

Illustrations of some of the principal diseases of the ovaria, their symptoms and treatment : to which are prefixed, observations on the structure and functions of these parts in the human being and in animals / [Edward James Seymour].

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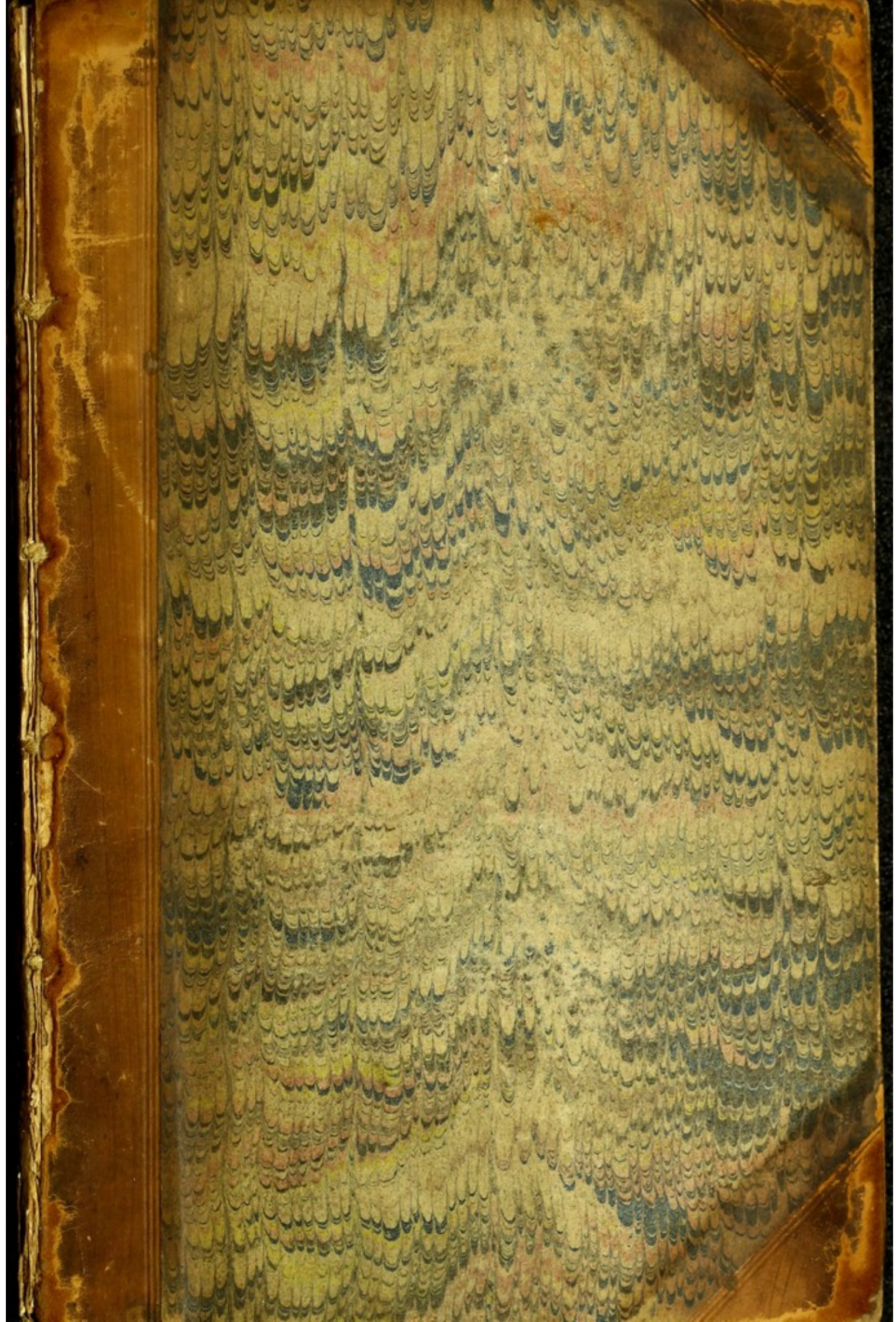
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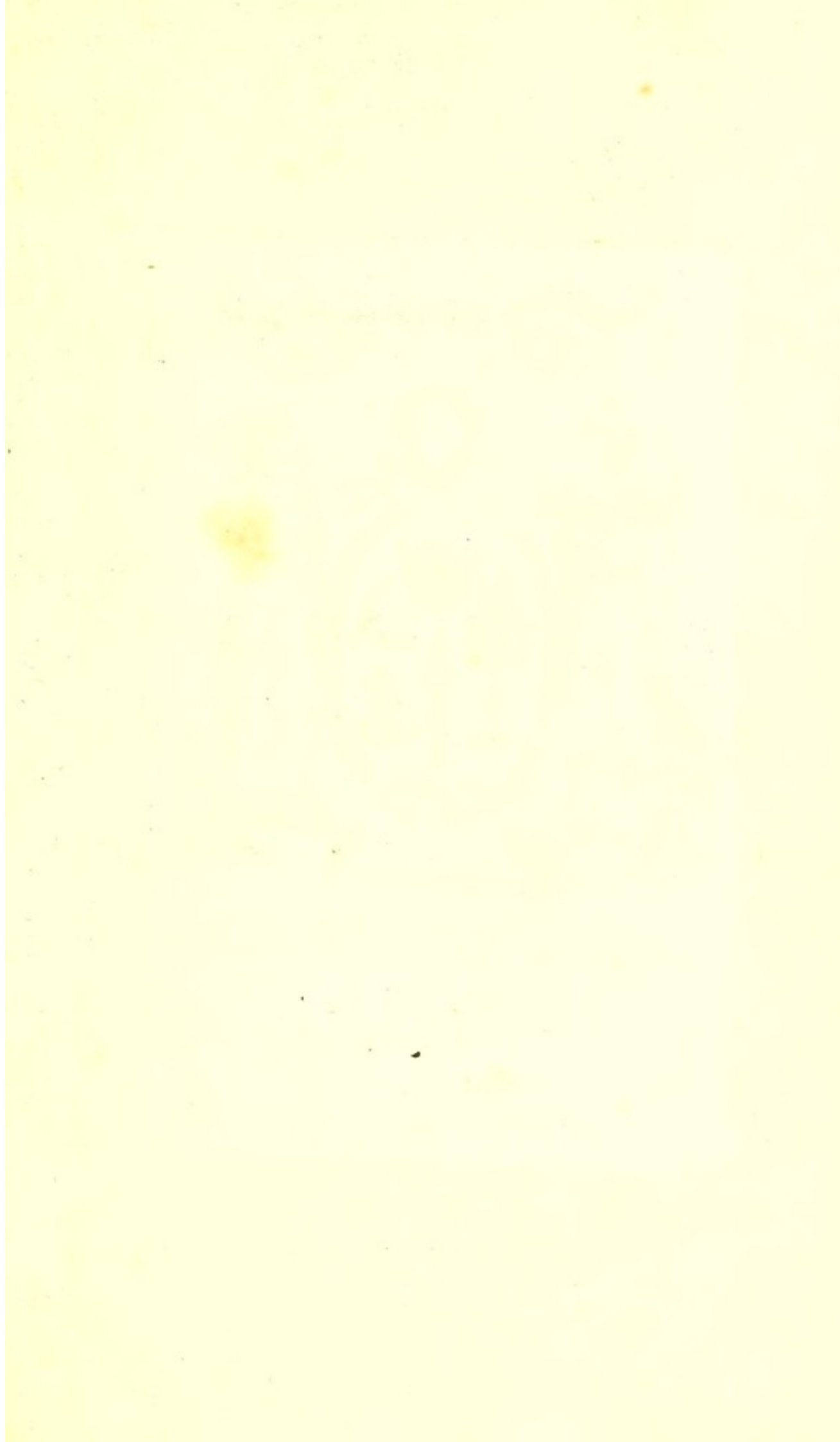
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ILLUSTRATIONS
OF
SOME OF THE PRINCIPAL DISEASES
OF THE
OVARIA,
THEIR SYMPTOMS AND TREATMENT:
TO WHICH ARE PREFIXED,
OBSERVATIONS
ON THE
STRUCTURE AND FUNCTIONS OF THESE PARTS
IN THE
HUMAN BEING AND IN ANIMALS.

BY
EDWARD J. SEYMOUR, M.D.

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PHYSICIANS TO ST. GEORGE'S HOSPITAL.

WITH FOURTEEN LITHOGRAPHIC ENGRAVINGS.

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TO
CHARLES MANSFIELD CLARKE, M.D. F.R.S.

WHOSE EMINENT TALENTS, SOCIAL QUALITIES, AND AMIABLE
CHARACTER, ENDEAR HIM TO THE PROFESSION
OF WHICH HE IS A MEMBER,

THE
FOLLOWING ILLUSTRATIONS
ARE INSCRIBED,
BY ONE OF THE MOST OBLIGED OF HIS NUMEROUS AND ATTACHED
FRIENDS.

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OBSERVATIONS
ON THE
PRINCIPAL DISEASES OF THE OVARIA,
&c. &c.

CHAPTER I.
ON THE STRUCTURE AND FUNCTIONS OF THE
OVARIA.

FEW subjects in physiology, extensive as the science is, have presented more interest, or occupied men of talents more earnestly, than the investigation of the laws by which animated beings are called into life, the structure of the parts adapted for impregnation, the functions with which they are endowed, and the remarkable uniformity with which these functions are performed.

Aristotle, Harvey, and Haller, men who at various periods of civilization devoted the most power-

ful minds to the study of the laws of life, paid great attention to these subjects ; and many points in the inquiry, elucidated or confirmed by them, have enabled Hunter, and more modern physiologists, to establish with sufficient accuracy a considerable number of facts. In the present chapter it will be my endeavour to trace the outline of these functions in the various classes of animals, especially the vertebrated animals, as in many instances what is obscure or altogether unknown in one class is rendered more clear by the more simple contrivance, or more visible structure adapted for similar purposes in another.

It is hopeless to expect that any considerable improvement should be made in the treatment of the various and complicated diseases of the ovaria in the human being, unless the structure and functions of these parts are fully understood ; and without this knowledge we shall be forced to resign to their fate the unfortunate victims of these unsightly and often painful diseases, with a sigh for the insufficiency of our art. It is not my intention to assert that even when these laws and these structures are clearly defined, much will not be left to be effected in the treatment of the diseases of the ovaria, much to be referred to individual constitution, to the artificial laws which regulate civilized society ; more to be hoped for from the discovery of new remedies, or the application of those already known, by ingenuity and talents. Such improvements must be

derived from the constant observation of scientific men, and those who have much practical experience ; and even then, probably, the gain will be less than our sanguine wishes have led us to hope, or our calmer judgment to expect.

It has been my great object, in the following pages, to lay before the reader the principal part of what is known in the history of these diseases, the appearances presented on dissection, the remedies which have been proposed for the entire cure, and the palliative means which diminish the sufferings of the patients and render life endurable ; and if others whose opportunities are more extensive, and whose zeal and labour are equal, should be induced to pay more attention to diseases of so much distress, and which have in a great degree been overlooked by physicians, my object will be more than fulfilled. Information must of necessity be the result of such inquiry, and great benefit eventually conferred on a numerous class of sufferers.

The ovaria in the human being are placed in the posterior portion of the broad ligament, which envelops them in the same manner as the peritoneum does the intestine, that is, incloses them completely, except where the vessels enter. They vary in size, of course, at the different periods of life ; but at puberty, when they are to be considered as perfect, they are oval, and the size of a large nutmeg, convex on the portion opposite to where the vessels en-

ter, and flattened at the sides. The peritoneum forms, of course, the external coat. On the removal of this covering, a second or proper coat is found, of condensed cellular substance, which is called the fibrous coat. This completely surrounds the contents of the ovarium, which consist of loose cellular substance, very vascular, and in which are embedded small cysts or vesicles of the size of a millet-seed, and varying in number from two to fifteen. They have two coverings or coats, an outer, which is sufficiently dense and firm, and an inner, transparent and easily torn. These vesicles were first brought into notice by De Graaf, and hence have been called Graafian vesicles. They were believed by him, and every observation on other animals has strengthened the opinion, to contain the germ (hence called ova) capable of impregnation by the male, and constituting, after this inexplicable process, a new animal, which is to expand and grow, and finally to become similar to the animal from which it sprung. The vesicles often distend unequally the coats of the ovarium; and in some animals such inequalities, from the enlarged and turgid state of the vesicles at puberty, are very remarkable. Among the larger mammalia this is most evident in the ovaria of the sow, and among the smaller in the hedgehog, in which the ovaria appear to be almost entirely composed of vesicles; and thus present an approximation to the arrangement of the corresponding structure in birds.

In virgin animals of the class Mammalia, at puberty, on cutting into the ovaria, always one, and sometimes two vesicles in each ovarium are observed, greatly enlarged, twice or thrice as large as the remaining vesicles; the cellular texture around is much more vascular than in other parts, and the vesicle itself is nearly transparent. In examining these parts in the virgin ewe, for example, such an appearance cannot fail to strike the observer. These are the vesicles, doubtless, fit first for receiving the fœcundating impression. The vesicles, in their ordinary state, contain a limpid serum, which coagulates by heat. The ovaria are abundantly supplied by blood-vessels from the spermatic arteries; and in animals in which many ova may be fœcundated and called into life at the same time, very numerous blood-vessels coming directly from the aorta are distributed to them: thus, in the large serpents noticed here, no less than four branches coming from the aorta were distributed to each ovarium.

The spermatic nerves which supply the ovaria and fallopian tubes are distributed in two sets; one the superior, being derived from the renal plexus; the other the inferior, consisting of numerous small twigs from the superior and inferior mesenteric plexuses, the hypogastric and renal plexuses, and from the trunk of the sympathetic nerves. Several small ganglia are intermixed with these nerves. The ovaria are abundantly supplied by absorbent vessels. A very beautiful and complete view of

these is to be seen in Mascagni's splendid work on the lymphatics.

In the class of birds* the ovarium consists of a number of rounded or oval bags, each attached by a peduncle to a common stalk, and termed, from their contents, the yolk or yelk bags. It is placed immediately above the kidneys, at the bifurcation of the aorta. It is inclosed in peritoneum, which connects it with the spine. Immediately below opens a tube similar in appearance to an intestine enveloped in peritoneum, which fixes it to the spine, and likewise restrains its mobility. This tube is the oviduct; the extremity near the ovarium is free in the abdomen, is of great tenuity and transparency, and has received the name of infundibulum. As the duct descends it becomes thicker, and towards the inferior part a few muscular fibres are visible. The interior of this tube is covered with villi, from which is secreted first the white, and afterwards, at the inferior parts, the shell. These villi do not apparently differ in structure, except that in the portion which secretes the white, they appear to have a longitudinal, in the portion where the shell is perfected, a transverse arrangement.

The oviduct performs the same office to the ovarium which is effected by the fallopian tubes

* See plate 1, fig. 1 and 2.

to the ovaria of the mammalia; it is certainly the structure through which the ovum passes, and we shall consider presently whether it is not the medium of the performance of a still more important function.

At the period when a yelk bag is matured, a white line is formed across the centre of the capsule: this white line is from the absence of vessels; they become obliterated at that part, and this is well seen in injected specimens. In the direction of the white line, the capsule bursts; the yelk-bag is grasped by the extremity of the oviduct, which appears endowed with a contractility *sui generis*; and being propelled downwards by a motion probably similar to the peristaltic, receives, as has been already stated, the white and shell.

The structure of the oviduct and its relative position to the ovarium is the same in all the genera of birds, as far as my observation has enabled me to determine. It occasionally happens that there are two oviducts*, but this is to be looked upon as a rare deviation from the ordinary arrangement, and not as adapted for any particular purpose in the species in which it may occur. No variation is seen in the ovarium or oviduct like that, for

* These are more often found in domesticated birds. That variety of the domestic fowl, known under the name of the Dorking breed, frequently presents the appearance of two oviducts: they are seldom, however, perfect.

example, in the trachea, which is so remarkably different in different species of birds.

In the class amphibia (at least in the principal genera, snakes, crocodiles, and tortoises,) there is an intermediate organization between mammalia and birds: like the former, they have two ovaria, one on each side; like the latter, they have oviducts and no uterus*.

The larger snakes† brought to this country from

* Some authors have given the name of uterus to the thickened extremity of the oviduct; but as this part is manifestly only a continuation of the tube, and in no respect differs in structure, it can hardly be justly compared to that viscus prepared in the mammalia for the reception, nourishment, and growth of the young foetus.

† These snakes are commonly called by the generic name of boa: those shewn at the various menageries are not, however, that formidable reptile; they are of the genus coluber, and two varieties are found. The brown snakes, from eight to sixteen feet long, are described and figured by Dr. Russell under the name of pedda podda, are common in Ceylon and on the coast of Coromandel, and by his account are by no means fierce: some authors have given them the name of coluber boæformis. The other variety, or purple snake, still larger, is likewise a coluber, but is termed by some naturalists boa amethystina, from its beautiful colour: it is a native of Java. Cuvier has assigned to these snakes an intermediate genus between coluber and boa, which he terms python, and assigns the hooks on each side of the anus as the distinctive character; these are found both in male and female, but are larger in the former.

The real boa constrictor is different in colour,² as well as in the

the East Indies for the purpose of public exhibition, have afforded me an opportunity of repeatedly examining the ovaria in the unimpregnated state, and once when the yolk bags were in a matured state.

On each side of the spine is a duplicature of the peritoneum; a little above the kidneys lie the ovaria * in the unimpregnated state, a string of transparent vesicles, rather more than three inches in length: at maturity † these ova become the size of a turkey's egg, but are spherical; the external membrane which covers them is very vascular, and derived from the peritoneum. Beneath this is another coat, apparently without vessels, and inclosing one still more delicate, which immediately surrounds the yolk, and which probably supports the contents until they are fairly lodged in the oviduct.

