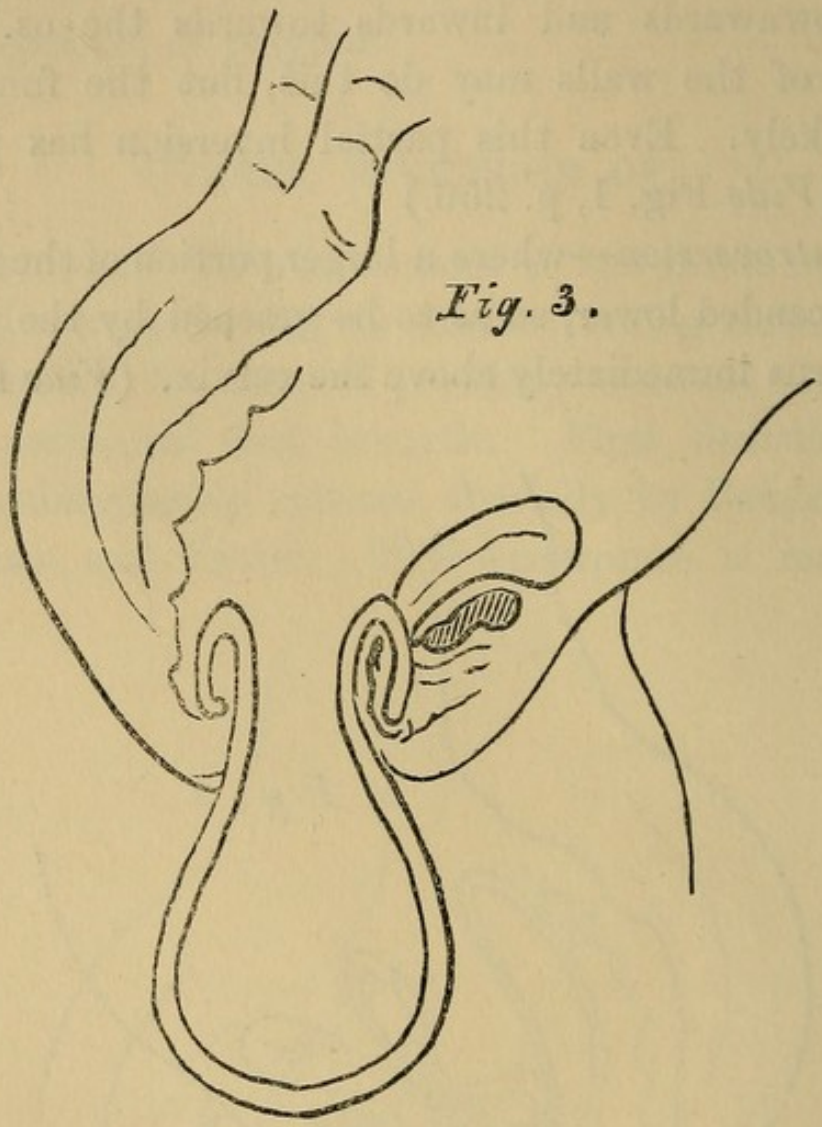


Fig. 3.

prolapsed, the danger is greater. (*Vide* Fig. 4, p. 259.) All these varieties commence at the fundus; scarcely possible to occur otherwise.

This accident mostly occurs immediately after delivery; or if it occurs some days after, it in all probability had its commencement at the time of labour. It may, however, come on gradually, from polypus.

Predisposing Causes are a delicate and relaxed fibre,

large pelvis, posture too long erect. Primiparæ subject to it. *Inertia uteri* also esteemed a cause; as also

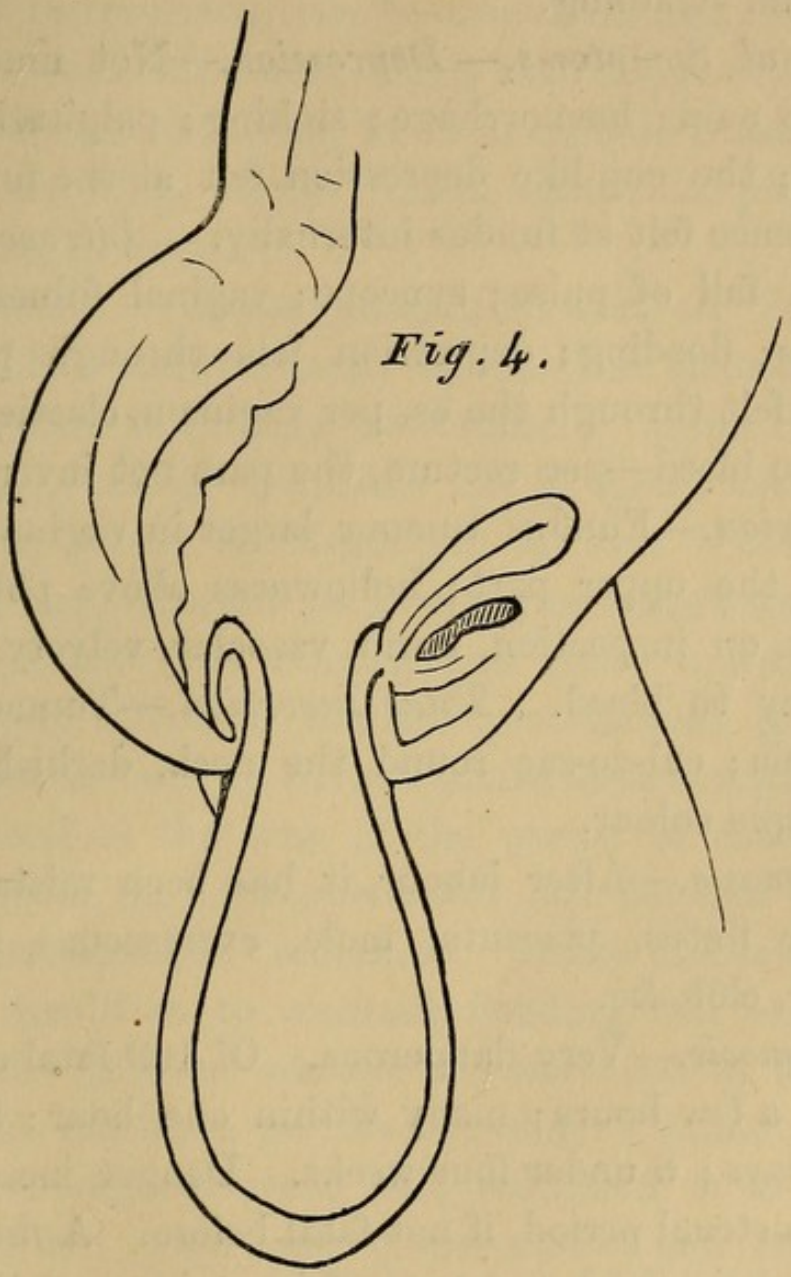


Fig. 4.

the hæmorrhage arising from inertia. Attachment of placenta to fundus, and traction of the cord under such circumstances, or a cord too short, might produce it. Rapid delivery and violent straining efforts have also been mentioned as causes.

Symptoms (*General*).—Exhaustion; sinking; pallid

countenance; rapid pulse, small, and tremulous; nausea; hæmorrhage (but sometimes absent); violent bearing down and straining.

