referred to. The tracks are united by commissural fibres in a foetus 1.5 inches long. I have not been able to fix an earlier period for the appearance of this commissure, from the difficulty experienced in dissecting for it. The third, the fifth, and the facial division of the seventh pair, grow out from the anterior columns, where crossed above by the posterior; and the fifth is close to the fissure which serves to divide them (Fig. XI, at X), so that it may be equally connected with either track. The facial is placed higher up (Fig. XI, above X), and curves round the anterior bulge of the cerebellum to reach, and thence to accompany, the auditory nerve. The fourth nerve forms a conspicuous line curving along the upper border of the cerebellum; it comes out just by the side of the vermiform portion (Fig. II, above Cb), and is thus in relation with the groove between the posterior tracks. The auditory nerve is of large size (Fig. II, A), and grows from the open floor of the fourth ventricle by a series of bands which form a thick projection curving below the cerebellum and over the lip of the ventricle formed by the diverging anterior tracks, until, at the anterior curve of the cerebellum, it passes to the periotic cartilage in company with the facial nerve. Although the two nerves pass off from the brain in company, their origins are widely apart and dissimilar. The remaining cerebral nerves have their origins from the side of the decussating fibres below the fourth ventricle—the sides of the future medulla oblongata.

In a foetus 1.8 inches long, it seems as if the change of direction in the tracks passing through the medulla oblongata is also from side to side, as viewed from the posterior surface. The track thus seen is the one spoken of as the anterior; the tissue ascending on the right side lies, as it crosses, behind that of the left. On looking at the front surface between the elevations for the medulla oblongata, no such crossing is indicated.

In a foetus 1.6 inches long (ten to twelve weeks), little change has taken place in the relations of the hinder portions of the brain. The medulla has enlarged considerably, and the auditory nerve on each side forms a thick cord of fibres as it curves out over its upper margin, which margin is nearly horizontal. The cerebellum is little more than a smooth band (posterior column of each side), with slight bud-like projections behind the inferior cerebral flexure. The corpora quadrigemina, somewhat lobed on their surface, but their permanent elevations not yet defined, are still marked with the irregular lines of junction of opposite sides, the most conspicuous being at the lower portion, where the section from the right side (Fig. XI, Q) is prolonged far to the left, forming a superficial elevation. The optic thalami are concealed by the mantles, which are connected with one another above at the site of the pineal centre.

The mantle of each side presents its especial characters; and it may be mentioned that in none of the brains examined have the appearances of the mantles during these early stages been alike to each other in any one, or similar in any two brains. It seems as if the development of the left mantle were throughout somewhat in advance of that of the right; a statement which I make with some hesitation, not only because it is itself a remarkable fact, but because it is quite opposed to the view I had formed from some dissections made a few years ago. Repeated observations lead me to the conclusion that these were made in error, and that some precedence must be allowed to the left side of the mantle portion of the hemispheres.

The right mantle, viewed on the outer side, presents a smooth surface, except towards its margins. At these, beginning from below (see Fig. 13), are seen the distinct lobe of the olfactory nerve, then two rather deep fissures, then three notches, then, after an interval, a well defined fissure succeeded by three notches, and then by a long sweep of comparatively smooth border. On the general surface, there is a rising of the fore part of the mantle; the depression behind this, vertical in its direction, is the line of the fissure of Sylvius. The left mantle (see Fig. 14), on its outer surface, has the line of the Sylvian fissure more

Fig. 12.

Fig. 13.

Fig. 14.

distinctly indicated. Below, after a notch on the margin, the olfactory lobe is conspicuous. Then follow four distinct fissures, twice the number of those seen on the right side. Where the notches occupy the right margin, there is, on the left side, a broad fissure with notched margins; this corresponds with the future fissure of Rolando; and, again, there

is a considerable fissure at the superior extremity of the Sylvian line. The fissures on the hinder margin are deeper and more numerous, and the intervening brain-tissue (gyri) is wider than on the opposite side.