From the situation of the oviduct on each side, it is very difficult to conceive how the ovum finds access to the infundibulum. The infundibulum is at first about three quarters of an inch in size, but almost immediately contracts to that of a crow-quill,

well-known generic character of having the scuta continued below the anus to the tail.

It appears that these varieties resemble each other in their habits, but that the true boa is a much fiercer reptile than the coluber or python, "*quocunque nomine gaudet.*" It is a native of the marshy districts of America.

* Plate 3, fig. 1.

† Plate 4, fig. 1.

becoming larger in its course externally to the rectum on each side, and is for a considerable distance from half an inch to an inch in diameter, and this is greatly increased during the breeding season. Each oviduct terminates in the cloaca*, at some distance from the valve of the rectum; but, like all the other viscera of this animal, the right ovary is placed higher than the left, and consequently the right oviduct is longer than the left. These appear to be oviparous snakes, and the eggs when produced are hatched in the sun.

It has only occurred to me to observe the parts in question in the crocodile, in the unimpregnated state†. There are two ovaria and two oviducts, the latter resembling perfectly the same organ in birds. The infundibula were turned outwards, which renders it a matter of more than usual difficulty to account for the way in which the ova enter the oviduct. It is not improbable that a considerable change takes place in the relative position of parts, when the animal is impregnated. The oviducts terminate on each side in the cloaca.

In the tortoise (*Testudo Græca*) there is likewise a considerable resemblance in the ovaria and oviducts to similar parts in birds. The oviducts terminate on each side in the cloaca, and are somewhat enlarged immediately previous to their termination; the internal structure in this part varies in no respect from that which is immediately above it.

* Plate 3, fig. 2.

† Plate 2.

One peculiarity is observable in the oviduct at a fourth of its length: the longitudinal folds which characterize the mucous membrane of the tube cease, and for several inches a structure of mucous follicles is visible, resembling the structure of the ventriculus succenturiatus in birds, and is probably for the purpose of secreting the covering of the egg*.

There is a strong resemblance between the arrangement of the ovaria and the oviducts in the class Amphibia, and two large genera of fish, the raïæ and squali.

In the former (the raïæ) the ovaria are two in number, and lie close to the spine, immediately below the liver. They consist of from twenty to thirty yelk-bags of different sizes, each covered by a proper membrane, and the whole enveloped in a peritoneal covering. The oviducts open close together, attached to the bony diaphragm immovably; into these the yelk-bag on each side passes by a process hitherto inexplicable, from the distance of the ovaria from the fixed mouth of the oviduct.

In passing through the oviduct, the yelk receives the white and the dark quadrangular shell with straight cornua†, so commonly to be found on the sea-coast. For the formation of this covering, a curious provision is allotted by nature. Clandular

* This appearance is well seen in Tab. xxx. fig. 188, of the splendid work of Eojanus de Anatome Testitudinis.

† Plate 6, fig. 1.

bodies, resembling in shape the gizzard of a fowl, and of a pale colour, about an inch and a half in width and two inches in length, are found about three inches from the commencement of the oviduct*; in the young animal they are scarcely visible, a slight thickening of the duct being alone perceptible; they are at the full size at the breeding-season, which being past, they subside.

The internal membrane of the oviduct, below the glands, shews a rugous surface, the membrane being thrown into numerous longitudinal folds; this membrane terminates abruptly on each side in a triangular-shaped expansion, lined with a smooth delicate membrane, which opens into the cloaca. To this expansion some authors, as Monro, have given the name of uterus.

In the squali or shark tribe a very similar arrangement prevails. In these fish there is only one ovarium†, lying obliquely across the spine, so that the right is much higher than the left portion. Here the same general appearance of the ova prevails, as one yelk-bag becoming much larger than the others, more transparent and turgid. Having had an opportunity of examining the glandular structure during the breeding-season in a large variety of oviparous dog-fish‡, and as the subject is

* Plate 4, fig. 2.

† Plate 5, fig. 1.

‡ The size of the specimen (the *Squalus Canicula*) to which the description refers, was about three feet and a half from the nostrils

curious, a more detailed description may not be uninteresting.

The gland is situated about three inches from the infundibulum, the tube being narrowed and surrounded by the thick soft mass which constitutes the gland. The inner surface is continuous with the rest of the mucous surface of the duct, but being incapable of the same distention, the membrane has not the rugous expansible appearance presented by the rest of the duct; it is on the contrary quite smooth and very vascular, and is connected by loose cellular membrane to the covering of the gland, which can be more easily torn from the substance than the inner lining. The substance of the gland is about one-third or half an inch in thickness in different parts, and can readily be broken up into a white soft pulp, looking like a thick paste of chalk and water, in which no organic substance can be perceived. This paste passes through the inner lining by small pores too fine to be distinguished as ducts, but shewn to exist by scraping the pulp with a knife from the inner surface, after it has been made to transude by pressure.

to the extremity of the anal fin. The coverings of the ovum in these parts (as is well known) are of a pale yellow colour and semi-transparent, and the cornua differ from those in the skate in being very long and twisted*; thus, when expelled from the body of the fish, and attached to marine plants and rocks, they become involved in such a manner as to render their separation difficult even by the violence of the waves.

* Plate 6, fig. 2 and 3.

Running transversely across the middle of the gland is a line of fibrous structure, probably muscular, about one-third of an inch broad*, meeting at the angles formed by the junction of the two flat portions of which the gland seems to be composed, and in the middle of its fibres in the centre of one angle is a depression of a quarter of an inch in depth, at first appearing to be an opening into the interior of the gland, but in reality having the same lining with the rest of the inner surface.

The extremities of the cornua of the ovum were still lying in the gland, and were quite soft and brittle, and perfectly white and opaque, from the secretion of the gland, instead of having the light yellow colour and transparency of the shell of the ovum itself, and all the parts of the horns which lay in the oviduct below the gland.

The yellow colour and fine varnish which covers the shell, are secreted by the mucous membrane which lines the duct below the glands.

In the first of the class Mollusca, Cephalopodia, similar temporary organs are found in the sepia, for the purpose of secreting the dark capsule which encloses the ovum, and the prolongations curiously twisted round fuci for its preservation†. These are most remarkable in the *sepia officinalis* at the breeding season in May and June.

* Plate 6, fig. 2.

† Fig. 3, plate 3.

In the bony fishes the arrangement differs from the preceding, and is very simple: the numerous ova, all of the same size, surrounded by a delicate membrane, are placed in long packets on each side the spine, sometimes occupying the whole length from the diaphragm to the cloaca. Internally prolongations of membrane separate them into transverse layers, and the ova are also connected by blood-vessels. There are no oviducts; but the prolonged enveloping membrane becoming of smaller diameter, form a canal on each side, through which the eggs pass, and which terminates immediately behind the rectum.

Having thus sketched out in the different classes of vertebrated animals, the structure of the ova which contain the germ, we find that in fish, the amphibia, and birds, they exist previously to impregnation, when fecundated, pass into a tube where they receive the coverings necessary to protect them from external violence, until the young animal is ready to be ushered into the world.

To carry this analogy to the mammalia, and subsequently to the human being, is easy: the Graafian vesicles present the greatest resemblance to the ova of other animals; they become larger, more turgid, and more vascular, at puberty. After impregnation, fissures are observable in the external coat of the ovarium, and a hollow space is visible in its substance, once filled by the vesicle round which a new body is formed: all this can be de-

monstrated, and can be seen by any observer. These circumstances led to the opinion, in which De Graaf and all the eminent physiologists who immediately succeeded him participated, that the Graafian vesicles were ova, similar in the human species and the mammalia to what the ova in birds, reptiles, and fish, were to their respective kinds. Such an opinion still prevailed at the beginning of the eighteenth century, at which time very distinguished physiologists, especially of the Italian school, brought forward arguments to subvert it. It was said, if the Corpora Graafiana were really ova, they should be detected in their passage through the fallopian tube, and in some animals where they are very large and the canal extremely small, such passage would be impossible.

De Graaf had asserted that he saw the ova in the fallopian tube; but neither Hartmann, Valisneri, nor Haller, in numerous experiments for the purpose, ever succeeded in seeing the vesicle or ovum in the fallopian tube or uterus. Since this period, however, they were distinctly seen by Haighton and Cruickshank, who confirmed De Graaf's experiments. Here, however, arose a fresh difficulty; the ova thus seen were greatly smaller than the unimpregnated Graafian vesicle.

Satisfied from all the observation it has been in my power to make, that the original opinion is the correct one, the difficulties may be reconciled from considering that the ova in the different classes do not

contain similarly arranged matter. Thus the yelkbags in birds, amphibia, and fish, contain not only the germ of the future fœtus, but a considerable portion of aliment for its subsistence; hence they bear a much larger proportion to the animal than the corpus Graafianum to man; but in the mammalia no such provision is necessary. The more perfect being requires a longer period for maturity, and a different arrangement for its nourishment, and this is provided in the uterus; hence the Graafian vesicle contains probably only sufficient fluid to protect the germ from injury, and when grasped by the fallopian tube, the contents of the vesicle are discharged, and the rudiment, not the entire vesicle, carried to the uterus. Such is the fair conclusion, and not that the laws of nature, so uniformly and beautifully adapted to the end in view, are changed, and an entirely new process, untraceable to the senses, substituted in their place.

The most recent experiments of Monsieur Baer, however, prove to demonstration that such conclusions are correct. He has seen the ovum, contained in the vesicle in the ovarium, exactly similar to those which he (as well as Haighton and Cruickshank) found in the fallopian tube. A fact of so much importance should be related in the words of the author:—

“ Restabat ut de ovorum conditione in ovario certiozem me facerem; nam ova tam parva vesi-

culas Graafianas ipsas ex ovario expulsas non sistere, luce clarius visum est, nec verisimile habui tam solida corpuscula in tubis ex vesicularum fluiditate modo coagulata esse. Ovaria contemplan jam ante omnem incisionem in quacunque fere vesicula punctum luteo-album clare distinxi, quod velamentis vesiculæ nullo modo affixum libere liquori innatare, pressio specillo in vesiculam facta, manifeste docuit. Curiositate quâdam potius seductus, quam spe motus, me nudis oculis per omnes vesicularum Graafianarum tunicas ovula in ovariis vidisse, vesiculam aperui, de quo dixi punctum cultelli lamina (tam distincte illud vidi et a muco circumdante discrevi) arripui et microscopio subjeci. Obstupui profecto, cum ovulum ex tubis jam cognitum tam clare viderem ut cæcus vix negaret. Mirum sane est et inexpectatum, rem tam pertinaciter quæsitam, ad nauseam usque in quocunque compendio physiologico uti in extricabilem tractatam, tam facillimo negotio ante oculos poni posse*."

We have seen the fallopian tubes in the mammalia, and the oviducts in the other vertebrated animals, convey the ovum from the ovarium to the uterus, and supply a covering to protect the growth of the young animal whilst cherished by the warmth of the mother, or exposed to the influence of the sun. Is this the only function of these parts? Do they convey the seminal fluid to the ovum?

* Baer, De Ovi Mammalium et Hominum Genesi, p. 12. s. 3.

Few subjects in physiology have occasioned more disputes.

In favor of the opinion that the fallopian tubes carry the fecundating fluid to the ovarium, are various inductions from direct experiment, and others from analogous operations in other animals.

1st. If the fallopian tubes be destroyed, the animal becomes barren, all desire being extinguished; and the same occurs where the oviduct is divided.

2dly. One fallopian tube being tied, it occurs in every instance that no fœtus is found in the cornu of the uterus above the ligature, or in the ovarium. Now, if the fallopian tube carries only the ovum to the uterus, and is not the medium through which the fecundating fluid is conveyed to the ova, but impregnation occurs by sympathy or consent of parts, how happens it that in some of these cases a fœtus is not developed in the ovarium, as has occurred in many cases on record, where the ovum has been prevented from entering the fallopian tube? The fact of the fimbriated extremity of the fallopian tube embracing the ovarium during the coitus, or when the animal is at heat, has been stated by several authors, and most positively by Mr. Cruickshank, in the following words:—"The fallopian tubes, independent of their black colour, were twisted like writhing worms, the peristaltic motion still remaining very vivid; the fimbriæ were

also black, and embraced the ovaria (like fingers laying hold of an object) so closely and so firmly, as to require some force, and even slight laceration, to disengage them*.”

Dr. Haighton, in his numerous experiments made for this purpose, never saw this action of the fimbriæ, notwithstanding which, affirmative testimonies must weigh against the negative even of so distinguished a physiologist as Dr. Haighton. Thus Haller could never see, as De Graaf asserted to have done, ova in the fallopian tubes, in his experiments made for the purpose; but both Dr. Haighton and Mr. Cruickshank did see them, and the affirmative evidence is the strongest.

3dly. The well-known fact of the necessity of the contact of the seminal fluid with the ova, in the lower animals, where no coitus takes place, as in frogs, where the male animal impregnates the eggs as they pass from the body of the female, and in many fish where the ova are impregnated by the male separately.

In the frog (and it appears to me to strengthen the analogy) there are very long oviducts: here then it may fairly be asked, if the oviduct is formed for carrying the seminal fluid to the ovarium, how happens it that it does not do so in this animal? There is a peculiarity in the frog; the oviducts

* Phil. Trans. 1797.

open at a great distance from the ovaria, and they are fixed; hence it is not easy to conceive that the seminal fluid could reach the ovaria by this means, and it is this very peculiarity which causes the necessity of a deviation in this function from the other amphibia, without which deviation the contact between the ova and seminal fluid would not take place.

But here it may be said, in the squali for example, a nearly similar organization occurs, and in these fish an actual coitus takes place. In the oviparous dog-fish, the infundibula are a little prolonged downwards, and might without difficulty, if filled with fluid, be supposed to sprinkle a portion over the distended ovarium; but for this purpose it is necessary they should be filled, or at least injected with considerable force, and a very peculiar contrivance occurs in the male animal for this purpose. This has been so well described by Sir Everard Home, in his magnificent work on Comparative Anatomy, that it will be better to adopt his expression, of the accuracy of which I have had personal observation.

“ *The mode in which the semen enters the penis is so unlike what is met with in other animals, that it deserves to be particularly explained.

“ The vasa deferentia are convoluted in their

* Comparative Anatomy, vol iii. p. 385.

course, but become straight and much enlarged at the lower part; and instead of going on to the penis, terminate by two wide orifices on the posterior surface of what may be called the urinary bladder, which is of an oval shape, and partially divided into two by a septum, on each side of which the ureters enter it. From this cavity the penis is continued, like the neck of a Florence flask; and the semen, before it can arrive at the penis, fills the bladder, and is propelled by the action of the muscular coats of that viscus, by which the semen acquires velocity, and the penis is rendered turgid during the whole time that such force is applied to the liquid passing through it."

Another proof of the adaptation of parts for the effecting this purpose occurs to our observation in snakes. The oviducts are long, and adapted to the double parts of generation of the male animal, and the coitus is of very long duration. Now, if consent of parts, or sympathy, were alone necessary, and not the contact of the seminal fluid with the ovum, neither of these conditions, viz. the adaptation of parts, and the long duration of the coitus, would be necessary.

A principal argument opposed to these has been the fact of impregnation with unruptured hymen. Such cases have undoubtedly occurred; but the membrane, although entire, was not imperforate; and the well-known experiments of Hunter and

Spallanzani shew, to demonstration, the access of how very small a quantity of fluid is essentially necessary to impregnation.

Hence the numerous experiments on record, and all the comparisons I have been enabled to make between the process in various animals, lead me to the conclusion that the fallopian tubes convey the fecundating fluid to the ova, and are the media through which the ova pass to the uterus in more perfect animals, and prepare them for the process of incubation in the less perfect.

On opening the ovaria of adult females, both in the human being and the mammalia, it not unfrequently happened that a new structure was found in the substance of the viscus. This consisted of a round or oval body, about the size of a pea in the human being, and proportionably larger in the larger animals. This substance appeared to be very vascular, and divided by small bands; and seemed to consist, when examined with a glass, of grains, or small glands conglomerated together, with a hollow in the centre; and from this depression a small communication existed with the circumference of the ovarium, where a mark was seen of the coats having burst. De Graaf named this body *corpus glandulosum*; and from Malpighi it received, from its yellow colour, the name of *corpus luteum*, which it has since preserved.

There is, perhaps, no dispute in physiology which has excited the talents, or stimulated the laborious investigations of men of science, more than the origin and use of the corpus luteum. It was the opinion of De Graaf, that the corpus luteum was the result of impregnation, and that the number of corpora lutea exactly corresponded with the number of impregnated ova; so that after death, the number of young conceived by the female animal might be ascertained by counting the remains of the corpora lutea. Malpighi, one of the most celebrated anatomists of the age, was the first to oppose this opinion. He maintained that the formation of corpora lutea was anterior to the connexion between the male and female, and preparative to conception; and that it was in fact necessary, in order to enable the ovum to become fecundated. Thus, he observes, in his letters to Spon, "*His itaque pensitatis, non improbabiliter colliges, luteam hanc, glandulosamque substantiam non immediatè subsequi seminis affusionem factam in ovo intra ovarium contento sed longè ipsum antecedere.*" He states that he has seen corpora lutea in the ovaria of calves, and likewise several fresh ones in cows, where only one fœtus was contained in the uterus; disproving thus the two assertions,—first, that they were only the result of impregnation; and next, that they exactly represented the number of ova which had been impregnated.