Special Symptoms.—Depression.—Not much, perhaps no pain; hæmorrhage; sinking; palpitation over fundus; the cup-like depression felt at the fundus; a prominence felt at fundus internally. *Introversion.*—Sudden fall of pulse; syncope; vaginal fulness; pain in loins; flooding; depression felt through parietes; fundus felt through the os, per vaginam, elastic, tender, liable to bleed—per rectum, the part not inverted felt. *Perversion.*—Fundus tumour larger in vagina; cervix felt at the upper part; hollowness above pubis; the tumour, on inspection, florid, vascular, velvety, with a tendency to bleed. *Total Inversion.*—Tumour large in vagina; cul-de-sac round the neck, darkish, florid, not purple colour.

Diagnosis.—After labour, it has been mistaken for another fœtus, placenta, mole, excrescence, polypus, tumour, clot, &c.

Prognosis.—Very dangerous. Of 109 fatal cases, 72 died in a few hours; many within one hour; 8 under seven days; 6 under four weeks. Danger increased at the menstrual period, if not fatal before. A *favourable* opinion is in the less degree of inversion and the slowness of advance; *unfavourable*, if inversion is rapid. Cases occurring spontaneously, more dangerous than those by traction of funis. Death arises from nervous shock, or hæmorrhage; but if that does not occur immediately, hectic follows hæmorrhage. If not reduced early, the chances are against the recovery, though cases are re-

corded of reduction after eleven weeks, and another after sixteen months and a half. The two first stages, *depression* and *introversion*, have been spontaneously reduced; but never *total inversion*. Cases have also been recorded of spontaneous reduction in even chronic cases. Persistent inversion, sterile. After reduction, pregnancy may occur as usual.

Treatment.—(Crosse states, in his work on "Inversio-Uteri," that mal-treatment affords less chance for recovery than if entirely overlooked.) Immediate reduction, by oiling operator's hands, grasp the uterus, press it up gently but steadily in the axes of the pelvis, pressing the perinæum backwards; or make a cone with fingers, indent the fundus, and press upwards. If placenta is attached, English practitioners generally advise not to detach; French advise detachment; much will depend on the tone of the uterus; if contracting power good, its detachment will not increase hæmorrhage, and facilitates reduction. If the uterus is not in a good condition to contract, flooding will be greatly increased. Dewees advises, in *introversion*, to draw down the uterus to *perversion*, which I cannot advise. However long inverted, still reduction is to be attempted, but great care is necessary; and before attempting, the rectum and bladder to be emptied, and chloroform given. If reduction is not successful, bandages and palliatives. Last resource, extirpation, by knife or ligature.

Statistics.—In 34 cases of extirpation by ligature, 19 successful, 5 failed, of which 3 died; by knife, 1 successful, 2 fatal; by both operations combined, 5 successful, to 1 unsuccessful.

UTERUS, RUPTURE OF.

This very serious and often fatal accident may possibly occur (though very rarely) in the latter months of gestation, and previous to labour; its usual occurrence is at the time of labour, and is supposed to take place about once in 657 cases, and observed mostly in multiparæ; the primiparæ are, however, not exempt, but less in proportion; it is mostly associated with male fœtuses and poverty. If rupture does occur, it is often in the earlier part of labour, comparatively few cases occurring after long protracted cases; in all cases of rupture the mortality is very heavy.

Causes.—Those occurring *during the gestative period* may arise from a fœtus being placed interstitially, that is, in the coats of the uterus itself, by a softening of its structure, abscess, injury from blows, fatty degeneration; it has also occurred during sleep, without any known cause.

During Labour.—It is most usual from contracted pelvis. In 79 cases, 68 were found to be contracted in the pelvis; results of inflammation on the uterus by thinning, or softening its structure, or gangrene; large fœtal head, oblique presentation, transverse presentation of the trunk; obliquity and retroversion of the uterus; previous to Cæsarian operation; polypus; to energetic uterine action; after strong stimulants—ergot, &c.; if the latter be the cause, it will be soon after it is given; violence—as blows, falls, forcible delivery, injudicious version, rigidity of the os; violent extraction of placenta; improper use of forceps; excess of liq. amnii;

plurality of births; mental emotions. *Arneth* states hypertrophy of the fundus. In a case to which I was called to give an opinion of the cause after death, and where the attendant was supposed to have given ergot injudiciously, the truth was, the dose of ergot was too small to be effective, and the effect had gone off some hours before the rupture, and another practitioner had given two grains of opium, which acted more as a stimulant than sedative. The *post-mortem* clearly proved neither of the medicines the cause; there had been long-standing disease of the uterus, and softening of its structures; an emaciated system; in addition to which, the linea ileo-pectinea was acutely sharp at its edge, and a sharp-pointed process directed inwards from the posterior junction of the symphysis pubis superiorly: these being opposed to the action of a morbidly-softened structure, were amply sufficient to account for the accident.

Seat usually at the junction of the cervix with the vagina, and generally that part of the cervix opposite the pubis, or directly opposite the sacrum. Also frequently at the sides; through the fundus; mostly in an oblique or transverse direction; sometimes accompanied with rupture of vagina.

Of 128 cases—from cervix to fundus, 15; anterior, 14; left side, 7; body, 2; transverse, 7; fundus, 10; posterior, 13; right side, 8; vagina, 2; involving bladder, 2; cervix involving vagina, 47. Sometimes the laceration is complete; at others the peritoneal coat is uninjured; at others, the peritoneal surface suffers alone.

Pathology.—Uterus thin; hypertrophy partial or

general; softening of structure; appears pulpy; deep red colour; offensive smell; blood effused in the abdomen; peritonitic signs; evidence of laceration or fissures.

Of 303 cases, 16 were shoulder presentations; 2 were breech; the rest head, or not stated.

Symptoms, not regular; seldom occurs before rupture of the membranes; a pain like cramp seizing some part of the uterus, suspicious; violent uterine action: pain intolerably acute; feeling of bursting or tearing, accompanied by noise, followed by cessation of uterine action; pallid countenance; anxiety and alarm; cold clammy sweats; lips blue; face cold; retching and vomiting of frothy mucus, or coffee-coloured fluid; laborious respiration; thin, rapid pulse; inability to lie; faintness; convulsions; hæmorrhage; recession of presenting part; outline or character of the abdomen altered; uterus gathered as a ball in one iliac; child distinct from it, and plainly felt through the parietes; if not immediately fatal from collapse, peritonitis ensues; if the peritoneal coat only is lacerated, labour may go on; it has happened that the last pains have ruptured the uterus and expelled the fœtus.

Diagnosis.—The recession of presenting part the great distinction, which is never absent unless the head is impacted in the pelvis when the rupture occurs; the peculiar feel of distinctness through the parietes; continued fœtal pulsation is in favour of rupture not having taken place, as the fœtus usually dies immediately; pains suddenly ceasing after activity, though conclusive *with* other symptoms, must not be taken alone; occasionally the signs of rupture come on gradually, and

neither stomach, pulse, nor breathing are greatly interfered with; hæmorrhage no proof.

Prognosis extremely dangerous; slight ruptures do not lessen the danger much; if the peritonæum escapes, peritonitis may also be absent; if metritis accompany rupture, the danger is increased; the situation of the laceration alters the danger but little; the child may live for ten or fifteen minutes after the death of the mother.

Terminations.—Fatally, by hæmorrhage; peritonitis; intestinal strangulation through the rent; psoas abscess. *Favourably:* fœtus becoming encysted, where it may remain for many years, and other pregnancies occur in the interim; *débris* of fœtus discharged through parietes, or per vagina, or anus.