To separate the mantles, which lie flat upon the thalami, it is necessary to break through the folds of membrane which unite them at the pineal centre; and, on turning them aside, the membrane can be traced over their outer and inner aspects, dipping in between the fissures wherever these exist. The endocranial membrane forms a ridge of no great depth, projecting from the cranium between the hemispheres, and elsewhere following that disposition of a separating membrane, which it has in the adult brain.

THE HASTINGS PRIZE ESSAY,

1873.

ON THE PATHOLOGY AND TREATMENT OF OVARIAN DISEASES.

By LAWSON TAIT, F.R.C.S.,

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III.

THE remaining affections of the ovary are those which are included in the results of increased growth, taking the form, in the largest number of instances, of cystic degeneration; in some rarer instances, the growth is solid, and may be either fibro-myxomatous or more commonly cancer. So much has been written lately, and so much done for the pathology and treatment of Ovarian Tumours, that I can scarcely hope to add anything new in this essay; but, as I have had a special experience in the investigation and treatment of ovarian tumours, I shall limit myself to the discussion of what I have seen and done myself, in preference to making a mere summary of what is to be found in perfection in the recent publications of Spencer Wells, Atlee, Peaslee, and Gallez.

For this purpose, I shall first discuss the diagnosis of ovarian tumours and their varieties; their therapeutic and surgical treatment. I shall also describe such ovarian tumours as I have met with which have not admitted of surgical treatment; and, finally, I shall give the results of some original investigations in the pathology and method of growth of these tumours.

There are, perhaps, no diseases in the province of surgery where so much caution is necessary in weighing carefully every point in the history, every symptom and every sign, for the purpose of establishing an accurate diagnosis as in those usually classed under the head of ovarian tumours. There are so many conditions which mimic them, and so few facts in connection with them upon which implicit reliance can be placed, that the only safety is to be found in the process of reasoning by exclusion; that is, for a proper diagnosis in the case of an ovarian tumour it will be found the best plan, first of all, to make a mental list of all the conditions that it might be, and exclude them one after another until no alternative is left. Anyone who habitually follows a converse plan will sooner or later be led into some fatal blunder. Our anxiety should always be, not to prove that a given tumour is ovarian, but to show that it cannot by any chance be anything else.

It may be said with perfect certainty that from the history alone no ovarian tumour could be diagnosed, so various are the stories told by the patients about their cases. Thus one patient will present herself totally unaware of the fact that there is any tumour, her only sensation being one of discomfort from the swelling, whilst another may have known for many years of the presence of a small lump which had long remained quiescent and had taken to enlarging only for a few weeks or months. The rate of increase gives no guide, either in unilocular or in multilocular tumours; for I have removed two multilocular tumours which had been in progress respectively seven and eleven years, and I have removed one of great size from a patient aged 66 which had grown in four months. I have removed, on the other hand, a large unilocular tumour which had been in existence for more than ten years, and the structure of which showed that it always had been unilocular; and I have removed two unilocular tumours, one of which grew so as to completely distend the abdomen in seven weeks, and another, almost as large, which had not been noticed for more than five weeks.

The details given by the patients as to the region in which the tumours were first observed are often very misleading, and no dependence whatever

can be placed on some. One patient, in whom there exists an undoubted fibroid tumour of the uterus, asserted that it originally grew somewhere in the neighbourhood of the spleen, and gradually descended to its present uterine situation. Tumours of one ovary are often stated by their bearers to have originated in the side opposite to that from which they are found to grow. One condition which on rare occasions comes under our notice, hydatids of the peritoneum, beginning as it does generally by rupture of the acephalocyst of the liver, presents usually a history of origin at the upper part of the abdomen; so that, when such a story is given with subsequent general enlargement of the abdomen, caution is necessary before excluding hydatids from the possibilities. A tumour which began centrally and remains so is, of course, likely to be uterine; but this is far from being constantly the rule. I have heard a patient state that an ovarian tumour of considerable size had appeared suddenly; and this might have really happened, for its escape from the pelvis might have been sudden. More than once I have pushed an ovarian tumour out of the pelvis that had been impacted there, but I never saw a fibroid tumour of the uterus so impacted.*