In favor of this view of the case are the obser-

vations of Valisneri, who filled the chair of Natural History at Padua during the earlier part of the eighteenth century. In a very laborious paper on the ovaria of viviparous animals, he concludes, after having stated that he dissected very many quadrupeds (*moltissime*), that the corpus luteum or glandulosum is not generated only after the ovum is fecundated, but long before, developing itself by degrees, and becoming matured, in order to assist in forming the ova*. To confirm the experiments of Valisneri succeeded much more recently those of Bertrandi, which are remarkable both for the facts established, and likewise for some pathological reasoning deduced from them. Bertrandi took three female guinea-pigs from the mother, and kept them separated from the male animal fifteen months, when he killed them; and in every one of these animals were found corpora lutea in a progressive state. He infers, from this and other experiments, an exact coincidence with the opinion of Malpighi, Valisneri, and others, that the corpus luteum is formed in animals at the time of puberty, as preparatory to impregnation. He professes, likewise, an opinion that furor uterinus is the result of the too rapid development of these bodies, or there being too many formed at once. Santorini has added his testimony, in his anatomical observations, to similar facts to those observed by Valisneri; and it would be needless to quote the words of Santorini, did they not exactly represent

* Valisneri, part ii, chap. 10. "Delle Ovaje delle Animali Vivipere."

the opinions of a celebrated physiologist of our own age and country—Sir Everard Home.

“*Nos ea (corpora lutea) in intemeratis virginibus pluribus sæpe commonstrata luculenter vidimus ; atque adeo neque ex virili initu tum primum excitari, neque ad maturitatem perduci sed in iisdem conclusum ovulum solummodo fœcundari dicendum est.*”

It would not be reasonable to suppose that a point of so much importance in the process of generation as the formation of the corpora lutea should have escaped the observation of Buffon ; and accordingly we find that he devoted much time and attention to the subject. His theories of generation, however, very largely partook of the defect which, in philosophical inquiries, too often arises from the predominance of brilliant imagination over calm judgment, a predominance characteristic of the writings of the nation of which M. de Buffon was so distinguished an ornament. Buffon adopted the observations of Valisneri, &c. as far as related to the formation of the corpora lutea, independently of impregnation ; but, dazzled by the vaunted discoveries of Hartsöecker and Lewenhoeck, with regard to spermatic animalculæ, he conceived that a similar fluid was secreted by the corpora lutea in the female. To ascertain this he instituted an experiment with the celebrated Needham *, the success of which he conceived would set

* Philosophical Transactions for 1748, page 615.

the question at rest. Having strangled a bitch at heat, he found a corpus luteum in each ovarium, and having divided each carefully, collected the fluid which escaped from the wound. This fluid, when subjected to microscopic observation, shewed the presence of numerous animalculæ. The triumph of the naturalist was complete,—a triumph which the subsequent discovery of animalculæ in animal and vegetable infusions, and the still later experiments of Spallanzani, effectually destroyed; and the opinion has long since rested, with so many other brilliant but striking theories, in deserved oblivion.

Such repeated observations as to the formation of corpora lutea, independently of connexion between the sexes, by different physiologists, all men of acknowledged talent and indefatigable labour, would appear to set the question at rest; but these observations were all known to Haller, and yet we find Haller decidedly opposed to the conclusions drawn from them. Haller, as is well known, sacrificed many sheep to this inquiry*. Investigating the state of the ovaria from half an hour after connexion between the male and female up to an advanced period of gestation, he found corpora lutea distinctly forming round the vesicle twenty-two hours after conception, and the process of formation lasting up to the seventeenth day; from

* *Elementa Physiologiæ*, liber xxix. § 14.

which time the corpus luteum became less vascular, harder, shrunk, and diminished. He enumerates the great number of animals sacrificed in these experiments, declaring that in no single instance has he seen a corpus luteum formed in virgin animals. This illustrious physiologist addressed a letter to Buffon on the subject, in terms which savour little of the loss of mental and bodily power of which he complains*. It may be permitted to quote his expressions, both as immediately bearing on the subject, and also to shew how warm was the zeal for science in this great man, even when languishing under the debilitating effects of bodily sickness.

“Sed puellæ nondum corpus luteum habent, quando flos ætatis eas ad amorem invitat. Quotquot fœminæ nullam fœcundationem ante mortem passæ sunt, tot etiam incisæ, nulla corpora lutea ostendunt.

“Centum et ultra corpora mulierum aperui, decies fortè corpora lutea vidi, neque unquam nisi in gravidis, in puerperis, aut a puerperio defunctis fœminis, neque puto frequentes esse incisores, qui decies in humano corpore corpus luteum viderint†.”

* “Corporis mei ex longo morbo languor, etiam animi vires debilitat, eoque tempore inopportunè spiritus meos frangit pro integerrimo ingenii usu quam maximè egeo.” Opera Minora, T. 3, p. 174.

† Opera Minora, vol. iii.

It would appear that, by arguing exclusively, each party has been in the wrong, two facts appearing to be proved; viz. that corpora lutea always form after impregnation, and are sometimes found in those animals in whom impregnation could by no possibility have occurred. The explanation given by Blumenbach, in the Transactions of the Society of Goettingen in 1789, and assented to by Cuvier, is only reasoning on facts well known, and even (cautiously indeed) admitted as possible by Haller himself, and is rendered extremely probable by what occurs to our senses in birds.

It has been stated that corpora lutea are the vascular remains of the Graafian vesicle after its rupture and the discharge of its contents. At puberty, before impregnation, the vesicle is large, turgid, and very vascular. When it bursts, the external coat, supplied with vessels, remains: it then constitutes the first stage in the formation of the corpus luteum; the numerous ramifications present the appearance mistaken for a glandular structure; the vessels which formerly nourished the ovum now relieve themselves by pouring out lymph, which fills the cavity left by the escape of the vesicle; and the increased action being thus terminated, the vessels become paler and paler; in other words, the corpus luteum being diminished, and the lymph gradually being absorbed (a work of time) complete the process. This result is equally the same, whether the vesicle, at a state of maturity, bursts after impregnation or

not ; and it is believed that, in human beings, certain feelings of the mind are sufficient to determine the rupture of the vesicle.

In birds, an egg passing into the oviduct, the membrane which formerly contained it shrinks ; but this occurrence takes place equally whether the ovum which so passes be or be not impregnated. In order to prove that such an effect may occur from excited feelings, eggs have been produced from birds by impressions calculated to promote such feelings, without the presence of the male bird. Harvey's experiments with the thrush and sparrow are well known, and the fact is familiar. In the same way may be resolved the difficulty of De Graaf's proposition, that the number of corpora lutea were in exact proportion to the number of ova impregnated. In the case in which there has been but one foetus in utero, and several corpora lutea in the ovarium—cases which it has been shewn are frequently on record, it is only proved that several vesicles have burst and discharged their contents, but that only one has been fecundated. In the same way, in birds and reptiles, we find that out of many ova produced after connexion between the sexes, although the greater number are fertile, some are perfect in every respect, except having received the fecundating impression.

One of the latest authors on this subject is Sir Everard Home, who has dilated much on the for-

mation of the corpora lutea, in his splendid work on Comparative Anatomy. Sir Everard's views entirely accord with those of Malpighi, Valisneri, &c. although he does not allude either to their opinions or experiments.

The following are the expressions of Sir Everard Home, and it will be seen how nearly they represent the opinions of the Italian physiologists already quoted:—

“ These corpora lutea are proved to be the glandular structure which forms the ovum, and when the ovum is expelled, gradually disappear.

“ Till now these bodies have always been considered as the effect, not the cause of impregnation; so that without impregnation there would neither be ova nor corpora lutea, and the presence of that body was allowed to be an undeniable mark of conception having taken place. This error must have arisen from the circumstance of there being almost always in the ovarium of a woman who dies in child-bed, a corpus luteum, preparing another ovum to be ready for future impregnation, which was usually mistaken for that belonging to the child born; whereas the former corpus, in the course of nine months, had nearly, if not entirely, disappeared.”

In differing from so distinguished a physiologist

as Sir Everard Home, it has appeared best to give an outline of the whole discussion. Sir Everard dissents in no part of his opinions from the Italian physiologists. These are at variance with Haller, Blumenbach, and Cuvier, who were well acquainted with these doctrines.

It must be admitted by all that corpora lutea exist without impregnation occasionally. They are figured by Valisneri and Sir E. Home; and the observation has been confirmed by many living physicians and surgeons. That it occurs after impregnation, is certain, and proved by the observations of Haller, who traced their gradual formation; but if, as supposed by Sir E. Home, they are necessary to render the ovum fit for impregnation, they should exist nearly always in virgin animals at the time of puberty. This is by no means the case. It has occurred to me to have examined the ovaria in the human being, and in animals at the period of puberty, in very many instances; many had ova ready for impregnation, large, projecting, vascular, yet no corpora lutea were visible, which induces the following conclusion, that in every instance these animals must have been barren, or that the formation of corpora lutea is not a necessary preliminary process to impregnation.

From these premises, comparisons, and observations, my opinion has been formed, that corpora lutea are the result of the change which takes place

in the ovarium by the bursting and discharge of the ovum, occurring rarely in virgin animals, because the bursting of the ovum is not a frequent but only possible occurrence, but always following impregnation, and diminishing as gestation proceeds.

It may here be asked, of what advantage is it to determine accurately the formation of these bodies? We have seen that their production is probably influenced by strong moral as well as physical impressions, the result of great vascular excitement of the part, and their absorption effected by great activity in the vessels of that system. Any deficiency, then, in the quantity of vascular excitement necessary—any obstacle to the exercise of absorption—would produce changes in these parts differing from the natural ones, which they were intended to undergo,—would, in a word, produce disease; and it remains to be discovered whether any of the serious and complicated diseases of these organs are to be traced to alterations which the corpora lutea undergo from any or all of these causes.

As early as seven years, Graafian vesicles are to be seen in the human being; the structure of the ovarium is firm, and there are few red vessels: at twelve these vesicles are very numerous, and the structure of the ovarium looser and more vascular: at puberty this vascularity is wonderfully increased. In advanced age the ovarium becomes shrivelled, hardened, and presents a convoluted appearance:

on cutting into it, the structure is much firmer; scarcely any vessels are to be seen, and the vesicles have entirely disappeared, or become thickened and solidified. Sometimes indeed a single one has remained, become much dilated, is filled with fluid, secreted by the vascular membrane which lines it, and shews the disposition to disease, which on a larger scale constitutes one form of ovarian dropsy. The appearance of the whole body changes at this remarkable period; the voice becomes hoarse, the skin harsh and wrinkled, and not unfrequently hair is formed on the upper lip and chin.

The well-known operation of Mr. Pott, in which he removed in the operation for hernia the ovaria of a young female, is very remarkable. The voice became hoarse, hair grew on the lower part of the face, the mammæ became diminished, and the catamenia ceased.

No other effect attends the extirpation of one ovarium, except the diminution of the number of young in that animal. Mr. Hunter* found that the sow from which the ovarium was removed by art farrowed six less than half the number of the sow of the same age, who had both the ovaria entire. In the human being, in extremely rare cases, one ovarium has been found wanting, yet the female has borne children; and one being destroyed by

* Hunter on the Animal Economy

disease has repeatedly been found to be no prevention against the female becoming a mother, from ova formed in the remaining organ.

In birds a still more remarkable effect attends the shrinking and shrivelling of the ovarium; the hen-bird assumes in many instances the plumage of the male: it had been supposed that such a change uniformly arose from the perishing of the ovarium by age; but Mr. Yarrell, in a paper read before the Linnæan Society last year, very satisfactorily proved that this change will occur in very young birds from disease of the ovarium.

Thus, in several young mules, (hen birds with male plumage), the ovarium has been found variously diseased; sometimes the oviducts appear to have been inflamed, and adhesion to have taken place between their opposite sides, so that they become obliterated; at other times the ovaria are shrivelled and of a black colour, and appear as if they had never been in progress to maturity. This black colour also pervades the oviduct, which is smaller than natural, and often impervious in some part. In old birds it might fairly have been alleged, that the destruction of the ovarium and the change of plumage followed only the general alteration induced by age, and that the one was not dependent on the other; but the fact that the destruction by disease of the ovarium in the young bird induces a similar change, and the destruction of the oviduct by art being followed by

an alteration incomplete indeed, but in many respects resembling the one mentioned, sets the question at rest.

A curious morbid appearance presents itself in the snake, where the ova have been matured and not impregnated. The peritoneal covering gives way at a similar point in each, as if to make the first preparation for the yelk-bag passing into the oviduct, but here the process ceases, the ova become hard, lose their spherical form, and present the appearance and nearly the consistence of chesnuts.

In the specimen in which this was observed, this disease of the ovaria appeared to have been the cause of the animal's death.

CHAPTER II.

ON THE DISEASES OF STRUCTURE IN THE OVARIA.

HAVING in the preceding chapter spoken of the structure, and endeavoured to describe the functions of the ovaria, in the present chapter the diseases of these organs will be considered.

1. The diseases which arise from inflammation of the structures of which the ovarium is composed.

2. Those which arise from enlargement of the natural structure, and others from addition of new structure formed by disease; and these last will include those schirrous and fungoid growths which from their rapid progress, their assimilation of neighbouring structures, their coincidence with other cancerous diseases in the same patients, and their fatal tendency scarcely admitting of palliation, have received the appellation of malignant growths.

3. Those deviations from natural structure which arise from obstruction in the function they are destined to perform, and those alterations of them which are probably congenital.

The ovaria, like every part of the body, are liable to inflammation. When the uterus has become inflamed after difficult parturition, or on the application of causes arising from profligacy of life, the ovaria are often included in the general evil. It does not, however, appear that inflammation of the peritoneal covering of the ovaria takes place without general inflammation of that portion of the membrane which covers the fundus of the uterus, and if it does, is not discoverable by any known or definite symptoms. No particular sensibility is increased, no particular sympathy with distant parts excited; nor can the remedies, therefore, be distinct from those which apply to inflammation of the uterus generally.

Inflammation of an acute form attacks the substance of the ovarium, which has been found in a state of suppuration after acute inflammation of the womb and its appendages in women who have died in child-bed. This likewise does not appear to be marked by any peculiar symptom: the suppuration in such cases has been of the diffuse kind.

Softening also takes place as the result of acute inflammation of these parts. A case recently occurred under my observation, where death from inflammation of the womb occurred about three days after delivery. The whole of the cellular membrane under the peritoneal covering of the uterus, and under that lining the pelvis, was in

a state of diffuse suppuration, and the absorbent vessels loaded with pus could be traced nearly as high as the diaphragm. The ovaria were in a state of extreme softness, presenting the appearance of a vascular pulp, but no purulent matter was visible.

The substance of the ovarium is likewise subject to inflammation of a chronic form, which may certainly exist independently of inflammation of the substance of the uterus or its coverings. Abscess of the ovarium does indeed appear to be a rare disease, but it nevertheless occurs; and indeed, in reasoning on the subject, it would not be easy to account for the difficulty or impossibility of inflammation, and its result, suppuration, occurring in the loose cellular texture of this organ. The following case of this disease will best describe the symptoms and post mortem appearances.

A young woman, aged 17, of the lowest and most unfortunate class of females, was a patient of Guy's Hospital, under the care of Dr. Bright, in the autumn of 1823.

She was greatly emaciated, had a very quick and feeble pulse, a shining red tongue, and constant watchfulness. She suffered from constant and irrepressible diarrhœa, and for many successive days vomited both food and medicine: the catamenia were absent. The case made a considerable

impression on my mind, from the extreme emaciation and colliquative diarrhœa, without any evident symptoms of disease of the lungs or intestinal canal. After having been in the hospital about two months, she suddenly complained of most acute pain over the abdomen, and in a few hours expired.

On opening the abdomen, death appeared to have been produced by the effusion of a large quantity of pus into the peritoneal cavity, which escaped from an abscess in the right ovarium, which abscess appeared to arise from suppuration in the substance of the viscus, similar in every respect to phlegmonous abscess in any part of the body, and not connected with any cyst or change, or addition of structure, the product of morbid growth.

Chronic inflammation of the substance of the ovarium terminates likewise, as in other viscera of the body, by thickening and enlargement of the part. Such cases, after the commencement of the disease, will often remain stationary, and without any inconvenience, for many years. Of this kind of disease the following is an example:

A lady, now about fifty years of age, was confined in India, about twenty-five years ago, with her second child, and soon after delivery was attacked with inflammation of the womb. After her recovery from this severe illness, a tumor was

perceived in the left iliac region, which, from its pressure on neighbouring parts, occasionally produced much pain. The patient came to England, and consulted several medical men of the first eminence. The inconvenience arising from pressure and tenderness in the part was relieved by the repeated employment of leeches and fomentations, and the use of laxatives; and mercurial plaisters were applied in succession over the tumor for several months.

At the present time the tumor is of the size of an orange, perfectly unyielding; may be grasped by the hand through the integuments, and falls over to the side on which the patient lies; occasionally, on rapid motion or fatigue, a dragging sensation is perceived, extending low into the hypogastric region, and to this succeeds great irritability of the bowels, without any constitutional disturbance: all these symptoms entirely subside by rest. This lady, however, never conceived again. She has enjoyed uninterrupted good health for more than twenty years.

Whether the Graafian vesicles are ever affected by inflammation, except when in common with the substance of the ovarium, it would be impossible to determine, except by long-continued and very accurate examination after death. We meet, indeed, in authors, with accounts of the ovarium which has been inflamed having purulent matter

of a healthy character contained in cysts; but no allusion is made to whether this arises from inflammation or suppuration of the vesicles, or is circumscribed abscess in the cellular structure. It is still more difficult to say what is or would be the effect of inflammation of the corpora lutea; that is, of vascular excitement greater than what is necessary for their formation; for their formation may be said to be owing to increased action of the vessels of the part. We have seen that they form in some cases after rupture of the vesicle, independent of impregnation, and that such rupture is occasioned by excited feelings connected with the generative system: hence it is reasonable to expect that any morbid affection of the ovaria dependent on such excited feelings, would have their origin in the corpora lutea. But authors who have hitherto written on this subject have been contented to describe vaguely the appearances, without reference to peculiarity of structure; and in the numerous cases on record in which the ovaria were altered in structure, in conjunction with the terrible disease termed *furor uterinus*, no further information is to be gained than that purulent matter or puriform fluid was found on cutting into the ovarium. The coats of the vesicle, however, in advanced life, undergo remarkable thickening; and instead of containing fluid, are filled with a thick matter of a red colour, from the presence of vessels, sometimes nearly solid, at others of a thinner consistence. This change exhibits on a small scale some of those hard

tumors which are sometimes found in the parietes of an ovarian cyst. Is it not possible that these may be some of the superficial vesicles, having undergone the change alluded to, and magnified by disease?