Treatment.—Speedy delivery if rupture is feared; pains, if possible, moderated; chloroform; opium; bleeding; forceps; if child is dead, perforate.

If rupture has taken place, and head in pelvis, deliver by forceps if the head does not recede, or by perforator, being careful in the application of both instruments to avoid pushing the head upwards. In extracting placenta, extend the funis rather than introduce the hand. It is advisable not to meddle with intestines, with the view of replacing them.

If child is in abdomen, gastrotomy is preferable to version, or to leaving the case to nature.

In 118 cases, Gastrotomy saved 16 out of 23.
„ Version „ 19 „ 30.
„ Left to nature „ 12 „ 34.

Those females who die after being delivered, usually

linger a little longer than those who die undelivered. In gastrotomy the advantage is, the child is easily and quickly removed, more so than by any other means, and with less disturbance of the lacerated parts. The intestines can be guarded against strangulation; the effused blood will have an outlet, or can be removed. In many respects it is preferable to version, though the latter is usually followed. If great depression, opium, ether, ammonia, brandy; no operation to be performed whilst depression is present. When reaction occurs, then operate. If peritonitis arises, large doses of opium, blisters, and poultices. Lastly, be guarded not to promise too much.

VAGINAL HYSTEROTOMY.

This operation, which is an incision into the uterus itself through the vaginal walls, and has been proposed in cases where the closure of the os uteri has occurred after impregnation, being the result of previous inflammation. If it is ever necessary to perform this operation, two points must not be lost sight of—first, to avoid wounding the bladder in front, and the rectum behind.

VAGINAL OCCLUSION.

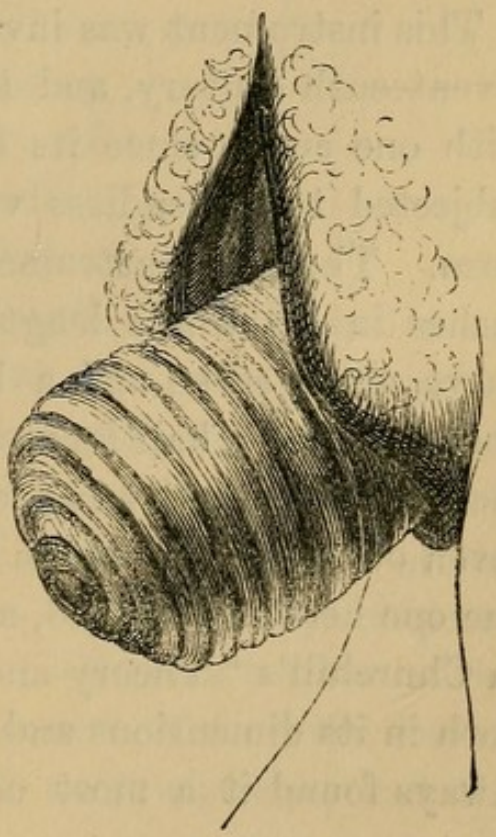
This may arise from malformation, or be the result of inflammation after severe labour. Discovered, from symptoms of menstruation without flow; vaginal fulness felt per rectum, and over pubis, with fluctuation; in young females, by imperforate hymen. Such a case,

if not relieved, might terminate in rupture of the uterus, or general health seriously disturbed, and often ending fatally.

Operation.—Introduce one finger into the rectum, and a catheter into bladder, as guides, to prevent either from being injured. The parts must now be divided carefully, by scalpel, in the median line, which is often pretty well indicated. Wash out the vagina with tepid fluids, and prevent its re-closure by pledgets covered with spermaceti ointment. Requires close attention, and frequent use of bougie or cylindrical speculum. It is seldom occluded far beyond the outlet; if it is, the case will be unsatisfactory to manage; and if accompanied by an imperfect development of the uterus, the case is irremediable, and therefore better let alone.

VAGINA, PROLAPSE OF.

Dr. Meigs, in his "Obstetrics," gives a curious case of prolapse of the vagina when in the eighth month of pregnancy, the subject of this sketch. The protruded part was five inches in length, and in circumference almost equal to a man's arm; and covered with a dry epithelium, and rugous. At the central point it

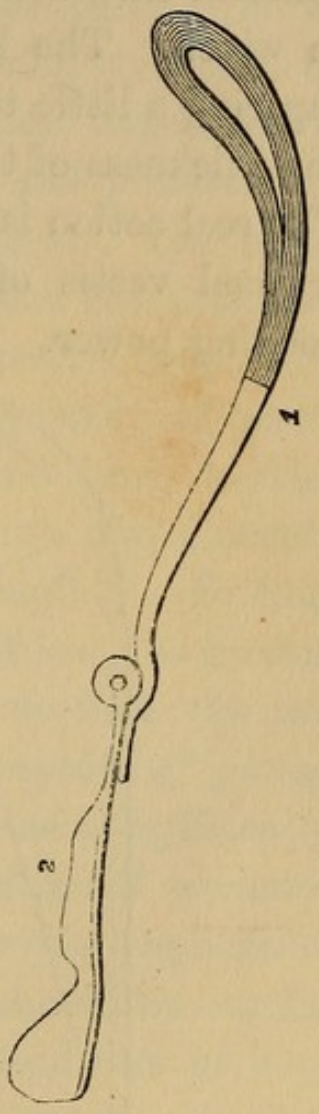


was indented, and by passing the finger forward in this indented part the gravid os was felt. The whole mass was passed back into the pelvis, and retained by pessary; but the female would not wear it; it was consequently down at the time of labour commencing, but when the pains set in the whole retired, and she was safely delivered. Replacement and rest, rigidly attended to, in the horizontal position, will usually be sufficient. I have seen two or three bad cases, which ultimately did well; but none so extreme as the representation above. Tannin injections have been found useful. M'Clintock, of Dublin, reported a case of prolapse of the vagina, in an infant four days old, in the "British Record of Obstetric Medicine," &c., vol. i. page 313.