The menstrual histories given by patients with ovarian tumours have been so various in my experience, as to lead me almost entirely to disregard them in the diagnosis. Dubois asserted that he had not known an ovarian cystic tumour accompanied by hæmorrhage, but this has been repeatedly noticed in my practice; and the explanation of the apparent discrepancy is that, when the great obstetrician wrote, the diagnosis of pelvic tumours had not arrived at its present state. I have known complete arrest of menstruation coincident with the growth of an extremely rapidly formed unilocular cyst, in a case to which I have already alluded; and, from the presence of an impacted mass in the pelvis behind the uterus, the diagnosis was complicated by the possibility of an extrauterine gestation, *plus* an ovarian cyst. The real condition was revealed only at the operation, when the pelvic mass was found to be a dermoid cyst of the other ovary. In this case, the diagnosis was one of great difficulty, chiefly owing to the suspicious indication of the cessation of the menses. Such a fact in the history of any case ought to make us especially careful to eliminate pregnancy, more especially the condition of hydramnios, which I have known to be treated fatally on two occasions by tapping, once as an ovarian tumour and once as ascites. The uterus, in the early months of normal pregnancy, is not unfrequently displaced to one or other side, and has been often mistaken for an ovarian cyst; in one case, by myself, for an abscess in the broad ligament. In this latter case, I was led astray by the general symptoms of hectic from which the patient suffered. It was to me a lesson to trust to no one symptom, nor to any group of symptoms, in a pelvic diagnosis; and fortunately the patient recovered completely after a miscarriage.

For the diagnosis of ovarian tumours, either subjective or differential, there are varieties of symptoms, almost numberless, the great majority being of little or no consequence for accuracy, and none of them alone being trustworthy. The symptoms vary in their character and intensity very much, according to the size of the tumour, though this is far from being the rule. Thus the largest ovarian tumour which I have removed, somewhere over one hundred pounds in weight, gave rise to no other symptoms than the inability of the patient to get about from its immense weight; while the smallest, only six and a half ounces, was the source of agonising pain, and a great variety of reflex symptoms, including aphonia, and it had completely disabled the patient for some years. In the early growth of a simple cyst, symptoms of any kind are seldom met with until the tumour is sufficiently large to be impacted in the pelvis. The growth of dermoid cysts, on the contrary, is often accompanied by pain of a most intense kind, for which no explanation can be advanced. As a rule, pain is not met with until cystic tumours are large enough, if out of the pelvis, to press on important viscera, or unless the surface of the tumour undergoes inflammatory change. Then pain and increase of pulse and temperature are the indications, though it is surprising to what an extent a tumour may be found to be adherent, and yet, throughout its history, no indications of inflammatory attacks have been given. Until the tumour is sufficiently large to interfere with nutrition, and if it be not of a cancerous character, there are rarely any symptoms of constitutional disturbance, though sometimes I have seen a small tumour very loose in the cavity of the abdomen give rise to great pain and discomfort. The appetite is usually not interfered with until the case is far advanced; nor sleep, though it is often found that the patient can lie only on one side; nor do we find that either the temperature or the pulse is affected to any appreciable extent. Hysteria is sometimes found in connection with ovarian tumours, and to depend directly upon them. In one of my cases this was markedly the fact, for the hysteria disappeared en-

tirely after recovery from ovariectomy. Hysteria is a constant symptom of phantom tumours, and these cases, in the days of the early ovariotomists, were in several instances cut into by mistake.

As the tumour enlarges, the symptoms become more numerous and various; thus in the pelvis, by pressure on the rectum, bladder, and nerves, it may give rise to dysuria or incontinence, to constipation or diarrhoea, and to various neuralgiæ. In the abdominal cavity, by pressure on the stomach, liver, and diaphragm, it produces very frequently nausea and vomiting, distaste for food; in one case in my own experience, jaundice; and very often difficulty of breathing, amounting in the later stages to orthopnoea. Coincidentally with the production of these visceral symptoms, there come on gradually indications of great systemic alterations, due partly to direct interference with nutrition and partly to its perversion. Thus the patient becomes thinner and the skin dry and often hot; the eyes sink, and the features become pinched, and then comes on the peculiar expression of face named by Mr. Wells the "*facies ovariana*". The legs at this stage generally become oedematous, from the mechanical obstruction to the return of the blood from the limbs, and the oedema extends to the vulva and over the lower and central walls of the abdomen. When the tumour has reached such extreme size as indicated by these symptoms, if then seen for the first time, its diagnosis becomes a matter of some difficulty, even by the careful consideration of its signs; for it is in the very small and in the very large ovarian tumours that the diagnosis is most difficult. In those of medium size, the task is much more easy.

