ternal. It began in the glands near the surface, or in their deeper parts; but the lecturer had not met with the disease beginning in the epithelium of the cervical canal. It appeared to begin in the lower more frequently than in the upper part of the cervix; but it began in the latter situation more often than was generally supposed. The following case (Fig. 3) was given as an instance of the disease beginning in the upper part of the cervix.

A patient, aged 40, of very fair complexion, who had had two children and some miscarriages, was seen first in July, 1878. She said that she had not been poorly for six weeks, and that she felt sick, and had very frequent micturition. On examination, the os was found large and patulous, and high near the inner orifice, in the posterior wall of the cervix was a hard mass, the size of a pea. It was thought to be a small fibroid. She was seen again in 1879. She said she had had a miscarriage at Christmas-time. Her husband had been away for six months, and returned a fortnight ago, and she had observed a slight loss of blood after coitus since, but at no other time. She had no pain, and no discharge.

Fig. 3.—Cancer commencing near the inner orifice, and forming a nodule occupying the whole of the posterior lip.

The uterus was a little enlarged, freely movable. The posterior lip was thickened, and on its anterior surface was an ulcer the size of a shilling, which extended slightly on to the vaginal surface of the lip; it was depressed with hard edges, and it bled on the slightest touch. The uterus was extirpated. The organ was then found to be $3\frac{1}{2}$ inches in length; the walls of the body were somewhat thickened, but appeared to be healthy. The cervix was considerably enlarged, the enlargement affecting chiefly the posterior wall, and an ulcer was situated on its anterior surface, just within the os externum. The surface of the anterior lip was papillary. Section showed the posterior lip to be occupied by a mass of the size of the kernel of a walnut. This reached upwards to the inner orifice, and occupied the whole thickness of the wall, and it reached downwards to the portio vaginalis, but it had nowhere penetrated through the mucous membrane of the portio. The growth looked to the naked eye as if it were encapsuled, but this appearance seemed to be due to the pressure of the growth on the parts immediately surrounding it.

Cancer might develop in the cervix from more than one centre, one being situated near the os externum, and the other near the os internum. And cancer might attack mucous polypi growing from the cervical canal. Cancer appeared to attack the posterior more frequently

than the anterior lip. It had a tendency to grow downwards so as to invade the vaginal portion and outwards into the peri-cervical tissues, and it showed but little tendency to invade the body, although growth in this direction had been observed. After having invaded the peri-cervical tissue, its tendency appeared to be to grow downwards in the cellular tissue around the vagina, and outwards into the bladder and broad ligaments.

ON REMOVAL OF THE UTERINE APPENDAGES.¹

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I WAS recently asked by a medical friend what I thought would be the effect on the future population of any country, if, in every large manufacturing centre, there were established one or two practitioners who frequently operated for the removal of the uterine appendages. To this I replied that if the said practitioners were conversant with the conditions under which the operation should be performed, it would have little or no influence, because the removal of normal ovaries should be, and is in fact, a very rare occurrence.

I believe that in nearly every case where the operation is called for, the capability of maternity has been already destroyed by some abnormal condition of the ovaries or tubes.

An eminent metropolitan gynaecologist, who cannot certainly be accused of over-activity in this operation, said in a recent address: "I am not, of course, contesting the propriety of ovarian extirpation, when the ovaries are themselves so diseased as to be useless for functional purposes."

The removal of normal ovaries may be justified, in a very few instances of deformity, where the birth of a living child is impossible, or might be reasonably expected to prove fatal to the mother; and it may be, also, in some few cases of myoma, where the operation is performed to check further development of the growth, that the ovaries are normal, or, at least, do not present signs of disease such as, with our present limited knowledge, we can recognise. Generally, however, in myoma, the ovaries are sufficiently altered as to leave no doubt of their pathological state.

The most frequent conditions which give rise to indications for the operation appear to be of an inflammatory character; for example: (a) a localised peritonitis, glueing together in various degrees of intensity the intestines, omentum, and appendages; (b) a pelvic peritonitis, glueing together the tubes and ovaries to each other and to the pelvis, or in the folds of the broad ligament, and generally occluding the fimbriated extremities of the tubes; (c) some causes, operating from the interior of the tubes, for example, the escape of some blood through the tube-end into the pelvis, or the extension of the gonorrhœal poison upwards to the tubes and ovaries.