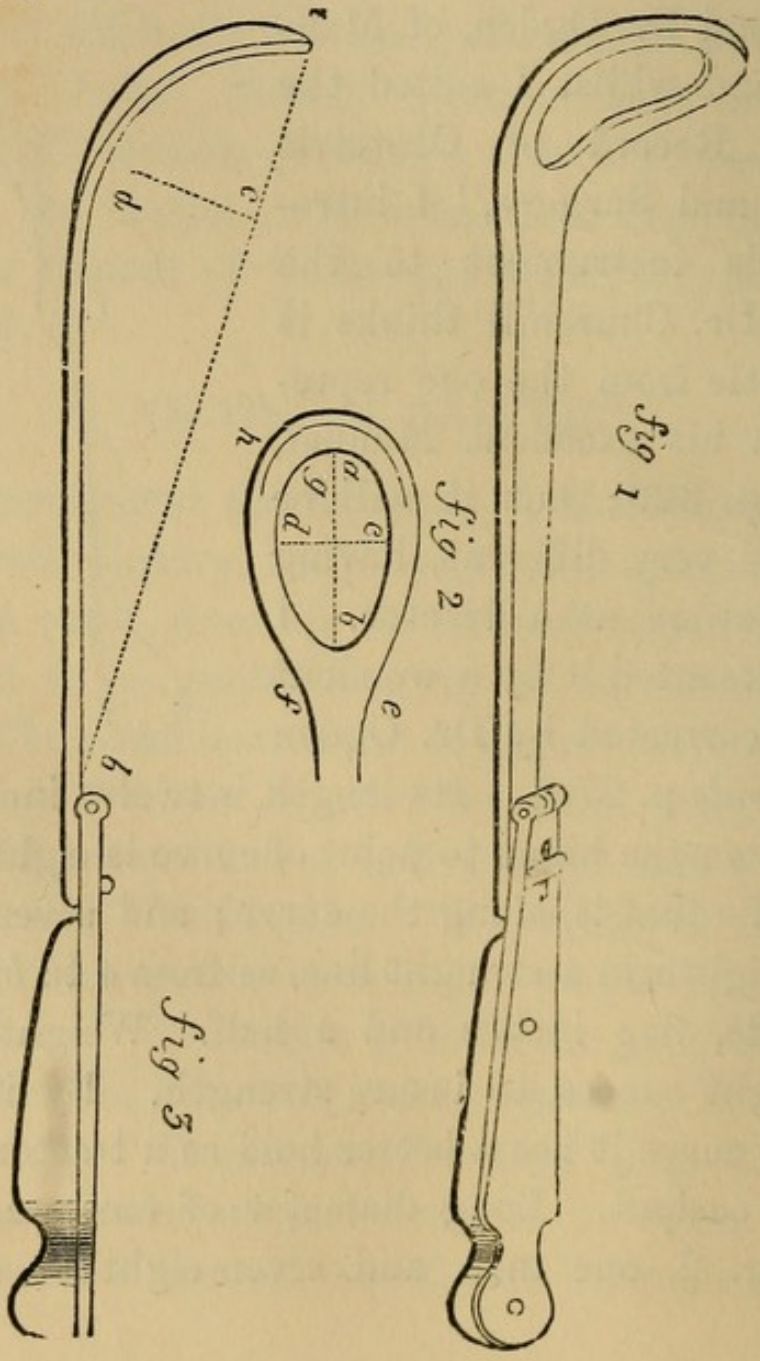
VECTIS (OR TRACTOR).

This instrument was invented by Roonhuysen in the seventeenth century, and though a simple instrument with one curve, since its first introduction it has been subjected to an endless variety of alterations in its form. The usual instrument is about twelve and a half inches in its whole length: the shank part, without curve, about seven and a half inches; and the curve, about six and a half inches. The width is about one inch and three-quarters; and its weight from six to seven ounces. The vectis I am in the habit of using is the one here represented, and is extremely like the one in Churchill's "Theory and Practice," Fig. 72, p. 320, both in its dimensions and sweep of its curve. I have always found it a most useful and convenient instru-

ment, when legitimately applied—*that is*, more as a tractor than *a true lever;* the latter mode of exertion making a fulcrum of the pelvis, should never be countenanced. The only mode justifiable as a true lever is when the fulcrum is made of the left hand. Of late years I have become acquainted with the use of the tractor vectis of my friend Dr. Ogden, of Manchester, and whilst I edited the "British Record of Obstetric Medicine and Surgery," I introduced this instrument to the public. Dr. Churchill thinks it differs little from the one represented in his excellent Manual, Fig. 72, p. 320; but it will be seen to be very different, having greater powers as a tractor. I have represented it by a woodcut carefully corrected by Dr. Ogden himself (*vide* p. 270). Its length is twelve inches and a half; from the hinge to point of curve is eight inches and a half—that is, along the curve; and seven inches and one-eighth in a straight line, as from *a* to *b*, Fig. 3; the handle, five inches and a half. Weight of the whole, eight ounces, to insure strength. By its peculiarity of curve it has a better hold as a tractor on the chin and occiput. Long diameter of fenestra, from *a* to *b*, Fig. 2, one inch and seven-eighths; and the



transverse, from *c* to *d*, one inch and one-eighth. The dorsal surface, convex. The rim round the fenestra of uniform thickness, and about three-eighths of an inch in width. The blade at *e f*, Fig. 2, about an inch, tapering a little to the hinge, where it is half an inch; the thickness of the blade, three-sixteenths of an inch. The real action is more as a hook than a tractor, the original vectis of Roonhuysen having no tractile or hooking power.