The physical signs which indicate the presence of an ovarian tumour come under the notice of the surgeon, as a rule, only when the tumour has reached a size sufficient to have obliged it to rise out of the pelvis, and appear as an abdominal enlargement. It is sometimes, however, necessary to determine the nature of a small pelvic tumour, and, as I have already said, to remove it. Such a diagnosis is a matter of no great difficulty to one accustomed to make the bimanual examination, more especially if it be conducted while the patient is under the influence of an anæsthetic. An ovarian tumour will be found to be almost invariably behind the uterus, that viscus being pressed forwards close to the pubes; and its fundus may, save in exceptionally obese patients, be felt just above the pubes. Usually the uterus can be fixed between the two hands, and then no doubt can be entertained as to what it is. Behind it is the tumour, and if the uterus can be moved independently of it, and if the tumour can also be raised out of the pelvis independently of the uterus, no doubt need be felt that it is a tumour of the ovary or of the broad ligament. How to determine between these two I do not know, nor do I think it can be of much consequence. It may be possible, as I have repeatedly experienced, to determine fluctuation by this method of examination.

As the tumour increases in size and rises out of the pelvis, it becomes somewhat more difficult to determine that it is not intimately associated with the uterus. It is often necessary to introduce the sound in order to determine this point, but this, as a rule to which I think there can scarcely be an exception, ought never to be done at the first examination. I have known a miscarriage, in more than one instance, brought on by neglect of this rule by competent surgeons. It not unfrequently happens that menstruation, or some loss resembling it, goes on for the first few months of pregnancy; and to assert the diagnosis between early pregnancy and an ovarian tumour just rising out of the pelvis, at a first examination, is a task which only the rash or the greatly experienced will undertake. If, with the patient on her back, one forefinger in the os uteri and the other in the fundus of the tumour, the two be found to embrace something which moves *en masse*, then it is, of course, certainly uterine. But, if the two fingers seem to be in relation with different structures, then the outside finger must search for the fundus uteri, and, after it has been found, and after it has been ascertained that the uterus is not enlarged, *and then only*, the sound may be introduced into the uterus and its relation with the tumour readily ascertained. The first matter, then, is to be certain that the tumour is not uterine. If it be not, and it be rounded, elastic, and capable of being raised to some extent out of the pelvis, then it is almost certainly ovarian. It still may be ovarian, even if fixed to the pelvis, though it is rare that ovarian tumours contract adhesions at such an early stage of their growth. If fixed, then, it may be a hæmatocele, or an abscess, or a soft tumour growing from bone; but the diagnosis of all these may be greatly assisted by the previous history and the general symptoms; and, finally, they may be set at rest by what may always be resorted to in cases of doubt—an appeal to exploration by the aspirator. The contents of an abscess, of a hæmatocele, or of an ovarian cyst will reveal their origin, and a solid tumour will be indicated by negative results. I have punctured many pelvic tumours with the aspirator, and have never seen any ill results; the practice I adopt being to make the puncture from the vagina, and if

* Since writing this essay, I have, however, seen two fibroid tumours of the uterus impacted in the pelvis, and capable of being pushed out of it; but in both cases the tumours were fundal and the uterus was retroflexed.

a cavity be found to ensure that its contents be evacuated as far as possible.