The first two of the above-named conditions have appeared to me to be of much the most frequent occurrence, and to have their origin in some septic poisoning in connection with abortion or confinement. The history, in such cases, is very often singularly clear as pointing to this; namely, a patient has one or more children, perfectly healthy and well, until at length comes a miscarriage or confinement which is followed by some symptoms of more or less gravity; at any rate, indicating that she is ill with some inflammatory or septic process referable to the pelvis. She thenceforth is sterile, becomes a chronic invalid, and, in most cases, the enlarged tender organs are to be felt, by double palpation on each side, through the vaginal roof.

The gonorrhœal origin of a considerable number of cases is, to my mind, undoubted, and it tends to throw a flood of light on the gravity of gonorrhœa in women. Hitherto, gonorrhœa has only been regarded as a grave disorder from some of its sequelæ in a few males who have had it; and it has been looked upon as a very mild affair in women, to be treated, as of little consequence, by the use of injections, hot-water douches, and local applications to the inflamed vaginal mucous membrane. But now that its consequences are known to be so serious, and not so uncommon, we must change our views concerning its comparative innocuousness; and we should come to regard every woman who has a gonorrhœa, however mild, as possessing the potentiality of a serious and, may be, fatal pyosalpinx.

The therapeutics of this subject, by which, of course, I mean the successful treatment by operation, is far in advance of its pathology; and there is a need of able men, other than busy practitioners, to

¹ Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association at Brighton.

devote time to working at the pathology of the many and varied diseased conditions of the uterine appendages. Abundant material is always at hand in the practice of gynaecologists who perform this operation. We want to know better than we do at present the significance of (1) atrophied or cirrhotic ovaries, (2) enlarged ovaries, whether persistent or temporary, oedematous or cystic. Where is the line to be drawn between what is called cystic disease of the ovaries and cystoma? Is the difference mainly one of degree in the size of the cysts or of encroachment of the cyst on the stroma of the ovary? Is there not sometimes induced a condition of the broad ligament and Fallopian tubes, which has become permanent, and which corresponds to varicocele in the male, and which, by pain, disables the patient from leading an active life, and may justify removal?

I have seen a few instances, perhaps half a dozen, where there was a small cystoma, say the size of an orange, with sometimes clear, and sometimes dark or sanious fluid, in direct association with very adherent appendages, the result, according to the history of the patient, of some antecedent inflammatory symptoms. These cysts have seemed to be of more recent date than the symptoms which indicated the inflammation and subsequent adhesion of the appendages. I would ask, Have the adherent organs, as regards their adhesions, had any causal relation in producing the cyst, and, if so, what?

One great objection to operating on the appendages has frequently been raised, and that is the difficulty of diagnosis. I can quite sympathise with this difficulty on the part of those who are not frequently seeing such cases. I do not think the difficulty will ever be entirely removed. In some patients, the case is perfectly clear beforehand, and may easily be diagnosed as a "tube-case," in which all the organs inside the pelvis may be mapped out with more or less accuracy, and distinguished by double palpation; and the enlargement which is the cause of the trouble may be clearly made out. In some patients we have to rely on the subjective symptom of pain alone; in others, the majority, there are at least some objective features which guide us more or less truly, such as metrorrhagia, enlarged uterus, and most frequently a fulness, a lump, or a small tumour. The clinical history is also generally an invaluable help.

In the acute and subacute forms of pyosalpinx, the temperature is usually a guide; whereas, in the chronic form, when the tubes contain only inspissated pus, the temperature is often not found to be above the normal.

The probability, or the recognised possibility, that a pyosalpinx may burst and cause a fatal peritonitis, is enough in itself to justify an operation, over and above what is to be gained in relief to the patient by its early performance. One of the results of the chronic inflammatory disease on the ovaries is to render them apparently quite pulsatious or rotten; sometimes a large hæmatic cyst, probably the result of an abnormal corpus luteum, is present, with very little real stroma left. Hæmatosalpinx, though rare, is, I expect, much more frequent than the text-books of the past would lead us to believe.

I shall only refer to the operation for the removal of an early ruptured Fallopian pregnancy as having been led up to by operations on the appendages for other conditions.