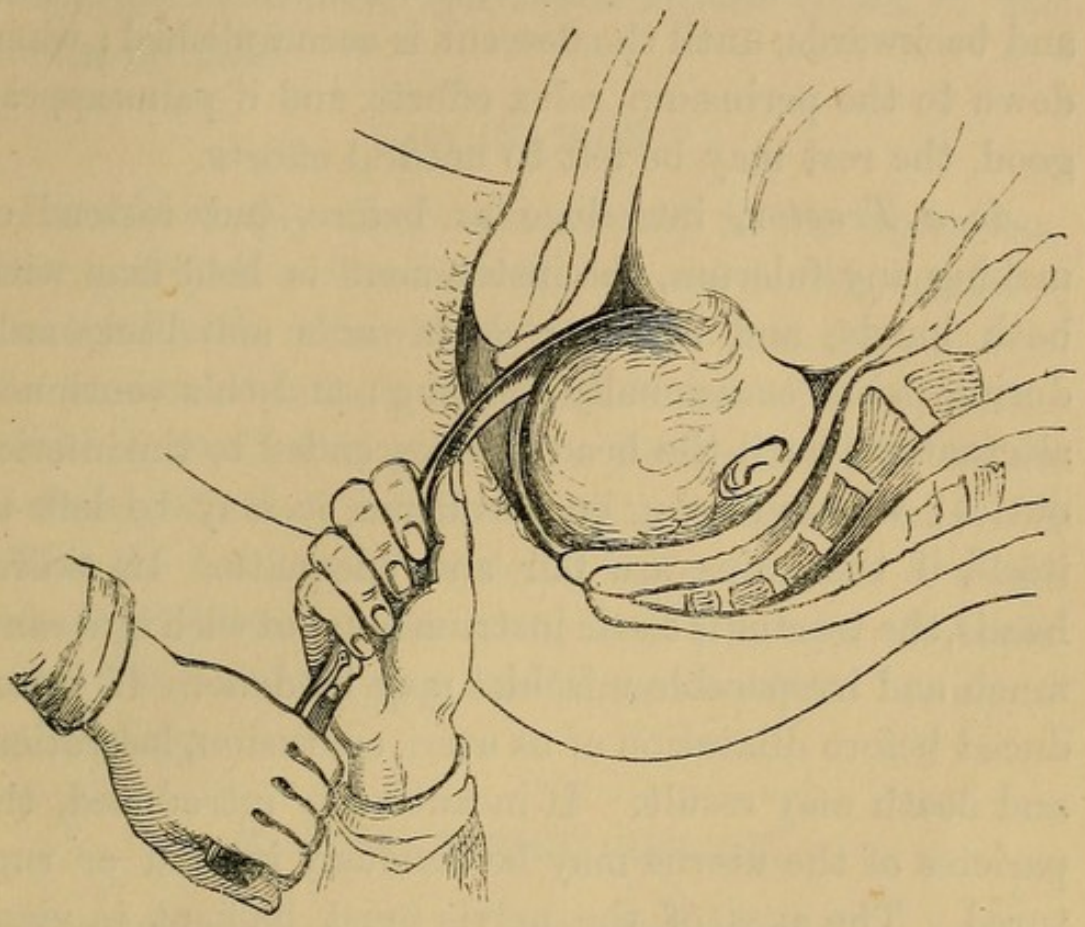


Use of the Tractor.—To rectify mal-position of the head before entering the upper outlet. Was formerly used when the head was impacted in the pelvis. It is of no use in such a case; but if only slightly tight, it may be of service. Two conditions are imperatively necessary to the use of the tractor—*the presence of labour pain*, and the dilatation of the os. The most legitimate use of this instrument is when the head has descended into the pelvis, and is arrested there, not from absence of pain, but from inefficiency of pain. This condition may continue for some time, to the injury of the patient, if not aided; even a slight assistance may often terminate these cases happily. In convulsions, if pains continue, and the head low, the tractor is useful. It requires some judgment to time the use of the tractor, *whilst the female is capable of giving some assistance by pain, and when the head is sufficiently low, arrested in progress, but not obstructed mechanically.* The lower the head, the easier the application of the instrument; and the operator should be careful that a swelling of the scalp does not lead him to suppose the head lower than it really is; urgency of symptoms must have considerable influence in determining its use. It is to be feared, from the ease of application, that the use of the tractor is far too frequent. Bruyn used it successfully 800 times in forty-two years; and Titsing, 262 times in twenty-four years. It would be impossible to draw a fair comparison between the forceps and tractor; the advocates of each have generally written with too much prejudice against the other. The whole may be summed up thus: *Where the pains have*

ceased, and some compression is required to extricate, the tractor is useless. But where there is just room, and pains persist, though not strong, the tractor is eminently useful, and more particularly as one blade only has to be introduced, it adds nothing of moment to the bulk of the child's head. That the tractor may be used in secret, without the patient or attendant being aware, has been differently estimated, some arguing the advantage, others the disadvantage, of such secrecy. I must in every way condemn the unnecessary use of any instrument, however easy of application; whilst, on the other hand, there are some individuals so nervous, irritable, and timid, but whose case would be benefited by the slightest aid: in such cases I see no harm in a little *finesse* to carry out an object for the advantage of the patient; but let it always be borne in mind, *never use an instrument to shorten time as a matter of convenience to the operator alone.*

Application.—Admitted the case is a proper one, and the time arrived, *as a lever* apply it over the occiput, or behind the ear, as the two best places; the next best is on the mastoid process and on the chin. The two first will be the best when the head is high; but when very low, the chin; the left hand to be the fulcrum, *never the parts of the mother, hard or soft*, as the injury may be incalculable. Warm the blade, and grease or soap it, and place the female in the usual position on her left side; conduct the blade, by two fingers of the left hand, to the part for purchase, then hold the handle firm with right hand, whilst the two fingers of the left, a little above the hinge, form the fulcrum. The instru-

ment is then made to move on this fulcrum, from the sacro-iliac symphysis towards the hollow of the ilium,



by the action of the right hand. By this means it glides on to the occiput. If the occiput point to the ilium, the left hand must be employed; but if to the left ilium, the right hand must be used. Then during a pain, hook down in the axis of the pelvis, which depresses the occiput, forces the chin on the chest, and the head thus reduced passes through; but when there is pressure on the perinæum, withdraw the instrument, and replace it, with caution, over the face of the child; guided by the fingers, fix the tractor on the chin, and then, during a pain, draw downwards, using more or less force according to the resistance. There is another

mode: make the fulcrum of the right hand, grasping the handle, and apply force by the left hand at the junction of the blade and handle, directing it downwards and backwards, until the descent is accomplished; when down to the perinæum, relax efforts, and if pains appear good, the rest may be left to natural efforts.

As a Tractor, introduce as before, but instead of making any fulcrum, the instrument is held firm with both hands, and drawing downwards and backwards during pains, occasionally relaxing; and this continued alternately, until the head has descended to the inferior outlet; when pressing on perinæum, it may be left to itself, if the pains are fair and adequate. In skilful hands, the tractor is a safe instrument; but with ignorant, much and irreparable mischief may be done. If introduced before dilatation of os uteri, contusion, laceration, and death may result. If incautiously introduced, the parietes of the uterus may be seriously injured or ruptured. The axes of the pelvis must be kept in view, otherwise the instrument will be ineffective, and the mother injured. Care must be taken not to pass the blade outside the os uteri, or a fatal wound of the uterus may be the result. The power of the instrument never to be exerted, except when pains are present. Never make the parts of the mother a fulcrum. Relax traction when the head is on the perinæum, or laceration of the perinæum will be the consequence, which may extend to the anus. Endeavour to prevent the pressure of the instrument acting too much on the point, lest a wound be made on the child's head.

Subsequent Treatment.—The same as for ordinary

severe labour. There seldom occurs any shock or injury, if the operator is equal to the task. If any lacerations or bruises, spirituous lotions either to the mother or child.

VACCINATION.

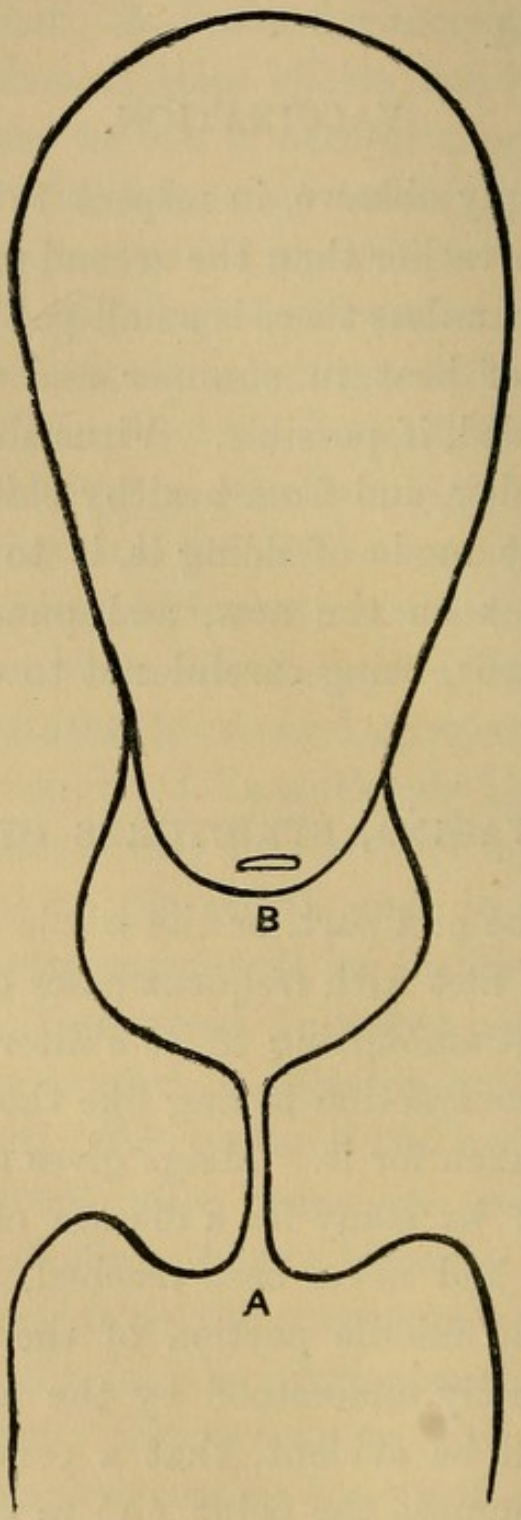
I would simply observe, in respect to this operation, never vaccinate earlier than the second month, nor later than the fourth, unless there is small-pox in the vicinity. The extreme of heat in summer and cold in winter should be avoided, if possible. Virus should be taken on the eighth day, and from healthy children only. I believe the best mode of doing it, is to place a small globule of virus on the arm, and puncture the skin through the virus, being careful not to draw blood, or but slightly.