I may here say, that I have never found, in an ovarian tumour, that examination by the rectum revealed anything undiscoverable by the vagina.*

When an ovarian tumour has risen out of the pelvis, and has as yet met with none of the accidents to which they are liable, and which lead to complications, its diagnosis is a matter of ease. First of all, palpation will discover that it is a tumour by its resistance, and firm pressure on it with the fingers of one hand, and percussion on them, with the fingers of the other, yielding a dull note, will exclude the possibility of the case being one of phantom tumour; and, as the tumour pushes the intestines before it upwards and to each side, in these regions a tympanic note will give the indications by percussion peculiar to uterine and ovarian tumours. To exclude the possibility of its being an uterine tumour, some care is necessary; but it is not difficult, when the educated touch has determined that the tumour fluctuates and that, throughout its extent, the peculiar wave passes which is found on gently striking any part of a bag of fluid while the hand rests on some other part of its circumference. A knowledge of what fluctuation is, and what this peculiar thrill is, cannot be communicated by description. If this wave be sharply communicated in every direction all over the tumour, then, in all probability, it is unilocular. A multilocular tumour, or one composed of two or three large cysts, may often be recognised by the practised fingers detecting a difference in intensity of the wave along different diameters of the tumour. There are two conditions, however, which must be carefully excluded from the possibilities, and, just because they are both very uncommon, their probabilities are every now and then overlooked. They are cystic disease of the uterus and hydramnios. In the former, the tumour will be found associated with the uterus, the latter moving along with it when moved, and being dragged upwards by it to an extent that ought always to make us cautious, and warn us to wait and watch.

Solid uterine tumours, besides the absence of fluctuation, have in addition two vascular signs which I have never met with in ovarian tumours; namely, an aortic impulse, which may be seen and felt, and an enlargement of the uterine arteries to be felt in the vagina. In one case, I satisfied myself that the tumour was uterine, mainly because, at the flexure of the vagina on one side, I felt an artery as large as the radial.

Hydramnios generally occurs with twins, and, where there is any doubt in the case, it is easily determined by getting the patient into the erect position and then making a vaginal examination. The child or children will be found settling down on the point of the finger, and can be easily felt through the thinned uterus. A slight push will send the mass floating up towards the fundus, whence it will sink in a few seconds. In this way, I have made a differential diagnosis between an unilocular ovarian cyst and a distended uterus.

If the tumour be found to be not uterine and solid, yet attached to the uterus and moving it to an extent which may lead to the belief that it is ovarian, then we have a choice between a dermoid cyst, a fibrous tumour of the ovary, cancer of the ovary, or a pedunculated fibrous tumour of the uterus. A dermoid cyst is rarely so constituted that it will not give fluctuation at some part or other, and its peculiar nodulated character, with here and there spots of bony hardness, may often betray it. Fibrous tumours of the ovary are very rare, and cancer of the ovary alone occurs in only one form, the fibroid, which is of extreme rarity. I have been fortunate enough to meet with one case of it, and to diagnose it in life. The signs on which I depended were, that the uterus was free; that the tumours were large, smooth, oval, and solid; that they grew rapidly, and that the patient's failure in health was not commensurate with the idea of a non-malignant tumour. The fibroid tumour of the ovary may be diagnosed by its slow growth and small size. There are, of course, a great many tumours that have been confounded with ovarian growths, and may be again; but to exhaust a consideration of them would be to exceed by far the limits of this essay, and to wander out of my own experience.

It is in the subsequent stages of the growth of an ovarian tumour that the main difficulties in diagnosis are met with; that is, between the time when a tumour has escaped from the pelvis and risen above its brim as far as the umbilicus, until it has reached its extremest size possible by the distension of the abdomen. Thus the sign of fluctuation, of so great use in the earlier period of growth, comes to have a decreasing value, because it is common to other diseases from which a large ovarian tumour must be carefully diagnosed, and a consideration of other signs is requisite. Thus inspection will reveal that in ascites the ab-