The fluid which is contained in the Graafian vesicle is liable to disease: it is often red, and even black, from the admixture of blood; and it appears to me, from the following case, that it may become altered from imperfect fecundation.

A woman, *æt.* 31 years, was admitted into St. George's Hospital in November last, labouring under ascites and anasarca, depending on the heart becoming enlarged after repeated attacks of rheumatic inflammation. By moderate blood-letting and ordinary diuretic medicines, combined with mercury, her dropsy entirely disappeared; and feeling no further inconvenience, she was dismissed at her own request, warned, however, that the smallest imprudence would bring back her disease. She remained at home a month, during which time she cohabited with her husband: the symptoms returned; she was admitted again, relieved, but died suddenly six weeks from her re-admission; a death explained by the enormous dilatation of the heart, and an aneurism of the substance of the left ventricle, immediately below the mitral valves. A very curious appearance was found in the right ovary: a collection of serous fluid, about the size of a large pea, contained in a delicate membrane, of an elongated oval form, was found arising from the coats

of the ovarium ; at its origin having a communication with the internal structure, and appearing exactly as if it had escaped from thence : to the other end the fimbriated extremity of the fallopian tube adhered. It appeared to me that a Graafian vesicle had burst ; that, not having freed itself entirely from the coats of the ovarium, it could not pass into the fallopian tube, but remained embraced by that organ, and underwent a partial development.

Such an opinion may appear altogether hypothetical to some, and to others a mistake, from having seen one of the vesicles attached to the fallopian tubes, of which an excellent representation is given in Dr. Baron's last work on tuberculous diseases ; and which have occasionally been described as the real contents of the vesicle after its escape from the ovarium. The fallacy was ably exposed by Haller. In the case of which mention is made here, at the root of the cyst in the ovarium there was a mark of the coats having burst, which communicated internally with an imperfect corpus luteum.

By far the most frequent disease of the ovarium, and of course that which occurs to our observation in practice, is the conversion of this organ into numerous cysts, of various sizes ; or the production of similar cysts, having their origin in some part of the ovarium : and when either the whole or some of these cysts contain fluid, the disease has received the name of ovarian or encysted dropsy. Under the name of ovarian dropsy have also been included

simple serous cysts, formed in the broad ligaments and fallopian tubes*. All these, confounded together under the name of hydatids, are distinguishable from the latter by being nourished by vessels supplying them from the parts in which they are formed, vesicles to which the name hydatid is attached being nourished by their own blood-vessels, or, in other words, having an independent life. Occasionally one or both ovaria are converted into simple cysts; the whole of the cellular substance and vesicles disappearing, that which was the fibrous coat of the ovarium becoming the fibrous coat of the cyst.

The first form of this disease, and the simplest, is from an enlargement or alteration of the corpora Graafiana. At an advanced period of life, on cutting into the ovarium, one or more of the Graafian vesicles are found dilated; and these bodies, generally the size of a millet-seed, become as large as an almond, are filled with limpid fluid, and their internal membrane becomes very vascular. Such is a common appearance; but occasionally they enlarge to a greater degree, and always on the side nearest the proper coat, which becomes distended often to an enormous size†. In this way, it appears to me that

* Plate 8.

† A similar disease affects the ovarium in birds, one or more of the yolk-bags becoming enlarged and distended by the accumulation of transparent white fluid. It has been often seen in domestic fowls.

a large single cyst with a fibrous covering may be formed ; and this is the simplest form of ovarian dropsy, the internal membrane secreting a prodigious quantity of fluid. The same opinion is entertained by Cruveilhier, and expressed in his work on morbid anatomy, still in progress of publication. His words are these ; “ L’ovaire est converti en une poche unique, qui peut acquérir un volume tel qu’elle remplisse la presque totalité de l’abdomen, à la manière d’une ascite. Il est probable que dans ce cas une seule vesicule aura par son developpement effacé le reste de l’organe qu’on rencontre atrophié sur l’un des points de la circonférence de la poche, et confondu avec des épaissemens cartilagineux et osseux.” One or two of the Graafian vesicles undergo this change, when the disease consists of one or two thin cysts filled with fluid.

A married woman, æt. about 60, was admitted into St. George’s Hospital in September 1828, in order to undergo the operation of tapping for the third time in five years, rendered necessary in consequence of the sufferings she experienced from the pressure of the tumor. About sixteen pints of ropy albuminous fluid, of a chocolate colour from admixture of blood, were drawn off. The patient, whose health was much broken, did not rally after the operation ; and she died, as is often the case, not from inflammation occurring after the operation, but with symptoms of exhaustion, a week from its performance.

On opening the body, a large fibrous cyst was visible, pushing forward the broad ligament as far as the fundus of the uterus; and on the opposite side expanding into a sac, which reached nearly to the epigastrium, and contained several pints of coffee-ground fluid. At the inferior part of this sac were the remains of the ovarium, very much shrivelled and imperfect on the surface internal to the cyst. It appears to me that this is a specimen of the cyst which I have endeavoured to describe; an enlarged vesicle, such as we so often see in its earlier stage, pushing forward and gradually dilating the fibrous coat of the ovarium, the remainder of the ovarium remaining attached to the inferior portion of the cyst*.

It is to this form that the name encysted dropsy may be strictly applied, and is the disease which exists so many years without much distress, furnishing, by paracentesis, such a wonderful quantity of fluid. A patient of Mr. Keate's, in St. George's Hospital, in the autumn of 1828, was tapped for the fourth time in three years, and lost seventy-five pints of fluid. She is now alive. But this quantity is trifling compared with the two well-known cases on record, one related by Dr. Mead, and the other by Mr. Martineau, of Norwich; on both of which authorities we can rely.

In the first, the case of Lady Page, the patient

* Plate 7, and plate 8, fig. 1.

was tapped sixty-seven times in five years and a half, and lost 1920 pints of fluid. The second, the case of Sarah Kippus, detailed by Mr. Martineau : in twenty-five years the patient lost by tapping the incredible quantity of 6631 pints of fluid. And here a question presents itself, the solution of which, like so many others in these inquiries, remains yet to be discovered ;—how is life supported, and the solids of the body nourished, when such an enormous quantity of fluid is constantly secreted from the blood ; when a discharge from a wound trifling in comparison, increased discharge from the exhalent arteries of the intestines, or even the slow, but prolonged, oozing of blood in some hæmorrhages, are sufficient to exhaust the patient.

Much solid fibrous structure is occasionally connected with these collections of fluid ; but this form of disease will more properly be considered under the head of malignant disease of the ovarium.

The ordinary symptoms attendant on ovarian dropsy are very various, and by no means severe, and are limited principally to the effects of pressure on neighbouring parts. Where the increase of the disease is slow, the patient often suffers no other inconvenience than from swelling of the leg on the side on which the tumor is largest, or from the unsightly bulk of the abdomen, which she is unable to conceal. Patients have lived in this manner thirty or forty years, with a very considerable enjoyment of the comforts of life, and even the

pleasures of the world*, the accumulation of fluid rendering it necessary from time to time to perform the operation of paracentesis. In cases of this kind, symptoms dependant on unusually rapid increase of bulk, or pressure on any particular organs in the abdomen, occur. Thus heartburn, vomiting, and purging, difficulty of passing urine, or violent and severe head-ache, are met with, which are entirely removed if the bulk of the tumor be reduced. There is a case now under the care of Mr. North, of Berkeley-street, where the patient has for many years been unable to pass her urine, except by the daily use of the catheter; and this appears to arise from the natural situation of the bladder being altered by pressure, and perhaps by the adhesion of the tumor.

When both ovaria are diseased in this way, the catamenia are always absent: when only one ovary is affected, they are sometimes irregular, sometimes absent altogether; but as they continue to occur often throughout the whole course of the disease, in the latter case, when irregular, it is rather the result of secondary constitutional derangement than of the local disease. In many cases the diagnosis of this disease is sufficiently

* One of the most remarkable instances of this is related by M. Frank.—“A case is known of a girl affected with ovarian dropsy, at thirteen years of age, having lived to the age of eighty-eight, notwithstanding the size of the tumor, which occupied the whole of the lower belly.”—*Medecine Pratique de Pierre Frank*, p. 236.

easy. Pain has been felt in either iliac region, succeeded by a tumor, which can be traced low into the pelvis, and the uterus is found on examination dragged upwards by the morbid growth. The history likewise assists us: it has followed miscarriage or delivery; at other times it occurs in females where pregnancy is out of the question, or at a time of life when it is impossible, and yet where the unbroken health renders ascites a very improbable occurrence. Occasionally, however, independently of its complication with pregnancy, it is difficult to distinguish this disease from accretions of the peritoneum with effusion, and still more so from ascites, the result of visceral obstruction; often also it occurs together with ascites.

It appears to me that the following is one cause of the mistake of ovarian tumors (in which some of the cysts, or the whole cavity, is filled with fluid, the parietes consisting of solid matter) for ascites with visceral obstruction. It often happens that the increase of the ovarium is slow at the commencement, and extends by a narrow neck into the abdomen before it is perceived: adhesions take place between it and the neighbouring parts, and from that time the increase of its growth is rapid. Hence, in some cases, the patient persists in having first perceived it in the right or left hypochondriac regions, and the solid portions give to the touch the feeling of enlargements of the spleen and liver, when, if ascites be also present, the combination is very perplexing.

Nor is this altogether hypothetical: it has occurred to me, within the space of one year, to have seen this mistake made thrice by persons of acknowledged talents and experience; and a similar mistake of a very large ovarian tumor, with fluctuation for ascites, is noticed in *M. Cruveilhier's book, already quoted.

When ascites is present, a different feeling is given to the hand on striking the abdomen in front, or in the hypochondria. When the patient lies down, the fluid gravitates in ascites in the hypochondria and lumbar regions; in encysted dropsy, the fluctuation remains circumscribed. It is certainly a mistake to infer, that because in many instances the fluctuation is obscure in encysted dropsy, that such obscurity is rigorously a diagnostic mark of the disease. If there be much air in the intestines, as well as fluid in the peritoneal cavity, the fluctuation will be much more sensible in ovarian tumor than in ascites; and in more cases than one most experienced practitioners have been surprised at the flow of the albuminous dark-colored fluid of encysted dropsy, during the operation of tapping, instead of the transparent serum of ascites, which the very sensible fluctuation had led them to expect. Indeed, on striking the abdomen in encysted dropsy, the fluid often appears as if only separated from the hand by some very thin medium, and this sensation has occasionally led

* Anatomie Pathologique, cinquieme livraison.

to the operation of paracentesis, when no fluid has followed the introduction of the trocar.

This disease, although, in by far the greater number of instances, it continues, when once formed, throughout the whole course of life, occasionally disappears under very remarkable circumstances. An adhesion is formed between the tumor and some portion of the great intestine, and a very large quantity of most offensive purulent fluid, of various consistence, is passed by stool; in such cases the patient often recovers: at other times the same takes place by discharge through the vagina; and several cases are on record, in which the discharge could be accelerated by pressure made on the tumor. How far such a termination of the disease may be influenced by remedies, will be considered hereafter. Occasionally, after adhesion between the cyst and the parietes of the abdomen, spontaneous rupture takes place at the umbilicus, and the contents of the cyst have been discharged through the aperture, and a perfect cure has taken place.

A very remarkable case of this kind is related in the practice of Dr. Mead. A woman with an enormous enlargement of the abdomen presented herself to that celebrated physician, in the hope of obtaining relief. Dr. Mead declared the disease to be incurable; and believing the strength to be greatly impaired, did not think the operation of paracentesis advisable. A few days afterwards,

hearing she was still alive, he visited her, and found two vessels, one holding twelve, the other six pints of fluid, which had escaped by rupture of the sac through the umbilicus, on two succeeding days. The weak state of the patient induced Dr. Mead still to despair of her recovery ; but here again the prognosis was wrong ; the patient recovered ; and as we are not informed that the fluid re-collected, it is fair to infer that the cure was complete.

Through the kindness of Dr. Locock, a case in which an attempt at a termination of this kind occurred, came under my observation last autumn. A woman, of about fifty years of age, had suffered for several years from an enormous encysted dropsy, springing apparently from the right ovarium : a fistulous sinus had formed at the right of the umbilicus, from which the fluid constantly dripped when any increase of the secretion greater than ordinary occurred ; and thus the distention of the patient, otherwise unendurable, was relieved.

Most marvellous accounts are found in books of the sudden recession of this disease : it has occurred from fright, from blows, from sudden exertion, and even without any perceptible cause. It is neither uncharitable nor unfair to suppose, that these were not cases of encysted dropsy, at least in a great majority of instances. In hysteric females, collections of air in the great intestines have often presented at first sight the appearance of encysted dropsy, and obscure fluctuation has been

imagined. Loaded bowels have again been mistaken for this disease; and to shew that the diagnosis is by no means easy, or to be pronounced at once, operations have actually been instituted for the removal of an ovarian tumor, the semblance of which arose from one or other of these causes.

Another termination of this disease is mentioned by many authors, which is very difficult to understand, being contrary to all experience in other diseases. This is the bursting of the cyst, and the discharge of the fluid into the peritoneal cavity, when it becomes absorbed by the lymphatics of the peritoneum. The bursting of an abscess into the peritoneal cavity is uniformly fatal, the smallest perforation of the intestines permitting the escape of air, or faecal matter, or the effusion of urine into the abdominal cavity, fatal, and the bursting of encysted tumors of the ovarium into the cavity of the peritoneum has been fatal in three cases within my own knowledge.

On the other hand, the experiments of Majendie and Blundell prove, that bland fluids may be injected into the peritoneal and pleural cavities of animals without necessarily inducing death, and the albuminous fluid contained in some ovarian cysts may be supposed to be little irritating. Women have, as has been observed, received blows while laboring under this disease, and the complaint has disappeared without any corresponding evacuation. The contents might indeed have been absorbed.

The absorption of considerable quantities of purulent matter in phlegmonous abscess, is a cause of frequent astonishment.

Considering, then, the fatal event which arises from the bursting of abscesses or extravasation of fluid into the cavity of the abdomen on the one hand, the great power exercised, and sometimes suddenly exercised, by the absorbents, on the other, it would appear most probable that in the cases of sudden disappearance of the fluid after blows or accident, the latter is the real cause of its removal.

There is, however, a remarkable case relating to this subject, mentioned in his lectures, by Dr. Blundell, who is too well known as an accomplished physiologist and a physician of most extensive experience in these diseases, to have his authority lightly considered.

He relates that a lady afflicted with this disease, falling from a carriage, struck her belly against a stone; a considerable discharge of urine occurred. She recovered, married, and dying subsequently of retroversion of the uterus, the cyst of her former complaint was found to have burst, and its contents, effused into the abdominal cavity, to have been absorbed.

From what we have already said, such a termination must be esteemed as of very rare occurrence,

and we must still consider rupture of the cyst as attended with the highest possible degree of danger to the patient.

The peritoneal coat of the ovary is subject, like other serous membranes, to thickening and tuberculation. In other instances the proper coats of the ovarium undergo chronic disease, being changed into a substance exactly resembling cartilage, and often considerable depositions of bone are found on its internal surface. The ovaria are found hardened in advanced age, by deposition of bone in their substance, and we read in authors of instances in which the whole viscus was entirely converted into bone. These latter cases have not occurred to my observation, neither are there any such in the various museums of morbid anatomy in this city.

It would appear that such an entire change is very rare.

Scrofulous disease is found occasionally affecting the ovaria, especially in young girls, the uterus and fallopian tubes participating in the disorganization produced by this disease. It occurred to me to see in the case of a young girl, fourteen years of age, who died in consequence of phthisis pulmonalis, and was likewise affected with scrofulous disease of the knee-joint, the fallopian tubes completely stuffed with curdy matter, and a scrofulous abscess was

seen excavating the fundus uteri. Unhealthy matter, mixed with portions like cheese, is found likewise in the ovarium, and such persons, in the few cases observed by me, have never borne children. Scrofula may, however, only attack one ovarium, and barrenness would clearly not be the result.

In one case where this disease existed in the right ovary and tube, the patient had during life been affected with intense pain in the sacrum, and inability of walking. Cupping on the sacrum with injections, with conium and the use of warm bath, relieved the symptoms; but the patient never entirely recovered, and died with a very aggravated form of phthisis pulmonalis.

Schirrus of the Ovarium.

It is impossible to conceive any signification more vague than the sense in which the term schirrus is used, when applied to diseases of the ovarium. If taken in the comprehensive meaning in which many authors have employed it, it represents equally the degeneration of the ovarium by age, and the enlargement of the ovarium by the deposition of any solid structure; and is often applied to that form of ovarian disease in which a portion of the tumor is solid, and a portion made up of cysts filled with secretions of various consistence. In speaking here of schirrus of the ovarium, it will

be restricted to that form of disease which falls under the description of Dr. Baillie, and which is far the most accurate which has appeared in writings of authors on the subject.

“The ovarium (says Dr. Baillie) is much enlarged in size, and consists of a very solid substance, intersected by membranes, which run in various directions. It resembles exactly in its texture the tumors which grow from the outside of the uterus, and I believe has very little tendency to inflame or suppurate.” The ovaria are seldom affected by the disease.

A very remarkable specimen of this disease is in the possession of my friend Dr. Robert Lee, who has kindly communicated to me the symptoms during life.