When menstruation occurs with more or less, and sometimes with perfect, regularity, it is thought to be due to the operator having left a small portion of ovary behind, or not having removed a sufficient length of tube. I cannot at present accept this view; but I am not prepared with an alternative explanation. I know quite well that in some cases of myoma it is very difficult, even impossible, to remove the whole of the ovary, even though the silk is passed some distance beyond it. When the ligature, in such cases, is drawn up tightly, it is seen that its distance from the ovary appears to have become diminished, and that a very little space is left for the scissors, without encroaching on the gland, often not enough to leave sufficient for safety on the distal side of the ligature. I have long been in the habit of tying the tubes as near the uterus as I can get, and yet menstruation will sometimes occur. In a patient of Mr. Bethell of Bridgnorth, I removed, in November last, the appendages for myoma, and entered in my note-book "appendages completely removed." This I do when I am quite satisfied that they are completely removed; and yet I find that in this patient menstruation has been quite regular, though not profusely so, up to the present time.

As regards the performance of the operation itself, there is every variation possible between extreme simplicity and extreme difficulty. Without adhesions, it is perfectly simple and safe, and ought to have no mortality other than what is outside and beyond preventable causes, for example, tetanus, etc. If the inflammatory symptoms have been recent, so that the adhesions are slight and easily separated, the operation is still easy and safe. In old-standing cases, where the

appendages are firmly glued to each other and to the pelvis by tough fibrous bands, the operation is often one of very considerable difficulty, involving much patience on the part of the operator. I believe there are few surgical manœuvres more fatiguing than some of these; and it requires some practice to attain to a perfect *tactus eruditus*, so as to be able accurately to distinguish the line of adhesion between the parts to be removed. I hear of cases that cannot be completed, and I am conscious of such in my own practice, but I feel that such are a reproach to my skill and dexterity, and I am coming to feel that when once attempted they ought always to be carried through; if not, the fault lies rather with the operator than with the inherent difficulties, great though they may be, of the case. The bleeding caused by the separation and tearing of these firm adhesions is often great. It is usually controlled by sponge pressure, or the insertion of the drainage-tube and the pressure of the binder round the abdomen. All this is, to my mind, a very strong argument that such operations should be had recourse to much earlier than they are.

Seeing that inflammatory conditions after confinement are such a large factor in producing chronic invalidism, with sterility, pain lasting for years, and inability to discharge the duties of life, we are justified in advising our patients to submit to operation much earlier now than was thought right a few years ago. And if we can catch the cases in the acute or subacute stage, so much the better; I mean when there are the symptoms of recent inflammation present.

In point of difficulty of performance, I would class first the cases of chronic inflammatory disease of the ovaries, where much discrimination is required and difficulty experienced in picking these organs out of their bed. The adhesions seen on the ovary, when floated in clear water after removal, testify to their having been firmly lodged in the pelvis. How it is that such adherent glands have not been fully recognised in the *post mortem* room seems difficult to understand. Next to these are the cases of pyosalpinx, especially the acute or subacute, where the tubes form a bag of pus of considerable size.

A short incision is, I am convinced, of great importance in most abdominal operations. The actual length of the cutting *per se* is of no real consequence, and can make no difference to the patient other than that she will have more tendency to a ventral hernia afterwards with a long than with a short scar. But during the operation, with a short incision, the probability is that no other parts will be interfered with or opened up than just those which lead directly from the incision down to the organs to be removed. Hence drainage, when necessary, will be more likely to be effectual; and the more the surrounding parts are disturbed, by so much the more is the door opened for introduction and absorption of septicity. The short incision—I mean one of one inch and a half or two inches—adds very little to the difficulty; and it can always be prolonged a little, if found necessary, to get below the organs in a fat subject or a deep pelvis. I think, too, that the intestines incommode the operator less with the short incision.

OBSERVATIONS ON REMOVAL OF THE UTERINE APPENDAGES.¹

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THE expediency of removing the uterine appendages under various circumstances has recently become one of the most important topics that can engage the attention of any medical society. As this subject will, I believe, be here introduced by several supporters of the operations referred to, from some of whose views thereon I have elsewhere expressed my dissent, I presume to take part in the present discussion in the hope that all sides of the question may be now considered, on broad general principles and apart from any personal controversies, with the sole object of arriving at just, temperate, and well-founded conclusions.

With reference to Dr. Savage's able paper, I am sure he will pardon my saying that we should not be withheld from the full discussion of the operations alluded to, even by the demonstration of the success and safety with which they may be performed in many cases by himself and other experts. What we have here to consider is whether, in the experience of the majority of those engaged in gynaecological

¹ Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association at Brighton.