domen is usually enlarged uniformly, and this may also be the case in a large unilocular cyst; while in a multilocular tumour, as a rule, the irregularities of the surface will reveal the nature of the case either to the eye or to the fingers. Percussion will generally show, in an ovarian tumour, the characteristic distribution of dullness, though the accidental adhesion of a coil of intestine in front of the tumour may vitiate this indication. There is a very simple and neat way of confirming the value of the sign of percussion in such a case which I have had occasion to practise, and which will almost always decide between ascites and ovarian dropsy in such exceptional cases. It consists in mapping out the marginal area of clear percussion-note by a pen-and-ink line, and then ascertaining whether a clear note, obtained by percussing on a finger laid gently on the skin immediately outside that line, can be altered to a dull note by increasing the pressure. If this alteration take place generally round the line or throughout its greater part, then it may be taken for certain that an ovarian tumour is present. On the other hand, if there be a clear note somewhere over the area of the swelling which is not removed by firm pressure, but rather extended, still more if pressure bring out a clear note when dullness existed without it, then it will be evident that ascites is present, and not an ovarian cyst. The explanation of these signs is, that pressure round the margin of an ovarian tumour will bring it into more extensive relation with the abdominal wall, displacing the intestines, and this is most easily accomplished in the epigastrium; in the converse condition, when a clear note is produced by pressure in ascites, the abdominal wall is brought into contact with floating intestine, the mesentery of which was so short and the quantity of fluid so great, as to keep the structures apart without the pressure. We have, further, a difference between the percussion-notes of ascites and ovarian dropsy, in that the former readily alters its position, always appearing at the part of the tumour highest in relation to the patient's position. Thus, in a doubtful case, if there be a corona of clearness above the supposed tumour, extending from the hepatic to the splenic regions, and any alteration of position, such as lowering the shoulders and raising the pelvis, should alter the position of the area of clearness to the region of the umbilicus, then the case is almost certainly one of peritoneal dropsy. It very frequently happens that we have both ascites and an ovarian tumour present at the same time, and then it requires a careful consideration of the signs to prevent mistakes.

The *tactus eruditus* of a practised ovariotomist can recognise at once that there is a double wave of fluctuation; one superficial and rapid, due to the ascitic fluid, and another, deeper and perceptibly less rapid, due to the fluid in the cyst; but, to the beginner, such a complication is puzzling. If the fluid outside the cyst be small in quantity, its diagnosis is of no great consequence; but, if large, its non-recognition may lead to serious mistakes. For instance, in one of my recent cases, I satisfied myself that there was an ovarian tumour from the signs given by percussion, and that there was evidently some ascites from the double wave of fluctuation. The patient was of an enormous size, and the growth had not existed for more than six months. It was a grave question whether I had to deal with a multilocular tumour with one or two very large cysts and a small quantity of ascitic fluid, or with a small tumour and a large quantity of ascitic fluid. The only method of deciding the question would have been to tap the abdomen above the tumour by Mr. Wells's blunt trocar, and to have evacuated the ascitic fluid only; but to this the patient would not accede, and I had to begin the operation in serious doubt. The result showed that the plan referred to would have been a wise one, for it turned out to be a comparatively small tumour with an enormous ascitic collection, all the intestines having been pushed above the tumour. There are some minor signs which often serve to indicate the presence or absence of ascites to any marked extent, as the protrusion of fluid through the omphalic ring, carrying in front of it a layer of peritoneum like the finger of a glove. The uniformity of enlargement with ascitic fluid is greater than that with ovarian dropsy, though in the case just referred to this indication failed me; for it was the want of symmetry in the measurement that chiefly suggested that the great enlargement was cystic. The readiness of alteration of the form usual in an abdomen distended with peritoneal dropsy was also absent; for, in whatever position the patient lay, the same outlines were preserved; and the greatest proportional increment of measurement had occurred between the umbilicus and the pubes. This peculiarity is usually an indication of ovarian cysts or uterine tumours.

The enlargement of the veins often seen in the skin of the abdomen in cases of ovarian tumour is of no great assistance as a diagnostic sign, for it is present in almost every other disease simulating ovarian dropsy. Vaginal examination of a case in such a stage as we have been discussing gives very often totally negative signs, and these are generally satisfactory. Thus, if the uterus be normally placed and freely movable,

* Since writing this, I have had the advantage of the instruction of my friend Professor Simon, in his *clinique* at Heidelberg, and my opinion of the value of rectal examinations has been very materially altered by subsequent experience.

then the indications are in favour of a long pedicle and the absence of pelvic complications. If, on the other hand, the uterus be drawn up out of reach, or is fixed and can be moved only with the tumour, more especially if it be tilted to one side, then the pedicle will probably be short. Some minor cysts may be felt at the roof of the pelvis, and, if there be much fluid outside the tumour, the recto-vaginal *cul-de-sac* may be felt distended. I have not yet, however, met with this sign of ascites; not even in the exceptional case I have referred to did it help me.