August 9th, 1828.—“At Blandford Mews I opened the body of a woman upwards of seventy years of age, who had died, after long suffering, from a tumor in the hypogastrium, with ascites. An induration was first perceived in the abdomen, between the naval and right ilium, nine years ago, after she had suffered considerably for some months from sense of weight and dull pain in this situation. The size of the tumor gradually increased, and about eight years ago (the belly being greatly distended with fluid), the operation of paracentesis abdominis was performed by Mr. Blagden, and several

pints of water were drawn off. In the course of the succeeding years the operation was frequently repeated; but the quantity of fluid evacuated gradually diminished, whilst the large indurated moveable mass came to occupy the whole of the lower part of the abdomen. She sunk gradually, from the interruption to the circulation caused by the tumor."

Sectio Cadaveris.—"On opening the abdomen there was found attached to the fundus uteri, on the right side, an ovarian tumor, weighing seven pounds, of a dense and fibrous structure. Several large cysts, containing a fluid varying in color and consistence, adhered to the upper surface of the tumor. The peritoneum, in contact with its anterior surface, was converted into a cartilaginous substance, about a quarter of an inch in thickness. In the proper tissue of the uterus, at its fundus, was observed a fibro-cartilaginous tumor, about the size of a large orange. In other respects the uterus was healthy."

These schirrous tumors are said never to ulcerate. We meet indeed, occasionally, in foreign writings, with descriptions of cancerous ulceration of the ovaria; but it would be difficult to attach any definite idea to an alteration the description of which applies as well to encysted dropsy, or any soft fungoid alteration of structure, as to ulcerated schirrus. In the Museum of the College of Physicians, however, is a preparation which has received the sanction of Dr. Baillie as a specimen of this

rare disease. It is a section of a schirrous ovarium (resembling more a section of schirrous testicle than the ordinary appearance of the ovarium under this disease), which was in various parts beginning to soften, the substance breaking down into thick brown fetid fluid. This preparation was taken from a patient who died of cancer of the stomach ; and Dr. Baillie says, in his catalogue, is the same disease. It does not appear whether any distinguishing symptoms, either of the locality of the disease or its peculiar nature, existed during life *.

Malignant or fungoid Disease of the Ovarium.

The formation of the next, or most complicated forms of ovarian tumor, is very difficult to explain. They consist, first, of numerous cysts, with more or less fluid contents, sometimes with bony or earthy matter contained in them ; often a fatty secretion, resembling lard ; sometimes penetrated with long fine hair, without bulbs ; but more frequently filled with albuminous secretion of varying tenacity and color. Sometimes these secretions resemble gruel in appearance : there is often matter like soot mixed with the fluid. At other times the secretion is the color of mahogany, from admixture of blood ; and not unfrequently the liquid evacuated from one of these cysts, by the trochar, resembles, in consistence and color, the medicine well known under the name of Griffith's mixture.

* Plate 9, fig. 1.

2dly. A single large cyst springs from the ovarium, and contains within it tumors varying from the size of a pin's head to that of an orange. Sometimes the great portion of the parietes of the cyst consists of tumors growing between the external and internal, or secreting coat, the interior of the cyst having the tumors projecting into it, being filled with fluid secreted from the serous lining. The tumors, when cut into, present a semi-fluid gelatinous substance, with white bands running through it, between which bands are smaller cysts, containing the same viscid glue-like matter.

Whether the first of these forms of diseased structure be or be not strictly referable to that class of diseases to which pathologists have assigned the appellation malignant, it is difficult to determine. The second variety, however, assuredly comes under the name of fungoid or malignant growth. All the generative system is notoriously obnoxious to this disease. The testicles in man, the mammæ in women; and that the ovaria should be exempt from such a change, would be a strange deviation from general laws.

The simultaneous occurrence of this disease with acknowledged cancerous or fungoid disease in other parts of the body, as of the pylorus, lymphatic glands, and even bony and muscular parts, will be shewn in the cases to be related.

These diseases frequently lead to a rapidly fatal termination, and are accompanied by that extreme sense of debility, and bloodless appearance of the body, so characteristic of malignant disease.

It has been said that many of these cases last for many years without making any progress, whereas acknowledged malignant disease is constantly proceeding towards a fatal issue. Of many forms of ovarian disease, as simple cysts and schirrus, this is undoubtedly true; but of the kind in question, it may be doubted whether it exists, even in extreme cases, more than a few years, and is often fatal in a few months; and the same may be said of malignant diseases in other parts of the body. Cases are not only on record, but within my own knowledge, of persons living more than three years with fungoid disease of the stomach, with malignant disease of glandular parts, and even longer, where these diseases attack the extremities; although, in the majority of cases, their course is run in the space of a few months.

Monsieur Cruveilhier has detailed a case of this form of disease occurring in conjunction with cancerous ulceration of the stomach, and evidently considers it to be a similar affection. “C’est, en effet, dans les catégories de cancers aréolaires et gelatini-formes que se classe le kyste de l’ovaire (the one described) cancers qu’on a désignés sous le nom

impropre de colloïdes, et qui ne diffèrent du cancer aréolaire et gélatiniforme de l'estomac et des autres tissus, que par la capacité de ses mailles*."

The malignant form of the disease may be recognized during life, by the want of nutrition and broken health of the patient, the unevenness and rapid growth of the tumor, the simultaneous enlargement of glands in other parts of the body, and the occasional occurrence of lancinating pains in the part. The latter symptom is not constant. The pulse is quick and feeble, and as the disease proceeds there is hectic fever, and often aphæ in the mouth, with an inexpressible sense of debility.

The presence of fungoid disease of the pylorus, mamma, or cervix uteri, together with disease of the ovarium, would place the nature of the latter almost without doubt.

We may here notice the views entertained on the formation of these tumors by two physicians, one of whom has devoted many years and much labor and erudition to the subject; and the other of whom appears likely to make very important improvements in the inquiry,—improvements which can alone result from time, opportunity, and talents—Dr. Baron and Dr. Hodgkin. Dr. Baron's assiduity and zeal have long been known to the public; and I cannot forbear

* Cruveilhier, cinquieme livraison Anatomie Pathologique.

offering my testimony of admiration to his original observations and learned writings.

Dr. Baron, following some rather indistinct views brought forward by Boerhaave and De Haen, conceived that the tumors we have just been describing were hydatids, whose contents became more or less inspissated by time, and whose coats underwent changes of different degrees of density, from simple thickening to cartilage. The contents became colored also, by the rupture of blood-vessels: and, by this simple view, he accounted for all the various secretions with which these tumors were found filled. For the sake of avoiding argument as to the independent life of hydatids—argument quite unnecessary, as Dr. Baron thinks, to the pathological reasoning—in his last publication he has substituted the word vesicle in their place, as being liable to no such cavil.

Dr. Baron ascribes the formation of these vesicles to a change in the lymphatics of the part; the extremity of a lymphatic being closed, and thus forming, when distended with fluid, a pyriform vesicle, or the vesicle being formed at the intersection of numerous lymphatic vessels; of course this latter occurs oftener in the parenchyma of a viscus than on the surface. He applies this reasoning in detail, to account for the formation of malignant tumors in every part of the body. A practical observation is derived from the experiments of Dr. Baron, which may lead to

important results,—that what we call malignant disease (cancer, fungous hæmatodes, medullary tubercles), may be produced in any animal by bad nutrition, arising from bad air and confinement. These conclusions of Dr. Baron can be strongly corroborated by my own experience. In the course of last summer I was employed in dissecting several animals which died in the menageries of this city, principally with a view to the physiological observations in the first chapter. Almost without exception animals of the classes mammalia and birds died of tuberculous disease, affecting all the viscera of the body. The tubercles were principally of the kind which we call *tubera circumscripta*, and which have received in the French school the name of “*encephaloides*,” and are found often affecting internal viscera, when cancer affects the glands or extremities. Seclusion in close cages, bad ventilation, and a want of their natural food, had produced this result. Does not this lead to the conclusion, that free air and nutritious diet, with an approximation to natural habits, is the course most likely to save those who are attacked, among our own species, by tuberculous disease?

Dr. Hodgkin's views, that encysted tumors of the ovarium, as well as malignant tumors, arise from the development of serous cysts, have a considerable similarity to those of Dr. Baron. Dr. Hodgkin's labors are not yet entirely before the public; it is therefore improper to comment long on them.

They are well worthy, and will doubtless receive, the attention of the profession. Dr. Hodgkin, as far as our present subject is concerned, conceives that a large cyst, which he calls the superior cyst, is first formed, from the inside of which tumors grow, of different sizes and shapes, pushing up the internal membrane of the superior cyst, which is reflected over them, as the pericardium and pleura are in the natural cavities of the body, lined with serous membranes. These secondary cysts contain smaller. Sometimes these smaller grow so fast as to strangulate one another, and the death of some of them causes altered appearances in the secretions of the parts. Sometimes they burst through the reflected membrane, and present a fungoid and fringed appearance, which may be seen in preparations in most collections of morbid anatomy.

These views are very clearly and scientifically expressed in Dr. Hodgkin's paper: they do not, however, go to the extent of explaining the constitutional origin of the disease. In this respect Dr. Baron has gone further, referring these changes to disease in the absorbent system.

A few cases of this formidable disease, with the appearances after death, will best explain its severity, and point out the occasional rapidity of its progress.

A lady, æt. 30, of a remarkably spare habit of

body, but who had never been attacked with any illness except the ordinary diseases of infancy, was delivered of her third child in June 1827. In September following she first perceived a tumor, of the size of a small pear, in the left hypochondrium. It was productive of no pain, and excited no uneasiness; nor did the constitution (with the exception of a few dyspeptic symptoms) appear to suffer from it. Suddenly, in the month of November, the whole abdomen became distended. A solid tumor, occupying the whole left side of the abdomen, was observed, on examination; and a considerable fluctuation was perceived on striking the right side with the fingers. The patient was unable to lie down in bed, or on either side; the pulse was extremely quick and feeble; and there were accessions of fever in the evening, followed by profuse sweating: the urine was very scanty, and high colored; the bowels regular, but distended with flatus: total loss of appetite and sleep.

The patient was visited by many of the most eminent physicians and surgeons in London; and the resemblance in the form of the tumor in the hypochondrium to enlargement of the spleen, together with the rapid formation of fluid, induced a very general opinion, at one period, that the disease arose from enlargement of that viscus and subsequent ascites. From the great pressure experienced, occasional vomiting, heartburn, and flatulence, not

relieved by ordinary remedies, and, at length, the necessity of passing the whole night in the sitting position, the operation of paracentesis was had recourse to, and about twenty two pints of ropy fluid, with the admixture of shreds of lymph, and dark matter, like soot, were drawn off. Much temporary amelioration followed; but the patient was unable to pass a month without the operation of tapping,—an operation which each succeeding time became more difficult, from the increase of the solid tumors in the abdomen. During the last months symptoms of inflammation of the sac repeatedly occurred, attended with a rapid and very weak pulse, apthæ in the mouth, vomiting, heart-burn, a total inability of lying in a recumbent posture, with distress from distention in the greatest possible degree. Temporary relief was afforded by the spontaneous re-opening of one of the incisions made by the trocar at a former period, from the distending force within, so that two or three pints of puriform fluid escaped daily from the orifice.

The gradual loss of strength from this constant discharge, and the symptoms of inflammation of the serous membrane lining the sac recurring, the patient expired in May; the disease having appeared and run its course, with a severity which never occurred to me to witness, in six months.

The body was opened by my friend, Mr. Cæsar

Hawkins, in the presence of Dr. Warren and myself; and the following is the description of the appearances, drawn up by him :—

A large tumor occupied the place of the left ovary, and filled the cavity of the pelvis, and great part of that of the abdomen. It was completely adherent to the front and left side of the abdominal parietes, and to the back part also on the left side, nearly as far as the vertebræ, the muscles being very thin, and having partly begun to assume the same appearance of malignant disease which the tumor itself possessed. Great part of the tumor was solid, being composed, for the most part, of transparent white gelatinous substance, with membranous partitions, containing a number of globular cysts filled with the same jelly; some others with thin transparent fluid; and one or two portions of the tumors being yellow, and harder in consistence. The greater part of the solid tumor was situated on the left side, close to the parietes, and extended from the pelvis to the ribs: but masses of the same appearance, and varying in size from that of an orange to a pea, were scattered around the principal cavity which had been tapped, and which was filled with thick purulent fluid. The whole of the external surface of the cyst and of the tumors was smooth and uniform; but the internal surface was very irregular, from the projection of these numerous globular portions of tumor into the interior of the cavity; and this internal surface was in a very

vascular state, while sections of the tumors exhibited very few vessels. The inflamed appearance of the principal cavity was much greater than is usually met with in the malignant disease of the ovarium.

The peritoneal surface of the cyst, and that of the contiguous intestines, were much inflamed, and covered with masses of recent lymph, and the cavity of the peritoneum contained a few ounces of serum ; but, except at the lower part, and where it was thus in contact with the cyst, the inflammatory appearance of the peritoneum was inconsiderable. The abdominal viscera were raised by the tumor high within the chest, and pushed across to the right side and upper part of the abdomen, but were otherwise healthy. The right ovarium was much enlarged and hardened, but did not present any appearance of malignant disease.

The next case is one for which I am indebted to Dr. Henry Davies, who was much struck on witnessing the *sectio cadaveris*, with the perfect resemblance presented between this case and the drawings (plates 12, 13) made from the one which I have just related.

In October 1828, Dr. Davies was called to see Mrs. J., æt. 45, of a full habit, sallow complexion, complaining of violent pain across the loins, with copious watery discharge from the vagina. These complaints had existed eight months ; but she had

felt a degree of uneasiness in the region of the uterus nearly four years. The catamenia had ceased a year before the present visit; bowels regular, pulse 76 to 80, urine free. On examination per vaginam, the os uteri was not tender to the touch, but the uterus was enlarged anteriorly. She was much relieved by local abstraction of blood, mild aperients, narcotics, and the tepid bath, during two months. On the 17th December she was attacked with violent and excruciating pain of the back, inferior part of the abdomen, and internal parts. The uterus was much increased in size, os uteri very sensible to the touch, and somewhat open.

On the 28th December, and 18th of January, consultations were held on the case, the result of which was, that the uterus was enlarged either throughout its substance, or some body within distending it. The os uteri being distended, the orifice half an inch in diameter, and the cervix uteri obliterated, the tumor was not so hard as carcinoma, nor so firm as fleshy tubercle. The question then arose whether it was polypus, or medullary sarcoma?

At the end of January the patient was seized, after an interval of tranquillity, with most excruciating pain, accompanied with violent expulsatory efforts. Several lumps were discharged from the vagina, small portions of which remaining, presented a ragged appearance, somewhat fleshy.

After this the uterus became much diminished in size; the os uteri regained its natural state, and was by no means so sensible to the touch; but a tumor was now found, on examination, apparently external to the uterus and posterior to it, between the uterus and sacrum, in the recto-vaginal septum, rather more than an inch above the cervix uteri, of a nodulated shape, covered by the membrane of the vagina. The report on the 17th February was, that she had had one violent paroxysm since the last report; pulse 84; bowels and urine regular; discharge less offensive; pains less frequent. On the 25th the tumor posterior to the uterus was much enlarged, projecting below the os uteri, which appeared puckered. The tumor is now perceptible above the brim of the pelvis, its apex, in the left iliac and inguinal regions. The patient has lost flesh, and the complexion is still more sallow. In March the tumor was enlarged, and apparent above the brim of the pelvis, at the right groin. In June, having been to the Bank on urgent business, on her return the patient was attacked with rigor, followed by severe abdominal pain; the third day after which she died.

Sectio cadaveris.—The immediate cause of death was an attack of enteritis. The parietes of the abdomen were fat; and the omentum loaded with fat, and adherent, by its inferior edge on the right side, to a tumor. On removing the omentum, the intestines were found much distended with air, glued

together by effusion of lymph, and about three pints of whey-colored serous fluid in the cavity of the abdomen. The uterus was enlarged, and its fundus situated above the brim of the pelvis, in the left inguinal region: the left ovarium and fallopian tube sound; the right merged in the tumor. Under the peritoneal coat, near the fundus, several fibro-cartilaginous tumors were found, of a dense structure and yellowish color. Occupying the right iliac and lumbar regions was a large tumor, with an irregular and lobulated surface, varying in color from a light red to nearly black. It adhered to the caput coli and all the adjacent parts, filling nearly the whole of the pelvic cavity, passing behind the uterus, between the rectum and vagina, forming a projecting tumor in the vagina, pressing the uterus upwards and forwards towards the left side. This irregular mass, when cut into, and which appeared originally to be formed of the right ovarium, presented a great variety of appearance, of which it is difficult to convey an accurate idea. In some parts there were irregular-shaped cavities, containing a soft matter, having the appearance and consistence of brain, in some parts of gelatinous consistence: no part appeared organized or cartilaginous. When the soft matter was washed away, a large mass of fibrous matter, similar to that on the uterine surface, remained. On opening the uterus the os uteri was found entire, but soft and altered in structure: the cavity of the uterus contained a

quantity of dark ash-colored purulent fluid. The whole original texture of the uterus was diseased, a ragged fibrous substance, of fungoid growth, springing from its surface throughout. Several small fibro-cartilaginous tumors seemed growing also from its inner surface. The original fungoid growth which the uterus contained had been expelled from time to time, which afforded momentary relief from the occasionally insufferable pain which the patient endured.

The next case is of a similar character, but complicated, from the presence of more fluid in the cyst, and from its interruption to the circulation by the pressure of the tumor, producing also ascites.

Mrs. B., æt. 48, was admitted into the Asylum for Recovery of Health, March 18th, 1828, to undergo the operation of tapping, which was performed by Mr. Hawkins. The medical treatment of the case came under my care during the short time she remained in the house.