VAGINA, STRICTURES OF.

These may be of a part, or the whole canal. I have in my practice met with frequent cases of extreme contraction, almost amounting to its obliteration; in some instances the contraction feeling like the os uteri, and might be mistaken for it. Meigs gives a case that had been diagnosed by many for a disease of the os, when in fact the os had never been reached, the case being stricture of the middle portion of the vaginal canal, and will be easily understood by the sketch, p. 276, in which it will be evident, that a person not experienced might suppose the point (A) to the touch to be the os, whereas that object is beyond the stricture, at (B).

I had a case some years ago, where marital connexion

was impossible; but by patient dilatation with gradually enlarged size of bougies, the female subsequently became



not only capable of intercourse, but the mother of six children, and had no difficulty during her labours.

Treatment will be understood by this case: slow dilatation, beginning with small bougies, of rather cone-shape, and gradually increasing the size, using unctuous matters freely, and taking especial care not to excite inflammation, by too frequently-repeated, or too violent, efforts, *time and patience* being the operator's motto.

VERSION.

Version, or turning, an operation which has for its object the substitution of another presentation for the one existing, already deemed unfavourable.

Its Advantages are, enabling the accoucheur to control the labour. It is not so safe as natural or breech presentations, but safer than others; is sometimes the only alternative of evisceration, and in many cases affords a great probability of saving the mother's life.

Its Disadvantages are, that all introductions of the hand enhance the danger of the mother. The mortality is about one child in three; and lastly, the difficulty in some cases of effecting it.

Applicability.—In irregular presentations; in placenta prævia; in many cases of ruptured uterus; in convulsions; in prolapsed funis; in hæmorrhage; in great debility; syncope, or danger of suffocation; and lastly, as Professor Simpson has proposed, in slightly deformed pelves.

Statistics.—English practice, in 43,798 cases, there were 184 cases of version. French, 40,376 cases, 451 of version. German, 89,673 cases, 920 of version. Or a total of 173,847 cases, of which 1555 were version,

or about 1 in 112. *As regards the mortality to the mother*, 419 show that 29 mothers died, or 1 in 14½. *Mortality to the child*, 792 cases, 294 children died, or about 1 in 3. The object of version, then, is—1st. To place the head in a better position for passing through the pelvis, or to substitute the head for some other presentation. 2nd. To substitute the feet for some other less favourable part. And 3rd. To hasten the termination of labour in consequence of the existence of other forms of complicated labour. In cases of sudden death it is also proposed to turn and deliver instantly in preference to Cæsarian section.

With regard to the 1*st Division, or Version by the Head*, which consists in removing parts presenting at the upper outlet, to induce the head to descend, or in seizing the head and bringing it to the brim, or in altering the position of a presenting head, to enable it to pass with greater facility. These modes of assistance have been variously estimated by different authors. It is objected to attempt to seize the head as difficult to get firm hold and bring it to the brim; and when even that is done, the case must be left to nature to finish. Velpeau, however, answers these questions thus. It is not difficult to seize the head, and exert considerable force upon it. If the waters have not been long away, the vertex can easily be seized and brought to the centre of the brim, however far distant; it is better to push up or aside the presenting part to make room for the head, than to bring down the head. Lastly, the breech delivery is neither so safe nor simple as supposed, and is less safe to the child than head version. *Still, head*

version is only strictly applicable where the pelvis is of good size, and the head in a mal-position; or where there is presentation of neck or shoulder, and in a few arm cases, the uterus not strongly contracting, and the waters yet *in situ*. But certainly it is not applicable where there is necessity for prompt delivery. *Advantages of head version* are the facility of reaching the head, and saving the infant's life.

Podalic Version, or turning by the feet, has some very important *Advantages*, and these are—

1st. Complete control of labour.

2nd. Next to natural labour in safety and results.

3rd. In some cases the only chance of saving child's life, or of avoiding evisceration.

4th. In some cases, when other means are hopeless, it offers the best chance for the mother's life.

Its Disadvantages are—

1st. The risk to the mother by introduction of hand.

2nd. The great mortality to the children.

It is applicable in all mal-presentations of upper extremities or trunk; and when head version fails, seek the feet. In placenta prævia; in ruptured uterus; convulsions; prolapsed funis; and lastly, as a substitute for craniotomy in slight distortions or contractions of the pelvis, as proposed by Professor Simpson. In such cases the mortality to the child will of course be great, but that is preferable to the destruction of the whole by craniotomy, as it is possible *some* may be saved. The danger to the mother cannot be increased, except from errors arising from miscalculation of size of head or pelvis; but in estimating the merits of an operation, it

is to be supposed as efficiently performed. Dr. Churchill fears the results of contusion in dragging the child through a narrow pelvis, but candidly admits the statistical numbers of these cases are not sufficient to judge from; and yet he prejudges, and objects to Dr. Simpson's plan, as well as Dr. Radford's. I do not think the proposition ought to be so summarily condemned; more evidence is wanting to form a proper estimation of its worth. I have no doubt of its success in skilful hands, and in others *what operation is safe?* It may also be stated, the opponents to this mode are as yet but very few. The most formidable objection is, that (by some error of calculation as to dimensions, the operation may fail) thus the female is made subject to a severer operation to remedy the error, thus really submitting to two operations, both serious ones, and increasing the chances of danger; but it is not more likely to commit an error of calculation on this point than on many other points of obstetrics.

Most suitable period for Version.—If cephalic version is called for, it should be before the head is engaged in the upper strait; *that is*, as soon as the mal-position is known to require such aid, and when uterine efforts fail to right the position. If pains are energetic, and the female a multiparæ, the aid ought to be very prompt.

If an *arm* presentation and *podalic version required*, supposing the membranes entire, and the os not dilated, wait for a time, but on no account leave the patient; for if the membranes rupture, the accoucheur ought to be there to take advantage of it. If the membranes are entire, and the os soft and dilatable, the operation

need not be delayed, as the great advantage is to operate whilst the uterus is distended with the waters, enabling the child to be moved with greater facility. Sometimes the character of the os is changed by the discharge of the waters, so as to favour immediate attempts. There are, however, *arm cases*, where the waters have long been discharged, and the uterus closely embracing the fœtus, which is forced down in the pelvis; the parts of the mother dry, hot, and tender, if not inflamed and tumefied; the female perhaps already harassed with attempts to deliver. In such a case, to introduce the hand would rupture the uterus; therefore defer assistance for a time, bleed to sixteen or eighteen ounces, and give two, or two and a half grains of soft crude opium; or, according to Collins—

℞ Aquæ fontis, ℥vj.
Antim. tart., grs. iv.
Acet. opii, gtts. xl. Mix.
f℥ss every half hour.

After some little time (to be varied in length according to circumstances), the uterus may be in a favourable condition for active operations. If the case be *placenta prævia*, or *accidental hæmorrhage*, the os will often be in a favourable condition to operate, and in these cases no time is to be lost; sooner the better. The same rule applies to convulsions, prolapsed funis, and ruptured uterus.