Auscultation of ovarian tumours gives chiefly negative signs, but these are often of value, as in the case of perfect absence of intestinal gurgling over the tumour. A loud friction-sound is often heard, but this is only an indication of a dryness of the peritoneal surfaces where it is heard, and there is sure to be an absence of adhesions at the spot. The hydatid fremitus, so well described by Mr. Wells, I have not been fortunate enough ever to meet with.

Tapping, either for the removal of ascitic fluid or the contents of a cyst, is often a great help towards an accurate diagnosis. By the removal of peritoneal dropsy, we may discover the actual relations of an ovarian tumour, or we may even find that the supposed tumour has no existence. By the removal of the contents of a large unilocular tumour, or of the contents of one or more of the major cysts of a multilocular growth, we may determine the existence of pelvic adhesions, the existence of pregnancy, or of some other condition that may alter in great measure our views as to treatment. I am strongly of opinion that preliminary tapping in doubtful cases is not resorted to with sufficient frequency; for Mr. Spencer Wells has certainly disabused us of the idea that it is such a very formidable proceeding as was once taught and believed, and he has shown that it is very efficacious in gaining time and in clearing up difficulties. The chemical and microscopic examination of fluid withdrawn by tapping has not as yet yielded any greater certainty than any of the other signs I have previously referred to. No one can speak more authoritatively than Mr. Wells on any subject connected with ovarian disease, and he has written on this point as follows. "While it is certain, therefore, that, in cases of doubtful diagnosis, complete reliance cannot be placed on the chemical characters of fluid removed from the abdomen, and that the rule of paralbumen being the characteristic of ovarian fluids, and fibrin of serous fluid, and the conjoint presence of paralbumen and fibrin pointing to a mixture of the two fluids, is open to many exceptions, it is still true that the rule is sufficiently often correct to become an aid of some value in arriving at a diagnosis, and to encourage us to attain more accurate knowledge by more extensive observation and more complete research."

Great stress used to be laid in former times on the diagnosis of adhesions; but, with greater experience of the disease, we are now led to disregard almost wholly any adhesions that are not visceral or pelvic. Parietal adhesions seem to be of very little consequence; and, if of any great extent, they may be diagnosed, provided the tumour be not of extreme size, by carefully watching the movements of the tumour during respiration. If it be free in front, its upper margin may be seen gliding under the abdominal wall synchronously with the play of the diaphragm. Mr. Wells states he has seen the umbilicus move with an adherent tumour during respiration. Perhaps, the most trustworthy point in the diagnosis of adhesions is a careful inquiry into the patient's history, for the occurrence of febrile attacks accompanied by localised abdominal or pelvic pain.

The diagnosis of the variety of tumour in each case is of importance in guiding us to its treatment; therefore, it is not for the mere exercise of ingenuity that I recommend every practitioner dealing with a case of ovarian tumour to exhaust every point on which I have dwelt, together with many others to which I have not alluded, but which the individual peculiarities of his case and his personal shrewdness may suggest. Above all, let me urge the necessity of reasoning by exclusion, and of making repeated examinations at intervals before any certainty of diagnosis is felt. Three times it has occurred to me to remove ovarian tumours which had hastily been set down at an early period of their history as floating kidneys, that diagnosis being made in all three cases because the wish was father to the thought, and because the practitioners who made it had not learned the value of patience. It is this want of patience that is to blame for those melancholy instances of blunders, altogether unpardonable, where the abdomen has been opened in cases of normal pregnancy mistaken for ovarian tumours.