Swelling commenced about twelve months since, on the left side, and gradually increased until the present time, producing by its pressure considerable distress, and preventing her lying horizontally. She has never used any medicine. Fluid is very perceptible in every part of the abdomen; but on the right side a line of thick cyst is perceived, dis-

tinct from the general fluid, extending from the ribs to the spine of the ilium. Her countenance is very sallow and unhealthy, as of a person laboring under malignant disease.

She was tapped in the linea alba, by which twenty-one pints of fluid were evacuated. Half this quantity came from the cyst, and was thick and turbid. The fluid then ceased to flow, till, on introducing a director, the cyst was held back, so as to allow the evacuation of the remaining fluid, which was thin and clear, and evidently came from the cavity of the peritoneum. Some solid tumor remained, chiefly perceptible where the hard ridge was felt before the operation. For two or three days afterwards she suffered much from tenderness of the abdomen, having a brown tongue and other symptoms of irritation, which were subdued by opiates, with ammonia. She was afterwards twice tapped by the late Sir P. Macgregor, and died at the beginning of the following October.

The peritoneum contained some fluid, in addition to that contained in the cyst, which was thick, with large veins on the surface, but not inflamed. The tumor occupied the place of the left ovarium, no trace of which remained: the fallopian tube was free, and extended over the tumor. On the side of the tumor next to the uterus, and on the upper part, the walls of the cavity were formed by solid matter, for the most part white, and nearly gelati-

nous in consistence, but containing some brown substance. The inner surface of this solid mass, projecting into the interior of the cyst, was ulcerated, and loose portions hung into the cavity. The right ovarium had undergone the change usually perceived in advanced age.

The ovarium, when enlarged or diseased, occasionally falls down between the uterus and rectum, producing obstruction to the evacuation of fæces or urine, and has given rise, in rare instances, to mistakes during parturition. Occasionally the diseased ovarium adheres, by its peritoneal surface, either to the rectum or posterior surface of the uterus. Of this the following case is an example, and likewise an additional one of malignant disease, both from its peculiar alteration of structure and the co-existence of schirrus of the intestine.

Margaret Webb, æt. 52, married
admitted into St. George's Hospital,
under my care, June 11th, 1829.

She has had no evacuation from the bowels during more than a month. On examination per vaginam a tumor is found, about the size of an orange, adhering to and external to the upper part of the vagina, and pressing on the rectum so as to render the passage of a gum-elastic tube very difficult, and the ordinary administration of enemata impossible. Two months ago she was attacked with severe pains

in the right hypogastric region, which, she said, resembled labor pains. She is not now troubled with similar pains. On further inquiry, it appeared she had been affected with constipation, which gradually became more severe for two years. The countenance was pale and sallow, the pulse quick and weak, and the tongue furred. By means of the patent syringe, enemata were repeatedly employed without success, and a gum-elastic tube passed up ten inches, but no relief was obtained. My friend and colleague, Mr. Babington, endeavoured to return the tumor, believed to be the ovarium, to its right situation; and the adhesion, with very slight pressure, gave way, and the tumor immediately receded out of reach. One of the small cysts, however, gave way during the operation, and effused its contents into the abdominal cavity. Inflammation of the peritoneum followed, and the patient expired.

On opening the body, the peritoneal covering of the bowels was seen much inflamed, and the convolutions of the intestines glued together by recently effused lymph. The upper portion of the intestines were greatly distended by fæces. Opposite the commencement of the first lumbar vertebra, the great intestine was found much thickened, to the extent of nearly three inches; and at the centre of this thickened portion the cavity was so entirely obliterated that even fluid could not be made to pass through it. The internal surface of the thickened

intestine was partially ulcerated. On examining the uterus, the right ovarium was found changed into a mass of soft matter not very dissimilar to the substance of the brain. This matter, more or less fluid, was arranged in cysts; one of which having given way, in the endeavour to restore the ovarium to its natural position, had poured out its contents into the peritoneal cavity. The tumor had adhered to the posterior and inferior part of the fundus uteri, by the opposite peritoneal surfaces, thus forming the tumor felt on examination per vaginam.

The next case was one of similar disease of the ovarium, with the addition of the presence of sebaceous matter in the cyst, mixed with long fine hair.

A. P., æt. 50, who had never borne children, was admitted into St. George's Hospital in May last, under the care of the late Dr. Young; in consequence of whose illness, and subsequent death, she became my patient. She had been ill a twelve-month. The abdomen was much distended, and hard irregularities were very perceptible; especially a remarkable one a little above the umbilicus, on the left side. Fluctuation below the umbilicus was very distinct, as much so as in the most marked case of ascites; pulse 100, and not weak; occasional very severe pains in the tumor, with dragging sensation in the hypogastric region, and evening accessions of fever.

Leeches and fomentations, and subsequently

opium, relieved the pain, and from mercury in small doses, combined with opium, considerable temporary relief was obtained. The use of iodine was obliged to be discontinued, from its employment being rapidly followed by inflammation. Leeches were again repeatedly used, but the degree of distention rendered the operation necessary in May, and about sixteen pints of thick albuminous fluid, resembling water-gruel, mixed with shreds of lymph, were drawn off. The relief obtained from the operation, and the subsequent use of opiates and occasionally leeches, brought the patient into a condition to return home, and at her own request she left the Hospital.

In the month of August she died, having desired her friends to request me to be present at the opening of the body.

The body was opened twenty-four hours after death, by Mr. Hawkins, assisted by Mr. Johnson. A large tumor occupied the place of the left ovary, adhering to the parietes of the abdomen on the forepart, so that no peritoneum was perceptible in that situation; adhering also to the omentum and to several folds of small intestines, but capable of being dissected from them. *The fallopian tube, of double its natural length, turned over the side of the tumor, and near it a small tumor projected from the external surface of the large one, of a dark

* Plate 14.

color externally, but like schirrus within. The principal tumor consisted of a very dense cyst, thickened still further in three or four parts into distinct tumors, about an inch and a half in breadth, but not projecting much either from the outer or inner surface of the cyst. On being cut into, these tumors, which were circular, and from three to four inches in diameter, were firm and like cartilage, and some fluid escaped from irregular cavities exposed by the section. The cyst contained about six pints of thick white fluid, resembling urine in odour, at the bottom of which were several masses of soft white unctuous substance, exactly like fresh butter, and amounting to about eight ounces; and enclosed in some of this substance was a mass of soft matted hair, the mass being about four inches long and two and a half broad*.

The uterus appeared healthy, but a quantity of schirrous substance lay by the right side, and adhered to the body of the uterus, whence it reached to the side of the pelvis and a little above the psoas muscle: this tumor appeared to be formed in the broad ligament, but no ovarium or fallopian tube was distinguished on it: there were three oblong thin vesicles, containing serum, attached by one end to the peritoneum behind the pubis and above the bladder, and a similar bag was situated on one side of the omentum: these vesicles resembled hydatids in transparency, but were distinctly vas-

* Plate 11, fig. 2.

cular. The intestines were dark-colored and vascular, and the omentum was quite black, as if colored by the matter from a tumor of the kind called melanosis, as was also the upper part of the tumor, where attached to the omentum; but none of this peculiar structure was found.

The liver was firm and irregular on its surface, but not distinctly granulated.

A woman, æt. 55, who had never borne children, was admitted into the Asylum for Recovery of Health, in order to undergo the amputation of the left leg for a malignant growth, taking its origin (as it afterwards appeared) in the medullary membrane of the tibia. The disease extended so far as not to render this only chance of recovery available. The patient died. On inspecting the body, both ovaria were found enlarged, nothing remaining of the original structure of the right but the peritoneal and fibrous coat, and the cyst thus formed was filled with a thick fatty secretion of a deep black color, from the presence of carbonaceous matter.

Fœtuses are occasionally developed in the ovary, where some obstacle has occurred to the escape of the impregnated vesicle. There are several cases on record. A very beautiful drawing of such a case, with the account of it, is to be found in the Philosophical Transactions, from the pen of Dr. Granville.

One of the most frequent morbid appearances connected with the ovarium, arises from tumors either in the substance of the ovarium or attached to it by a peduncle, containing hair and adipose matter, and embedded in some portion of the mass or the fibrous membrane which surrounds it: a portion of bone is often observed, sometimes part of an alveolar process containing one or more teeth, and occasionally a well-formed jaw with perfect teeth.

There are a great number of cases of this peculiar condition of the parts on record, and one well known, described by Dr. Baillie in the *Philosophical Transactions*. A case also occurred recently in St. George's Hospital: a woman, about thirty years of age, some weeks after delivery, having been admitted under the late Dr. Young, with symptoms of enteritis, which speedily proved fatal. The inferior portions of the small intestines were found inflamed, which inflammation appeared to have been excited by the presence of a tumor, of the size of a large cricket-ball, which had been attached by a narrow neck to the posterior part of the left ovarium. Its proper coat was of a fibrous texture, and of a purple color, and inclosed a mass of sebaceous matter, penetrated throughout with long fine hair; after removing which a full-grown incisor tooth was found attached to the fibrous coat. A very important question arises from the consideration of these growths—How are they produced? and two

opinions have been adduced to account for their formation.

1st. That they are imperfect conceptions, congenital with the being in which they are found.

2dly. That an ovum has been imperfectly impregnated (in the being in which they are found), or at least blighted after impregnation, so that an imperfect produce has been the result; and the fact that in several cases they have first been observed after parturition, would tend to confirm the opinion. On the other hand, Dr. Baillie's case occurred in a virgin child previous to puberty; Mr. Nicholls's case, described by Mr. Younge, in the *Philosophical Transactions*, likewise in a virgin.

In such cases impregnation was out of the question. In addition to this, teeth and hair have been found in parts of the body which have nothing to do with the generative system. Rusch found teeth in the stomach of a boy; Mr. Coleman in the loins of a gelding; Mr. Brodie, a jaw, with full-grown teeth, in the bladder. Dr. Gordon, in the thirteenth volume of the *Medical and Chirurgical Transactions*, describes teeth and hair to have been found in the anterior mediastinum.

The knowledge of such cases has led to the opinion, that these appearances arose from an imperfect conception in the mother of the animal in

whose body they were found: instead of a monstrous birth, or a perfect twin conception, a perfect foetus, with a portion of the rudiments of another, generally attached to the generative system, but occasionally found in other parts, was produced. To this it has been objected, that the parts in question grow and become more developed, but that they should remain nearly stationary if formed in the manner which it has been attempted to describe. It is probable, however, that they are susceptible of growth with the part in which they are embedded, as they are nourished by the same vessels, and subject to the same laws of absorption. That they attain often a very considerable and sudden development when attached to the ovarium, is certain; but it must be remembered that this frequently occurs after the parturition of the female in whose body they exist: during gestation a very considerable afflux of blood has been determined to these parts, of which this attached mass will have received a portion. On the whole, therefore, I am strongly inclined to believe that the first opinion is the true one, and that these bodies are the result of an imperfect conception in the mother of the individuals in whom they are found.

CHAPTER III.

ON THE TREATMENT OF DISEASES OF THE OVARIIUM.

IF it were difficult to explain the structure, and point out the diseases of the ovaria, that difficulty is greatly increased when we come to the treatment of the latter. The manner in which the therapeutic agents produce their effects, varied as it is by the different quantity of strength or sensibility possessed by individuals, is still wrapped in mystery even in this country, which possesses a far more powerful number of remedies, and a far more extensive experience, derived from the fearless employment of them, than any other nation in Europe.

The abundance and employment of therapeutic agents in this country has not escaped the observation, nor failed to excite the wonder of our continental neighbours. In his remarks on English practice of medicine, one of the most celebrated among them, both for liveliness of imagination and extensive learning; and one who, however we may differ from him, may fairly be considered as a man of very superior talents; M. Broussais, after abun-

dance of raillery, in which his countrymen so much excel, has not failed to express his belief of the advantage one day to be derived by society from the "frightful boldness," as he terms it, with which calomel, resin, turpentine, colchicum, the æthers, &c. are administered; and there can be no question in the minds of those who have resided several years on the continent of Europe, that the knowledge of the effects produced by the active remedies of our pharmacopœia, particularly those drawn from the mineral kingdom, with few exceptions, is yet in its infancy there.

To the diseases of the ovaria generally, and to the particular enlargement or addition to them, consisting in cysts, containing sometimes fluid alone, and at other times secretions of different consistence, several remedies have been proposed, but in general they have been looked upon as nearly beyond the reach of art; and an acknowledged case of ovarian disease is one which the practitioner is content to observe, and is satisfied if no symptoms except what may arise from inconvenient bulk exist. If, after considering *seriatim* the diseases of this organ, we proceed to seek for remedies for its various affections, we shall find that we possess very powerful means of subduing disease, and still more effectual ones of calming and alleviating the distress arising from an acknowledged incurable state.

Without undervaluing the great importance of

morbid anatomy, or of minute attention to diagnosis, it may in this place be permitted me to express a hope that those singularly attractive pursuits which seem, as it were, to lay open before us the whole page of nature, tracing the first change from health to disease, and the termination of disease in disorganization—flattering the sanguine observer sometimes that he has been right in his ideas throughout all the fluctuating symptoms of the complaint; at other times visiting him with the humiliation of having laid too much stress on particular points, and thus exciting his pride to more close observation—it is to be hoped that such pursuits, universal at present, will not entirely absorb the powers of the mind in professional men, and draw them from the investigation of the action of therapeutic substances.

Where would have been the improvement of our profession, as a curative art, if our predecessors had been contented with investigating alone symptoms during life, and connecting them with appearances after death? The most powerful agents—those agents which, when properly employed in disease, can all but confer life; those valuable inductions from the introduction of poisons into the constitution, one of which has stamped immortal honor on the art of medicine in this country—would have been lost; and the science reduced to the sad condition of conveying to the observer only a better and more accurate knowledge of the nature

and fatality of disease—only a stronger and more mortifying lesson of mortality.

Inflammation of the acute form attacking the ovarium, as has been observed, does not differ in the treatment required from inflammation of the peritoneal coat, and seems best relieved by local depletion, such as cupping on the loins and sacrum, the use of the tepid bath and opiates. It is true, the tepid hip-bath appears to be inadmissible, from drawing a larger quantity of blood to the neighbourhood of the affected part; but this is counterbalanced by the relief experienced from the tension and dragging sensation felt when inflammation attacks a membranous or fibrous structure. Perfect rest ought to be enjoined, and the recumbent posture observed, during the continuance of the disease, without which the foundation may be laid for very extensive organic mischief.

Where abscess in the ovarium adheres to the neighbouring viscera of the rectum or vagina, the care of the physician is required to support the strength during such an evacuation. This indication is to be fulfilled, (and more than one such case is in my remembrance), by bark, light and nourishing diet, and attention to keep the bowels open by means least likely to produce irritation. Here, again, rest and pure air are of the most essential service.

In scrofulous disease of the ovaria, which, I apprehend, seldom occurs without symptoms of a similar disease in other organs of the body, those remedies which invigorate the health, as pure air, nourishing diet, a mild and equal climate, and alkaline medicines, seem best adapted. In the few cases which I have seen, very acute pain has been always felt in the region of the uterus; acuter pain than perhaps in any other affection of these parts, except in cancerous disease of the cervix or os uteri. The absence of such cancerous disease, which may be easily ascertained, the violence of the pain, the youth of the patient, and the otherwise strumous habit of body, will go far to make us suspect the presence of the disease.

The best local remedy, at least that which produces most comfort, is the internal use of injections, with the extr. conii. The extract of colchicum, given in the dose of a grain, two or three times daily, has likewise appeared to be attended with the most soothing effect. The patient, in more than one instance, has expressed herself relieved by this remedy in a manner quite extraordinary. I leave it to the more extensive opportunities of my readers to determine the accuracy of the observation.

Simple Encysted Dropsy.

In simple ovarian dropsy it would seem reason-

able to diminish the quantity of fluid secreted in the cyst, by exciting some increase of the excrementitious fluids, more especially of the urine; but experience does not shew that such an effect can be produced by those remedies, which are found very powerful in serous accumulation in the natural cavities of the body. In the work of Dr. Withering, on the Employment of *Digitalis* in Dropsy, some cases of its use in encysted dropsy are given, in which it failed entirely, and subsequent experience, with other diuretics, have confirmed the inefficiency of this class of remedies. But as has been already shown, the disease is not unfrequently combined with effusion into the peritoneum, and here the bulk and distress of the patient are greatly relieved by the due administration of diuretics. Of these the most powerful which have occurred to my observation, are the infusions of *digitalis*, and of the *pyrola umbellata*. The fact of the diminution of frequency of the pulse, under the use of *digitalis*, has led to its employment in cases of dropsy, attended with increased action: cases in which blood-letting is properly employed, the diuretic effects of the medicine is scarcely ever produced in such cases; but where the accumulation of fluid is great, and from the continuance of the complaint, the pulse is languid and weak, this medicine will almost certainly succeed in promoting a considerable flow of urine, unless nausea be produced. This was the opinion of Dr. Withering, who had most extensive experience in the employment of this medicine, and

such it has appeared from all the observations I have been enabled to collect. If *digitalis* be used as an assistant to blood-letting, to produce its specific effects on the action of the heart and arteries, of course it is inflammatory disease to which it is best adapted; but if its diuretic effects be desired, the specific ones must be avoided, the nausea, sickness, and irregularity of the pulse being accompanied rather with a diminution than an increase of its diuretic properties. It has occurred to me to witness in more cases than one, the efficacy of the infusion of the *pyrola umbellata* in ovarian dropsy, complicated with ascites, a pint of the infusion being drank daily. It is more easily recommended from the resemblance in taste to tea, and might be substituted in such cases for that beverage.

The powerful efficacy of emetics in promoting absorption—an efficacy well known in swelling of the testis—might lead to the use of this remedy. A very remarkable case occurred to me some years ago, of the extraordinary action exercised over the absorbents by the employment of emetics. A lady, at Florence, æt. 60, had a very considerable swelling of the submaxillary glands: feeling incommoded with nausea, she had recourse to an emetic for the purpose of evacuating what she termed the bile. This remedy she had been in the habit of employing on former occasions when suffering from heart-burn, or other functional disorder of the stomach.