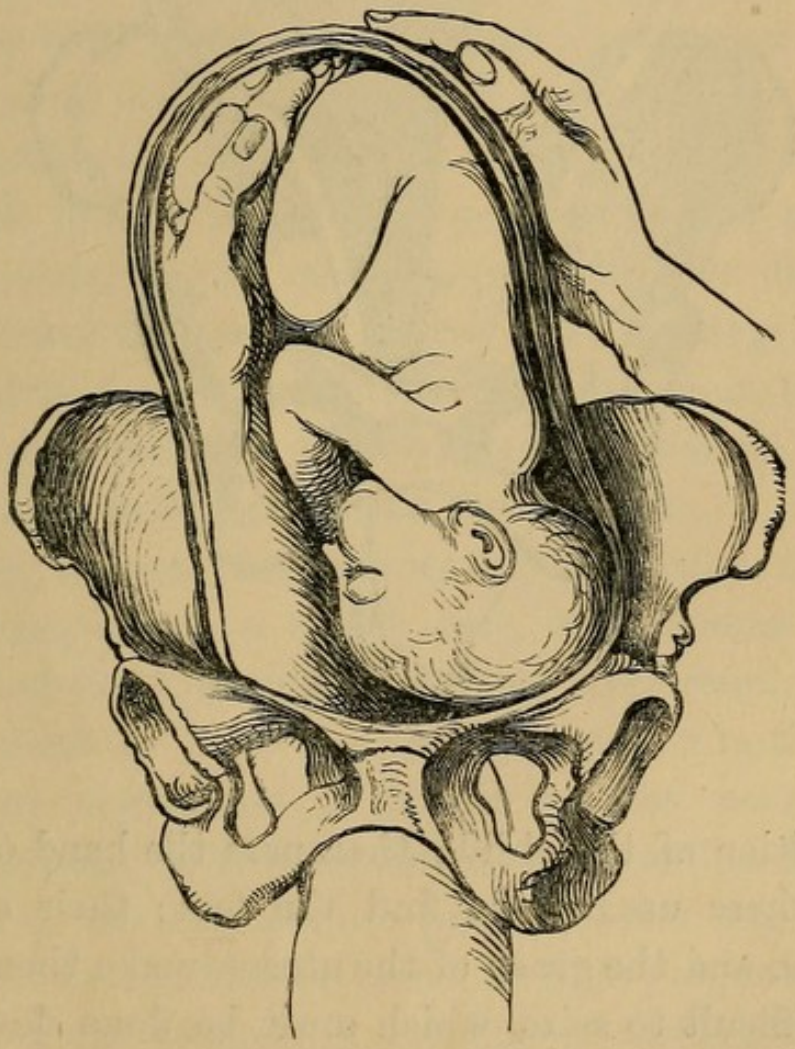
Mode of Version.—Cephalic.—Empty bladder and rectum; best position, on her left side; oil the hand and arm; introduce gently; bear in mind the axes;

when at the os, form a cone with the fingers; insinuate the hand by degrees into the uterus, and always in the absence of pain; rest whilst the pain is on; when fairly in the womb, grasp the head, and place it in one of the oblique diameters of the brim, with the posterior fontanelle next to one of the acetabula. If to change the presentation—viz., for a shoulder, the latter must be pushed up first, and then the head seized as before. The case may then be left to nature; but if unable to complete the process, the forceps must be put in use.

Wigand states it possible to change the head-position by external abdominal manipulations; others have confirmed his views. Martin, of Jena, relates 34 cases of turning by external manipulation. To accomplish this it is necessary that—1st, Immediate delivery is not called for; 2nd, Great mobility of the child; 3rd, Absence of irritability in the uterus and abdominal parietes; 4th, Capacious pelvis; 5th, Active pains; 6th, The child must be living. *Mode of Operating.*—Whilst the os is not dilated and pains irregular, the patient is kept on the side upon which the part to be removed is placed; when the os is dilated, and the waters about to discharge, empty bladder and rectum; then placed on her back, hips raised. With one hand warmed, a continuous pressure downward on the part of the fœtus nearest the os, whilst the rest of the body is pressed upwards. These manipulations to commence immediately after the cessation of a pain, and continue to the commencement of the next; but whilst the pain is full on, support the uterus equally on all sides. These manipulations to be repeated as often as necessary.

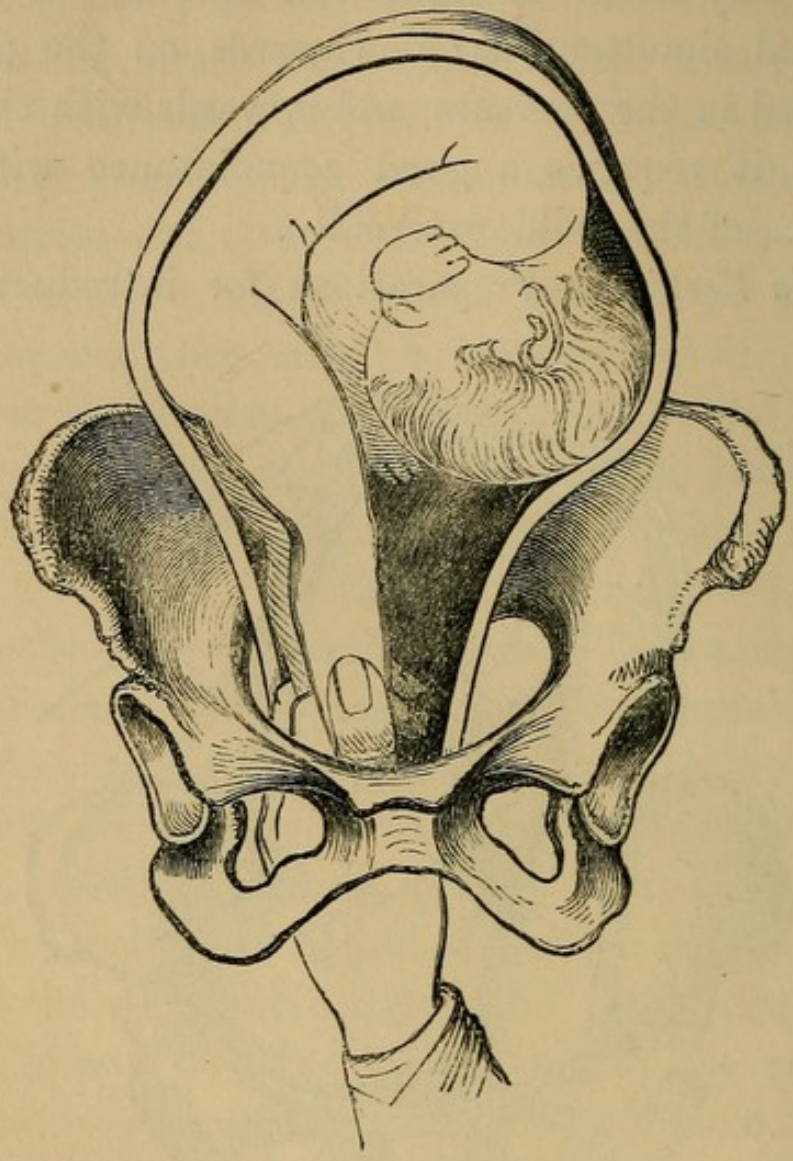
When the head or breech is fairly within the os, the membranes may be ruptured to secure the position. Pressure may either be diffused or special, but always double and simultaneous: downwards on the part to be engaged in the aperture, and upwards with the rest. After all, it requires a good acquaintance with the limbs, &c., of the child, externally.