A final means to be employed in the diagnosis of ovarian tumours, a *dernier ressort* in cases of doubt, is the exploratory incision. Such a proceeding is quite justifiable in any case of abdominal tumour which has been watched for some time, and where none of the ordinary indications suffice to make its nature certain. It is also to be recommended as a preliminary to the surgical treatment of some tumours, either

uterine or ovarian, when the possibility of removal is doubtful, and the relations of the tumour can be ascertained only by exploration. The mortality of exploratory incisions has, in Mr. Wells's practice, seemed to have been small enough to support this opinion, and out of five I have not lost one.

[To be continued.]

ON MODIFIED SYPHILIS.

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THE remarks of Surgeon-Major Oliver in the number of the JOURNAL for May 9th, 1874, lead me to hope that this subject, which I ventilated at the meeting of the Medical Society of London on February 9th, has attracted attention, and will lead practical observers like Mr. Oliver to throw aside the bondage of preconceived opinion, and will disturb the blind faith which is accorded to the dicta of observers on the Continent more especially. Why, in these countries, where, from density of population and disregard of compulsory legislation, the venereal disease in all its forms is particularly rampant, we should be less capable of forming accurate deductions, I cannot understand; yet we find men with vast fields of information and observation in their own immediate sphere prefer to follow, and even strain to accept, the dogmas of foreign syphilographers. We all admit that climate, habits of life, legislative interference, diathesis, etc., have wonderfully modifying influences in other diseases; still it is constantly endeavoured to mould our deductions so as to suit the views that have been dogmatised and sanctioned elsewhere as to this affection. The maxim *nullius in verba magistri* should be specially applied in investigating the phenomena of this disease, and all deductions should be tested by the common sense of applied facts and observations. The dualists have issued the dogma of the existence of an infecting and a non-infecting sore, but, to avoid the difficulties which will constantly present themselves, have invented the mixed chancre or sore—a source which introduces the local effects of the non-infecting with the constitutional results of the infecting ulcer, or a sore presenting a convenient amount of duplicity of character to explain any break in the chain of proof as to the duality of the venereal sore. Others, again, will lay all the errors of diagnosis to the want of discerning power in the surgeon, who, they hint, cannot distinguish induration or appreciate the mild degree of induration termed "parchment", from the dense and cartilaginous feel of a cartilaginous induration. Others, again, and, indeed, as Mr. Oliver remarks, it is a not unfrequent suggestion, say, when instances are brought forward totally subversive of the dual theory, that the surgeon did not see or discover the real infecting sore—a speedy and easy way, and an extensively applicable one, no doubt, of overcoming the difficulty. While, as my own observation shows me, strict duality cannot for a moment be admitted, yet the rule holds good that, from the true indurated chancre, constitutional symptoms are apparently invariable, yet, from the non-indurated sore, constitutional signs of a modified and usually milder nature are not infrequent. In hospital practice, I see constantly soft patchy sores in the male followed by constitutional signs. Mr. Oliver, a staff-surgeon, gives his experience for sixteen years amongst the military; he says the modified form of syphilis, or descent modified syphilis, is in 70 per cent. of "the primary syphilis" patients, the form met with; and that "not more than 30 per cent. of these can be considered as true syphilitic chancre, but merely the local evidence of the transmission of secondary syphilis"; and he remarks, in confirmation of the modification by descent of syphilis, that, while constitutional evidences will follow both the indurated and non-indurated sore, yet that the cachexia (which renders syphilis so formidable) is absent, or reduced to a minimum, in those instances where secondaries follow the non-indurated sore; this evidence, coming from a practical source, and based on statistical observation, is very remarkable. Surely, if they followed from a true indurated sore which was not found out, the symptoms should be formidable, whereas they were found to follow the type of "absence of cachexia" and of evidences "easily dispelled"; in fact, modified syphilis required but modified treatment. It is satisfactory to find thus an approximation at least to the solution of the difficulty, in reconciling the various treatments recommended by army surgeons more especially; and this explains, in a great measure, why it is that, in military practice, syphilitic evidences usually are docile to treatment of a comparatively simple nature, while in private practice, where the disease is more usually obtained from the better class of female communicators, the true virus is received.

At the meeting of the Medical Society of London, I showed, from the experience of the Lock Hospital in Dublin, where a vast number of