At this time two grains of the tart. antim. were taken : after its brisk operation, to her great surprise, the tumor entirely disappeared, and at the same time she complained of double vision. In less than two hours she became comatose, and in the course of that night she died. The immediate cause of death appeared to be the rapid effusion of fluid into the ventricles of the brain. Actual experience, however, has clearly shewn what might be inferred from reasoning, to be true. The effect of sea-sickness in ascites has long been known : among others, there is a remarkable example of its efficacy related by Hoffman, from Forestus. Boerhaave has the following passage, in speaking of the use of emetics in ascites, and it is obvious that the evacuation alone could not account for the effects :—

“ Oportet quidam hæc monere quod leniora emetica nil agant in ascite, sed fortiora ex brevibus intervallis repetita palmam reliquis præripiant*.”

Reasoning then from analogy, the power which the operation of emetics appears to exert over swellings of glandular structures, and their efficacy in some remarkable cases of ascites, we might be induced to employ them in encysted dropsy of the ovarium, and they have in fact been recommended in this disease by the late celebrated Dr. Percival,

* Boerhave in Prat. Medicin. Art. Hydrops.

of Manchester, from the result of a case which fell under his observation, and which, as being remarkably interesting, it may be permitted to quote.

“ Mrs. P. N. aged 33, a woman of a very delicate constitution, and subject to a profluvium mensium, which had greatly impaired her strength, perceived about two years ago an indolent moveable tumor in the lower part and left side of her belly, which gradually, though slowly, increased. Before it acquired any considerable bulk, her right leg began to swell, her urine was voided in small quantity; the symptoms of thirst and inward heat ensued; the abdomen became enlarged; a fluctuation was soon perceptible, and a complete ascites. The tumor in the lower part of the belly, which, from its situation, I apprehend, was an encysted dropsy of the left ovarium, now began to be extremely painful; the swelling of the abdomen increased; a general anasarca was coming on, and her case became every day more and more deplorable. Such was the state of the disorder, when the patient, as she arose out of bed in the morning, was seized with a nausea without any apparent cause, succeeded by a violent vomiting. At three o’clock in the afternoon I was called to her assistance, and found her quite exhausted with incessant retching; her pulse was so feeble as to be scarcely perceptible; her extremities were cold, and her legs and thighs affected with a most painful spasm: she had discharged nearly ten pints of water, and this evacuation had entirely

removed the anasarca swellings, and greatly diminished the fullness and tension of the belly. The tumor of the left ovarium, though much decreased in bulk, was evident to the touch, and appeared to be still moveable under the fingers. Gentle cordials were directed to support the patient's strength, warm fomentations were applied to the legs and thighs, and an opiate administered, to procure for her a short interval of rest and ease: she enjoyed a few hours refreshing sleep; the vomiting then recurred and continued five or six days with intermissions, which gradually became longer and longer; her thirst, during these evacuations, was almost insupportable, but she refrained with great resolution from all liquids, except a little red port wine diluted with mint water; oranges likewise were freely allowed, and were highly grateful to her: all her dropsical swellings were now removed, and the tumor of the ovarium itself was no longer perceptible: when the vomiting ceased a gentle diarrhœa succeeded. An infus. of bark, with t. mart. in sp. salis. was given; her thirst abated, her appetite returned, and in a few weeks she recovered a tolerable degree of health and strength, and still continues free from any of her former ailments, though it is now four months from the time when her vomitings commenced. The quantity of water she discharged, exclusive of her evacuations by stool and urine, amounted to about three gallons.

“ In the incipient stage of a dropsy of the ova-

rium, emetics repeatedly administered would be likely means of promoting the absorption or discharge of the encysted fluid But unfortunately this disorder is insidious in its attack, and so little alarming in its progress, that it becomes almost incurable before the patient is apprehensive of any degree of danger. However, in its more advanced stages emetics may be administered with safety, and sometimes with advantage."—*Percival's Essays*, vol. i. p. 375.

It is obvious that the sweeping objection which would exclude blood-letting in this disease, must have arisen from misunderstanding its pathology ; when accumulation of fluid or growth are proceeding rapidly, when there is a quick pulse, irregular heat of skin, and acute pain in the part, it is obvious that inflammatory action is going on within the cyst, and will probably eventually be extended to the neighbouring peritoneum ; the fluid secreted is mixed with shreds of lymph, or thickened by the diffusion of purulent matter ; under such circumstances the use of the lancet is employed with much benefit. Even when great depression of vital power has apparently existed, the relief obtained has been very great, and similar to what is experienced in inflammation of an acute nature, when seated in other serous membranes. The pulse has risen in force and diminished in frequency under the flow of blood ; the crassamentum has been unusually firm, and the buffy coat very distinct on the

coagulated blood. The oppression under which the patient labored has vanished under the repetition of the treatment; and although the disease has been by no means cured, the strength of the patient has been saved, and she has perhaps been brought into the situation in which paracentesis may be employed without risk. It is in such cases that mercury is useful, and as in other inflammatory diseases these remedies appear to be nearly similar in their effects, one diminishing, the other altering vascular action. The comfort experienced after such loss of blood, by the administration of opium, is certainly equal to, if not greater, than that which occurs in inflammation affecting vital organs, and seems to realize the feeling and almost poetical expression of the late Dr. Currie of Liverpool: "The patient sinks into a sleep, which is ill exchanged for the realities of life."

Purgatives appear to be principally useful by keeping the bowels free from obstruction, and likewise expelling flatus, which is one of the most frequent and most painful symptoms attending the disease. The purgative recommended by the late Dr. Beddoes, consisting of jalap, cream of tartar, and ginger, made into an electuary with a little honey, appears very fully to fulfil this indication. It is quite evident that this class of remedies can never effect a cure, and if very severe in their action, they might cause the rupture of the cyst, and probably the death of the patient.

The use of long-continued frictions over the part where much fluid is present, has appeared to be followed with success, the dropsy having gradually and entirely disappeared under such treatment.

A case of this kind occurred to my friend, Dr. C. M. Clarke, in which the contents of a very large ovarian dropsy disappeared under the employment of friction. The patient employed a rubber twice daily for several months: the fluid has appeared, however, very lately to re-collect.

Under the most favorable circumstances, and with unbroken constitutional powers, however, the fluid will continue to be secreted with great rapidity, and the operation of tapping must be had recourse to. The first time this operation becomes necessary in this disease, appears, from the experience of physicians in ancient times, to have been regarded as very dangerous; probably from the fluid re-collecting so rapidly as to menace the life of the patient, even where no immediate bad effects resulted from its employment. It appears always to have been the great object of physicians to protract the time previous to the performance of the operation.

Morgagni, in speaking of paracentesis, delivers in very strong terms both the opinions of his contemporaries and his own against the operation:—

“ Certe autem junior Verneyus, Chirurgus, siquis alius, in paracentesi exercitatissimus, disertè negat se ullam quæ saccato hydropè teneretur, vidisse sanatam, quin plures, quæ satis bene valentes, nullaque alia nisi onerosi ventris, molestia pressæ, cum ab hâc per eductam aquam liberare se vellent, brevi ait periisse, diu cæteroquin imo interdum diutissimè, ut sæpe indicata exempla ostendunt, victuras ; sed et alii passim viderunt, paracentesim in his morbis citam mortem esse consecutam.”

And again—

“ Mitto cætera ; nam vel ex hiscejam satis, superque intelligis cur hic paracentesis non modo inutilis ; sed et noxia miseræ mulieri contingat.”

Dr. Mead also appears to have greatly feared the application of this means of relief, as we have seen in a former case that a patient was relieved by a rupture at the umbilicus of the fluid which he thought it imprudent to relieve by tapping.

On the contrary, persons have been tapped very many times, and life been protracted, by the operation, many years ; and probably in this, as in many other cases, it is desirable to avoid extremes—not to have recourse to paracentesis earlier than appears necessary on the one hand, nor to let the patient languish in unendurable distention on the

other, from a vain fear, which at last may not be realized, of the rapid re-collection of the fluid.

The danger which often resulted from this operation, and the almost certain and rapid re-collection of the fluid, have induced medical men, for many years past, to seek for and recommend operations tending to a more perfect and radical cure. Such points of practice have been allotted (in this country at least) to a distinct branch of our profession, and nothing can be farther from my intention, in the views I am about to enter upon, than any interference with their duties. But it not unfrequently happens that such means are discussed in cases in which the physician is attending, and not to be acquainted with the points of difficulty or eligibility of such important practice, would expose our patient often to hasty conclusions, and ourselves almost always to the imputation of negligence or ignorance.

Two methods have been proposed then for emptying the cyst, and for promoting its entire contraction.

1. A considerable incision, in order to empty the cyst entirely of its contents, leaving in a canula or bougie, to excite contraction of the cyst, and prevent the re-collection of fluid.

2. Injections into the cyst.

For the first method of practice it has been urged, that operations on the abdomen, although dangerous, are by no means fatal; and the cyst often containing matters of various tenacity, these contents will not escape through an ordinary canula.

A very remarkable instance of the application of this practice, and a very strong proof of the impunity with which operations conducted with considerable roughness may sometimes be successful, is contained in the 33d vol. of the *Philosophical Transactions*, by Dr. Houston, more than a century ago. This was the case in a woman, *æt.* 58, of an ovarian tumor of 13 years duration. I subjoin the account of the operation in his own words:—

“The operation of puncturing the abdomen being proposed, she consented. Accordingly, with an imposthume lancet, I laid open about an inch; but finding nothing issue, I enlarged it two inches, and even then came nothing forth but a little thin yellowish serum, so I ventured to lay it open about two inches more. I was not a little startled, after so large an aperture, to find only a glutinous substance bung up the orifice. The difficulty was, however, to remove it. I tried my probe, and endeavoured with my fingers, but all in vain; it was so slippery that it eluded every touch, and the strongest hold I could take.

“I wanted in this place almost every thing ne-

cessary, but bethought me of a very odd instrument, yet as good as the best in its consequence, because it answered the end proposed. I took a strong fir splinter, such as the poor in that country use to burn instead of candles ; I wrapped about the end of the splinter some loose lint, and thrust it into the wound ; and by turning and winding it, I drew out above two yards in length of a substance thicker than jelly, or rather like glue fresh made and hung out to dry ; its breadth was about ten inches. This was followed by nine full quarts of such matter as is met with in steatomatous and atheromatous tumors, with several hydatids, of various sizes, containing a yellowish serum, the least of them larger than an orange, with several large pieces of membranes, which seemed to be parts of the distended ovary. I then squeezed out all I could, and stitched up the wound in three places."

This patient recovered, and lived fourteen years afterwards without any return of the disease.

The next time we meet with an account of a similar operation is in a memoir of the Royal Academy of Surgery in Paris ; in which M. Le Dran states the result of two cases in which he made an incision into the tumor, and left in the canula ; through which he injected the cyst with very mild washes, as barley water and a little honey, &c.

The first was the case of a lady, *æt.* 60 years,

who had been tapped twice, but the fluid rapidly re-collected. He performed the operation, extracted the contents, fluid, and membranous substances, and nearly closed the wound, leaving in a canula, through which injections were made morning and evening.

The patient survived the operation four years; having, however, a fistulous communication in the abdomen with the sac, which opening never entirely closed.

The second—an unmarried woman, æt. 42—had a similar operation performed; the canula left in; and at the expiration of two years the fistulous opening closed, and the patient entirely recovered.

These occurrences have naturally led in modern times to a repetition of the operation. Injecting moderately stimulating fluid into the cyst, although it has the analogy of the cure of hydrocele in its favor, does not succeed; and, indeed, unless the quantity of inflammatory action could be accurately measured, it would seem to induce the most fatal conclusion of these diseases. The inflammation is however in rare instances recovered from, cases having been known where inflammation of the cyst has taken place after paracentesis, the patient has been in great peril, has struggled through it, and a permanent cure of her disease has been the result, from

the adhesion of the opposite sides of the cyst. Such are extreme cases.

Leaving in the canula, or a bougie, after paracentesis, has been frequently tried. I am indebted to my friend Mr. Key, senior surgeon to Guy's Hospital, for a note of three cases in which he employed this practice; and as it has failed in the hands of this scientific and accomplished surgeon, I fear it is not likely ever to be attended with the success which would establish its general employment.

“ I find notes of three cases in which the instrument was left in after tapping an encysted dropsy. The issue has not been such as to lead me to expect much from the plan. One case was favorable for the treatment, as the fluid was of the serous character. The two others contained a fluid of much thicker consistence; in one it resembled mucilage, in the other a dark coffee-ground fluid. Case 1. A strong and otherwise healthy woman, æt, 42, single. Dropsy of four years standing. Twenty-seven pints drawn off, resembling straw-colored serum; no inflammation followed. In two months fluid again collected; tapped; and twenty-one pints of same character removed. A piece of elastic gum catheter left in, but closed; for three days pain, but not considerable; slight febrile symptoms; on the third day plug withdrawn, and a few ounces of turbid serum removed. Experienced relief. The same operation repeated on the 9th, 13th, and 18th of

May. At each successive operation the fluid assumed a more turbid and inspissated character, shewing the progress of inflammation. At the last she began to complain of so much general tenderness, and so much fever excited, that I was induced to comply with her request to withdraw it. The treatment certainly retarded the formation of fluid, for I had not occasion to tap her until six months afterwards, when the fluid was found to be of the serous kind, containing a few flakes of lymph. The medical treatment consisted in mild purgative remedies.

“ The second case is that of a female, *æt.* 33, having had ovarian dropsy for two years and a half; the tumor solid in some parts, with a large cyst on right side; the health impaired of late as the tumor increased. The bougie was introduced after tapping: the fluid drawn off was of the mucilaginous kind, of a light brown color. On the third day she complained of great pain across the *scrobic. cordis*, which was relieved by fomentations. On fifth day, pain returning, with sickness and a febrile pulse, I thought it advisable to take out the bougie. The fluid again collected after a short interval, and was removed; it retained the same character. This patient died out of the hospital in a year after; and, on inspection, the ovarian tumor was divided into several cysts of various sizes, with tense fibrous septa.

“The other case was a delicate young married woman, without children, exceedingly florid complexion, and of but little constitutional power. The fluid was of a dark reddish coffee-ground color, about seventeen pints in quantity. A piece of elastic catheter was left in after the operation; obliged to be withdrawn on the following day, in consequence of the severe constitutional irritation which followed. The fever and tenderness of the belly increased for four days, and an abscess formed between the peritoneum and integuments, which burst at the opening made by the trocar. Under the continued suppuration she sank: and not being allowed to inspect her, we could not ascertain if the abscess communicated with the cyst; of this, however, we had strong suspicion.”

Schirrous and Malignant Diseases of the Ovary.

In the true schirrus of the ovary I am unable to propose any remedy which can be relied on with confidence; and this remark will apply to all those diseases of the organ which have been designated by the name malignant. In the absence of a certain knowledge of the cause or progress of such disorders, various remedies have been had recourse to, supposed either to control their growth or exercise a power over the absorbent system, sufficient to cause the disease to disappear; and to every one of the remedies which I am about to con-

sider, this power has been believed to belong. Mercury, iodine, the caustic alkali, conium, and the muriate of lime, have each been supposed to cause the removal of these morbid growths, but to be more effectual in recent cases, where the tumors are soft and spongy in their texture, than in those of a solid or fibrous character.

There are few improvements in medical science which can bear comparison with the knowledge of the action of mercury resulting from modern practice. The ancient opinion, which esteemed this remedy as adapted only to lues, or the diseases complicated with it, or the subsequent one, that its operation was beneficial in changing or augmenting the secretions of the liver, assume the appearance of very limited observation when compared with the important results of its employment in acute inflammation. Wherever the inflammation is of the adhesive character, where it attacks serous membranes, and the consequence of its continuance is the adhesion of these important parts, mercury appears certainly not to be inferior to venesection in importance, and often far more available in practice. Thus in inflammation of the brain and its membranes, of the pleura and the peritoneum, where used early and fully, its employment (no disorganization of these parts existing from other causes) is frequently attended with success. In inflammation of the trachea, which rapidly tends to the occlusion of the air passage, by the pouring

out of lymph, its efficacy is wonderful, and the same may be said of rheumatic pericarditis, in which the symptoms diminish, and the patient gains strength under its administration, and if given early and largely in the disease, it would appear that it is not unfrequently cured. The effect is observed in iritis, a disease which from its situation offers us demonstrative evidence of the action of the medicine. Under its administration the inflamed vessels cease to pour out globules of lymph, the termination of increased action, and the absorbents remove by degrees that which was already deposited, the action which produced it having ceased. In general, then, the influence of mercury seems principally exerted in changing or restraining the diseased action of vessels, which ends in the pouring out of lymph. This has received the sanction of men of the present day, well known for their talents and the experience derived from public institutions. Drs. Farre, Latham, Chambers, and Elliotson, have had opportunities of verifying such results in extensive practice, and in the large institutions to which they are attached: many, probably, with whose names I am unacquainted, especially practitioners in India, have arrived at the same conclusion—a conclusion, be it observed, which reflects great credit on English practice of medicine, the employment of this remedy on the continent being far too limited to admit of any general conclusions being drawn from its employment.

It is pretty generally admitted that dropsy, in the majority of cases, arises in the human body after disorganization, by frequent attacks of inflammation of the heart, liver, lungs, or kidneys. If this disorganization has long existed, if the inflammatory action which produced it has entirely ceased, then perhaps will the employment of mercury be found worse than useless, diuretics and purgatives, according to the circumstances of the case, affording the best chance of relief; but if the case be recent, and inflammation, in a more or less acute form, is going on, many a patient has his life prolonged by the administration of mercury, combined with venesection and the use of the salts of potass.