Podalic Version.—Preparations for introduction of



the hand the same. The hand and arm of the infant will be our guide: if the arm presents, never put it back —never amputate; the limb is no hindrance to version,

and will therefore rectify itself as the version proceeds. When the hand is in utero, first accurately ascertain



the position of the child; then pass the hand over the belly, where usually we find the feet: their distance upwards, and the grasp of the uterus, make them somewhat difficult to seize, which must be done slowly and steadily, not rashly, resting now and then. When pains are present, let the hand lie flat on the child, not only to prevent cramping the hand, and rendering it unfit for exertion afterwards, but to avoid rupturing

the uterus. Being quite certain that a hold is got of one or both feet, they must be held firmly, and drawn steadily towards the pelvis in a zig-zag manner. The waters will probably now discharge, therefore it is necessary to wait a short time for the uterus to contract on the child when the pain is resumed. The operation consists of drawing the feet downwards towards the outlet. Always act, in version, during the interval of pain, and always bring down the feet over the belly, *never over the back;* as the feet descend, the original presenting arm *will ascend.*

In extraction of the child during a pain, let it be gradual; and be mindful its position in the pelvis, as it descends, is in accordance with the diameters. Never leave the case to nature after turning, as some have advised; if it is right to turn, it cannot be wrong to complete delivery. After the feet are down, the case must be treated as the usual footling case.

Some writers have advocated, in version, to prefer converting it into a breech case, in preference to footling; but the difficulty of seizing the breech, and the less control we have over it when placed in that position, are arguments in favour of the usual mode. Another plan, by hooking down, the knees flexed, instead of seeking the feet, is more plausible, and ought to be done, unless the foot is come at first. Another great improvement consists in turning on finding one foot, instead of seeking (at the expense of time) for the other foot. This plan has been ably advocated by different writers, particularly by Dr. Radford, of Manchester, on the ground that the breech, with one thigh

only turned upwards, is less in diameter and circumference than the usual breech descent, and even a shade less than the usual measurements of the head. Dr. Radford's experience shows—"*the child's life is much more frequently preserved than where the feet come down first.*" Then, as a rule, *never bring down more than one foot;* in other words, prefer converting into a species of breech-presentation than to a common footling case, the former being safer to the child, equally safe to the mother, and the manipulation far easier.

Circumference of head	. . . . .	.	12 to 13¼ in.
Ditto	„ breech, usual.	. . .	12 to 13½ in.
Ditto	„ ditto, with one thigh up		11 to 12½ in.
Ditto	„ hips, with extended feet		10 to 11½ in.

It is argued that the breech with one thigh up being the next least measurement, it will form a better preparatory step to the after-delivery of the head. The rule of Professor Simpson should always be borne in mind—viz., *If the right arm present, bring down the left knee, and if the left arm present, bring down the right knee.*

The difficulties of version arise from action of the uterus; whilst quiescent, the operation is comparatively easy; and the more energetic and violent its action, the more difficult the operation.

Danger of Version to the Mother.—1st. Not observing the axes of the pelvis, and thereby injuring the vaginal walls. 2nd. In searching for the feet, the hand might penetrate the uterine coats. 3rd. Inner surface of the uterus may be bruised by the hand or

points formed by the limbs of the fœtus. 4th. Rupturing of the cervix, from too great force being used. 5th. Subsequent inflammation, and its consequences. 6th. From shock to the nervous system. It is evident these dangers may be considerably lessened by careful practice.

Danger to the Child.—1st. Compression of the funis, which generally occurs or commences when the breech is at the os externum, unless it is fortunately situated at the junction of the sacrum with the ilium; the rule is to save time by expediting delivery when the breech is at the vulva, and far better than attempting artificial respiration, as recommended by some. 2nd. Dislocation of spine or hips, from too much force; it is said the leg has been pulled off. 3rd. Compression of the head.

After Treatment.—An opiate pill I have always found to be the best; some give calomel and opium; others, calomel and Dover's powder. A good look-out is necessary for the first symptoms of inflammatory action, and if it arises, is to be met promptly; care must, however, be exercised in estimating the constitutional powers of the patient, as well as the violence or mildness of the attack. The lochial discharge must be inquired after; sometimes it will be necessary to inject warm water into the vagina. The patient must not be troubled with company, but kept free from every species of excitement, enjoining rest, and perfect quiet. In such cases it will be desirable not to tease the female by applying the infant for thirty or forty hours.

VULVA, ERYSIPELAS OF,

By some authors called inflammation of the mucous membrane of the vulva, but which, in my opinion, partakes more of the erysipelatous than any other kind of inflammation. Children from five to ten years of age most liable, and in whom the progress is rapid, and often of a most serious character, not unfrequently ending in gangrene, but generally in resolution or ulceration. In adults its attacks are more circumscribed, mostly ending in resolution, seldom in ulceration, but scarcely ever in gangrene.

Symptoms.—Uneasiness; itching; urine, scalding; mucous membrane much inflamed; increased by efforts to relieve by rubbing; after some time, a whitish-yellow acrid discharge, with excoriation; mucous membrane very vascular, and of deep red colour; not much constitutional disturbance; most symptoms increase in violence as the case progresses. My respected teacher, Kinder Wood, Esq., in the "Medico-Chirurgical Transactions," vol. vii. p. 84, published an interesting account of a number of these cases, many of which soon terminated fatally, in fact, assumed the character of an epidemic, which in debilitated constitutions frequently succumbed to the attack.

Treatment.—In the mild form, frequent warm-water washings; after which apply the black wash, or a weak saturnine solution; when in a chronic state, lotions of sulphate of zinc, or nitrate of silver: and if vaginal canal affected, syringe it with the lotions; quiet; avoid rubbing; diet mild; no stimulating drink or food; ape-

rients; if adhesion of the labia threatens, interpose lint with ungt. cetacei. Dewees found advantage in five-drop doses of tinct. cantharidis, which I have tried, but found no good from it; if the gums be swollen, let them be scarified. *In the severe form*, Kinder Wood begins with purgatives, then washes of diluted acetate of lead; after which, poultices of bread, softened in the same liquor, continued whilst ulceration lasts; and internally bark, with aromatic confection, and wine in moderate quantity; sometimes, if the ulcerations are stubborn, dress with the ungt. oxid. plumbi. If the bark passes off by the bowels, give chalk mixture, with or without opium, according to circumstances. My own experience, however, has found no lotion equal to that of tinct. iodini, ℥ss., aq. pur. ℥viiss. M.: it almost immediately allays the severe symptoms, and disposes the ulcerations to heal rapidly; in other respects treat as above.

In the adult form, leeches may be required, and purgatives more freely given; in other respects the treatment will be similar to the infant form; as the ulcerations are sometimes deeper, with thicker edges, touching with the nitrate of silver in strong solution, or the pencil, may be necessary. In this, as in the other form, the tincture of iodine is eminently useful, in proportions of ℥j. of tincture to ℥vij. of water. The purgatives should be saline, and great cleanliness observed throughout.

VULVA, WARTS ON THE,

Occur singly or in clusters; generally pediculated; various in size; sometimes large; I have removed them as large as a hen's egg, but many larger are recorded.

Symptoms.—Inconvenient from size and situation; not often painful, unless inflamed; possibly some venereal taint may be connected with them, but may exist without.

Treatment.—Ligature better than the knife, and with less liability of returning, and less hæmorrhage, though it can in general be easily controlled by caustic applications. Dewees recommends covering the warts with dry chalk; many disappear by so doing, but on others it has no effect. If there is suspicion of venereal taint, mercury in some form is necessary.

THE END.

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