To apply this to our present subject. If these principles be true, the beneficial employment of mercury is limited to those cases in which vascular excitement has immediately preceded the enlargement and still continues, in which case its growth may be entirely stopped, and the increase of bulk already formed, diminished by the healthy action of the absorbents. It must be remembered also, that ovarian tumors sometimes increase rapidly, and by pressing on neighbouring parts produce inflammation of surrounding textures: where such inflammation ensues, the employment of mercury will be found useful, for at this time the blood drawn will be found covered with buffy coat. The membrane which lines these cysts we have seen is nearly allied in structure to the natural serous membranes

of the body; it likewise is often attacked by inflammation after tapping, or from external injury. Here again mercury is useful, and will restrain even more powerfully than venesection the progress of the mischief.

Except, however, in these circumstances, mercury appears to be of no advantage in ovarian tumor; and in the malignant form of the disease, if any inference can be drawn from its employment in constitutional diseases of a similar nature, it is injurious; fungoid disease of the stomach and intestines, and encephaloid tubercles of the secreting viscera, not only not diminishing under its use, but the symptoms of exhaustion and overwhelming sense of debility, under which the patient labors, being often much increased.

Hence perhaps it is that the use of this medicine in encysted tumors and dropsy of the ovary has been condemned by many writers, and more particularly by one whose experience is at least as extensive in these diseases as that of any one now living, Dr. James Hamilton, of Edinburgh, who states that after having employed it, or seen it employed in many hundred cases, he cannot call to mind one in which benefit was the result.

There is no question also, but that there are some constitutions which bear marvellously ill the introduction of mercury into the system; and although

such cases are probably much more rare than persons unconnected with the profession would be induced to believe, they excite a well-founded fear of having recourse largely to an agent which may possibly so materially aggravate the patient's distress. When administered, therefore, in ovarian disease, it should be in small quantities, and the effect carefully watched, inunction seeming the form in which it can be introduced with least detriment, and in which the friction employed may contribute to its rapid absorption.

It is only within the last twelve years that iodine has been introduced into practice as a deobstruent ; and previous to the general recommendation of it, by Dr. Coindet, of Geneva, in bronchocele, it occurred to me to witness somewhat extensively his employment of it, during my residence in that city, in 1819. The tincture was the medicine generally employed, and ten drops given twice in the day, gradually increased to twenty ; this form being afterwards in a great measure relinquished for the more convenient one of inunction with the salts formed by a union of the hydriodic acid with the fixed alkalis. The extraordinary diminution in the size of bronchocele, the endemic disease of Switzerland, under the use of this remedy, induced a very general and rash employment of it ; and several instances occurred in which death appeared to have been hastened by its use, and health ruined under its exhibition.

Some time often elapsed, after its discontinuance, before decided proof of its powerful effects occurred. The bronchocele was indeed often diminished, and in some cases disappeared, but the patient suddenly became reduced in strength, the nervous system greatly disturbed, the senses being impaired, especially the sense of touch; and in extreme cases (and one is very forcibly impressed on my memory), the whole appearance of the patient was that of a man laboring under paralysis agitans.

At other times, profuse perspirations, with extreme sensation of debility, accompanied with griping pains in the stomach and bowels, were the symptoms which followed its imprudent employment.

These evil effects manifestly arose from the abuse of the remedy, and would be applicable to any of those powerful medicines with which physicians in this country combat the severest forms of disease.

Arsenic, copper, mercury, colchicum, and many others, must be included in the severe decree, which would prohibit the use of powerful remedies, from their possible or even probable misapplication.

It is certain that bronchocele has been greatly diminished under the use of this medicine; it is likewise certain that soft cases of the disease, even

when very large, have disappeared under its employment, and without any injury to the fortunate patient.

This has led to its employment in diseases of a carcinomatous or malignant nature in different structures of the body. It has occurred to me to witness its employment in these diseases in several instances, but no cure, or indeed any considerable amendment, has been the consequence. My friend, Mr. Brodie, has obliged me with the result of his experience of this remarkable agent in such diseases ; and indeed it is only from similarly extensive practice that any just conclusions can be drawn, as to an efficacy so important. The following are Mr. Brodie's remarks :—

“ I have employed iodine as an internal medicine in a great number of cases of morbid growth, without any manifest effect arising from its exhibition. In two cases, however, and in two only, it was productive of the greatest benefit, effecting that which I should scarcely have supposed that any medicine was able to accomplish.

“ In one of these cases, which I attended with Mr. Pennington, the patient laboured under a tumor on one side of the tongue, and imbedded in its substance, of about the size of a nutmeg, of an irregular form, hard to the touch, and having a well-defined margin. The disease had existed between one and two years, gradually making

progress ; and it had resisted the internal use of arsenic, as well as a course of sarsaparilla, combined with oxymuriate of mercury. As the surface of the tongue was furred, and there were some other symptoms which seemed to indicate a deranged state of the digestive organs, we prescribed, in the first place, the *pilula hydrargyri*, with a gentle aperient, and a light bitter with soda. Under this treatment the tongue became clean, but there was no perceptible alteration in the local disease. We then administered the tincture of iodine three times daily in moderate doses, gradually increased. In a fortnight the tumor was evidently smaller, and at the expiration of about eight weeks it had nearly disappeared. The patient was sent into the country, being directed to continue the use of the iodine for some time longer. This was upwards of four years ago, and I have not seen the patient since ; but I have been informed that the cure is complete.

“ The second case was that of a man who was admitted into St. George’s Hospital on account of a tumor, situated on one side a little below the axilla. It was of the size of a small orange, unattended by pain, and bearing no other marks of inflammation, and quite moveable beneath the skin. Having removed it by the knife, I found, on making a section of the tumor, that it was composed of a brown solid substance, of a firmer consistence, and to

all appearance more highly organized than fungus hæmatodes, and of an uniform structure throughout, except that externally it was covered by a thin membranous cyst closely adhering to it. Some-time afterwards the same man applied at the hospital a second time, having two tumors on the neck, each of the size of a double walnut. These bore no resemblance to the common enlarged glands which occur in this situation, and so exactly resembled that which had been removed from the side, that no one entertained a doubt as to their being exactly of the same nature.

“Conceiving that there were some obvious objections to a second operation for the removal of a disease so manifestly depending on a constitutional cause, and knowing nothing better to be done, I prescribed the tincture of iodine to be taken internally. Under this course of treatment, which was continued for several weeks, the tumors gradually diminished in size, and ultimately disappeared. I have heard nothing of the patient since; but as I told him that he should be received into the hospital again whenever he applied for that purpose, I think that in all probability he has had no return of his complaint.

“I have no right to say, that in these cases the tumors were of a malignant nature; at any rate, they were not malignant tumors of the worst kind. I have, however, exhibited the tincture of iodine

in many cases of truly malignant disease, and in a few instances, as it appeared, not without some temporary advantage. For example, I was consulted concerning a lady who was supposed to labour under a tumor of the breast: I found, however, on examination, that the breast itself was in a healthy state; and that in this, as in some other cases which have fallen under my observation, the apparent enlargement of the breast was the consequence of its being elevated by a tumor beneath it. The tincture of iodine was given internally, and under its use the tumor became so much reduced in size, that I had the credit with the patient and her friends of having cured an obstinate disease. The amendment, however, was of short duration. Soon after discontinuance of the medicine, the tumor began again to increase in size; and the iodine, which was a second time administered, had now no dominion over it. The patient ultimately died; and on inspecting the body, it was ascertained that there was a medullary or fungus tumor, which had its origin in one of the ribs below the breast and pectoral muscles. The same disease existed also in other parts of the body."

It was an easy step to apply this remedy, often efficacious in diseases of the thyroid gland, to encysted diseases of the ovarium; and accordingly it has been used and recommended for the purpose of causing the absorption of these tumors. Many cases have been published of its success,

where too short a time had elapsed since the apparent diminution of the tumor to allow of any accurate conclusion being drawn; and on the whole I am inclined to think that its efficacy has been greatly over-rated. Iodine is an active stimulant, and appears to me only applicable in those diseases of the ovarium, or such states of them, as are unaccompanied by inflammation: in fact, its operation is the very reverse of mercury; and in two cases which have occurred to me, where it succeeded, it appeared to operate by causing inflammation and subsequent suppuration in the tumor.

The following case will best explain the symptoms which often arise during the employment of this medicine :—

C. T. æt. 31, was admitted into the Asylum for Recovery of Health, under the care of my colleague, Dr. Badeley, in March 1827, at the recommendation of a very experienced physician, who considered her laboring under ovarian disease. A large tumor, which could be traced into the pelvis, occupied the whole right side of the abdomen, and stretched over beyond the umbilicus; it was hard to the touch, irregular, and gave a sense of obscure fluctuation when struck with the hand. It had existed a year and a half. The health was tolerably good, and the only pain experienced was from the unwieldy bulk and weight of the tumor. The patient was put, by Dr. Badeley, under the

use of the iodine, and, after continuing it for two months, without any very marked effect, came under my care, in consequence of Dr. Badeley's severe indisposition. She was then taking twenty drops of the tincture twice daily, and rubbed in half a drachm of the ung. hydriod. potass morning and evening. The last was increased to double the quantity; and with the occasional application of leeches and the mildest laxatives, this treatment was continued for three months. The tumor appeared to grow gradually softer, and at length very violent constitutional symptoms arose; tremblings, great distress of mind, and lowness of spirits; to which succeeded the symptoms of internal suppuration: a very quick pulse, tongue brown and dry, rigors, followed by profuse sweats. At the expiration of a fortnight the patient began to pass purulent matter by the rectum and by the vagina, of various consistence and intolerable fœtor: this passed daily for several weeks. She was now allowed generous diet and bark, and sent into the country, and at the expiration of five weeks she returned with her strength restored, and the tumor had entirely disappeared.

Six months after this she consulted one of the most eminent physicians in London, who has made uterine diseases his principal study; and on the minutest examination, no tumor could be discovered,—nothing but the doubling over of the integuments of the abdomen, which, from long disten-

tion, had lost the power of regaining their natural contractility *.

The third of the remedies which have enjoyed a high reputation as a deobstruent is liquor-potassæ. This medicine, employed in as large doses as the stomach will bear, appears to have been successful in discussing indolent scrofulous tumors, and those of a steatomatous kind. It is with diffidence that I offer any result of my own experience; but in diseases of a malignant nature, affecting internal parts, it has appeared to me to produce more alleviation than any other remedy with which I am acquainted. This applies, however, principally to those tumors when they are not attended with acute pain, or any considerable symptomatic fever.

Liquor-potassæ has been recommended in ovarian disease of the kind we are considering, and the general health appears often to have been greatly improved during its use; and the formidable disease itself is reported to have disappeared under its employment.

* This patient continued quite free from her disease nearly a year and half, becoming a housekeeper in a lunatic asylum, where she received a blow in her groin by a kick from one of the patients. The swelling re-appeared; some time after which an opening formed in the right groin, just above Poupart's ligament, through which a constant discharge takes place. In consequence of this the tumor has again diminished. Fæces are occasionally passed through the opening.

The liquor-potassæ, in such cases, appears to act by inducing suppuration in the cysts, which is afterwards discharged after adhesions formed with neighbouring viscera. In this respect its action resembles that of iodine, and is contra-indicated when increased vascular action is present ; hence it would appear to be most useful in those cases to which mercury is inapplicable ; and, in fact, it is in the leucophlegmatic habit of body that it appears to be most beneficial, whether as a curative or only as a palliative agent.

Dr. Warren has favored me with the account of a case which occurred under his care several years ago, in which this remedy was employed in very large doses, as large as the stomach could bear it, at short intervals. After some weeks, softening of the tumor took place, adhesion with the great intestine, an opening was formed, and much purulent matter, united with other secretions of various consistence, such as are observed in these tumors, passed by stool. The swelling subsided, and the patient entirely recovered her health.

It may fairly be objected, that a similar result would have taken place in both these cases without the employment of the remedy, as we know it occasionally does. It can only be answered to such an allegation, that medicines of such strength could scarcely be administered without effect, and that

presumptive evidence is in favor of their having been agents in the process.

It must be left to the experience of future observers whether such is the fact; and should it be established that the immediate action of these remedies is the softening and assimilation of the various contents of these tumors previous to their being discharged, the discharge depending on circumstances which regulate the evacuation of abscesses under ordinary circumstances, one step will undoubtedly be gained both in the knowledge of the *modus operandi* of these medicines, and also of the process preparatory to the cure of the disease.

From the use of the conium, once so famous as a deobstruent, no advantage except the relief of pain appears to be obtained. The repeated application of blisters, particularly after the fluid has been drawn off, has been recommended on the high authority of Mr. Abernethy: they appear, in his experience, to have retarded the re-accumulation of fluid, and diminished the size of the tumors.

In the few cases which have occurred to me these good effects have not been visible; and the application of the remedy has been accompanied with much pain.

The muriate of lime was some years ago brought forward, with strong recommendations in its favor,

for the cure of scrofula; at least its internal use was believed to have contributed greatly to the healing of scrofulous sores and the discussion of scrofulous swellings. Whether the extravagant encomiums passed upon it by its first champions produced the natural consequence of lessening in a short time its real value, it would be difficult to decide; certain it is, that it has not of late years, in this country, been very highly esteemed by physicians. Still, if we believe the testimony of various physicians in different countries, we should be induced to feel that, although it does not deserve the original extraordinary encomiums, it still less merits unusual depreciation. Very good and varied testimony in Switzerland has assured me that marked good effects were observed from its use in strumous swellings, to which the country people in close and mountainous districts are very subject. As a matter of ordinary experience, it was asserted that sores healed and tumors subsided under its use in a greater degree than any other medicine, or course of medicine, which could be mentioned.

As far as my personal observation goes, which is of course very limited, it is inferior to the liquor-potassæ in the diseases in which it has been recommended.

It has received, from Dr. James Hamilton, of Edinburgh, the greatest possible reputation in the

cure of encysted dropsy : he conjoined, however, with it percussion of the tumor ; and as the testimony of a man of such experience is valuable, and his opinion very decided, I will take the liberty of quoting it.

“ Adverting to the effects of percussion and of pressure in chronic rheumatism, and knowing the influence of the continued use of the muriate of lime in indolent glandular swellings, the author was led to the trial of those several means, as being at any rate perfectly safe. He advised, therefore, that moderate and equable pressure of the abdomen should be made, by means of a suitable bandage ; that the enlarged part should be subjected twice a day to gentle percussion ; and that a course of small doses of the muriate of lime should be continued for at least several months. Where pain or tenderness was experienced on the ovary being pressed upon, he recommended, in addition to the above means, the daily use of the warm bath.

“ This plan of treatment has been much more successful than he had anticipated. In seven cases in which it was tried, the enlargement has so completely subsided that it is no longer tangible. There could be no mistake in the majority of these cases, not only because the size of the diseased ovary was very considerable, the fluctuation was distinct, and all the ordinary characteristics well marked, but

also because the nature of the affection had been previously ascertained by the most experienced practitioners in London.

“In the first three cases the author considered that there might be some accidental coincidence independent of the remedies employed, and therefore he did not venture to allude to them even in lecturing, being always unwilling to give any hints which might lead to delusive speculations in the practice of physic; but the fortunate issue of four additional cases entitles him to presume that the above means of cure bid fair to prove extensively useful.”

Previous to the diminution of bulk in all these cases, it is proper to add, that the circumscribed enlargement of the ovary has invariably become soft.

The last measure for the cure of this disease, and of which in modern days we have heard much, is the extirpation of the whole tumor. In the lower animals, when unimpregnated, the extirpation of this organ, it is well known, is attended with little or no danger. In some cases, likewise, of hernia, as in the celebrated one of Mr. Pott, quoted on a former occasion, the ovaria have been removed without any other evil result than that of barrenness. It is said, also, but we would fain hope that such accounts are entirely false, that both in ancient and

modern times the extirpation of this organ has taken place to gratify the cruel and barbarous profligacy of Asiatic monarchs.

These considerations have led to the recommendation of a similar operation when the disease of the organ has attained a size which leaves little other hope of relief by human art. It has been recently successfully performed several times on the Continent, and in our own country, by Mr. LIZARS*, of Edinburgh. Nevertheless, the arguments against such an operation are numerous and strong, and the probabilities of success are very small. If the tumor be not large, and the woman's health unbroken, she may live many years, as long as is allotted to humanity, in the enjoyment of a tolerable existence. If the health be much broken, the cure of so large a wound in a weakened constitution would be difficult, if not in the great majority of cases impossible. If connected with scirrhus in other parts of the body, it is inadmissible; and if the growth itself be of the nature of fungus hæmatodes, all experience tells us that should the operation be survived, or the wound heal, the disease will recur in other vital organs of the body.

Nor do the difficulties rest here: when these

* See Mr. Lizars' work on Operations for Diseased Ovaria, which contains much valuable information.

growths enlarge to a great size they most frequently adhere, and here the operation is out of the question. If all these exceptions, then, are estimated, the case which remains in which such a risk is advisable, and such an operation feasible with any fair chance of a happy result, is rare indeed. Still the meed of praise cannot be withheld from those men who have dared, and been successful.

I have now concluded the investigation of the leading points of this interesting inquiry; and have endeavoured to propose a plan for the farther investigation of these diseases, beginning with the alterations of natural structure, and tracing them to the more complicated forms of disorganization.

Of the importance of the subject, and the imperfection of its execution, none can be more conscious than myself; I seek only for the merit which is to be derived from the nature of the subject, and the labor necessary for its elucidation.

Before concluding, I ought to return my thanks to those professional friends who have assisted me with their opinions, and the loan of many rare and valuable preparations; and it is only acknowledging a debt when I mention how much I am obliged to Mr. Oswald Cooper and Mr. Smith, who assisted me in the dissections; and to the former especially,

who put up the preparations of comparative anatomy which are noticed in the early part of this treatise, and which are now deposited in the Museum of the College of Physicians.

THE END.

