

In some cases there may be severe vomiting, not from any inflammatory condition of the peritoneum, but probably from mere atony of the bowel. If in addition to the vomiting there be flatulent distension of the abdomen, the case simulates closely one of peritonitis, and it is here that an aperient of sulphate of magnesia or soda acts like a charm.

One of my patients (Case 9), a thin, neurotic lady, had frequent vomiting for six days after the operation (on four days it was black), which nothing would allay. At last I thought I would give an aperient, but as she was very low, I called in consultation an eminent obstetric physician who did not think it advisable to purge. Next day, however, as she continued getting worse, I gave a dose of white mixture, and repeated it every two hours until the bowels acted. The effect was marvellous; she was only sick slightly once after the first dose, and from that time recovered steadily.

Flatulence is a frequent and often troublesome complication. I make it a routine practice to have a soft india-rubber tube passed into the rectum for several inches at least twice a day, and find it gives relief. In a case of Porro's operation which I performed at the Middlesex Hospital, there was enormous flatulent distension a few days after the operation, giving rise to all the signs of acute peritonitis; but on passing a long stiff tube into the colon, a tremendous escape of gas put an end to the unfavourable symptoms. In slight cases a teaspoonful of brandy in half an ounce of hot water gives much relief. My patients suffer little from flatulence since I have discarded the use of ice.

Peritonitis is the only other complication about which I shall speak. It may, of course, have existed before the operation, or it may be due to the escape (at the time of operation) of some pus or irritating fluid into the abdominal cavity; but when it sets in after a straightforward case of abdominal section, I cannot help thinking the operator has to reproach himself that the measures he adopted to ensure strict cleanliness were wanting in completeness. Although when once it has set in it need not necessarily be fatal, I believe the best chance is given to the patient by reopening the wound without delay, and irrigating the cavity thoroughly with the boracic acid solution, and inserting a drainage tube. The only case in which I did this for acute peritonitis coming on two days after I had performed abdominal section recovered completely, and is now, three years after, perfectly well.

Mr. Lawson Tait recommends the use of saline aperients, but I cannot help thinking that even such an experienced and able observer as he may have mistaken flatulent distension and vomiting for peritonitis.

In conclusion, I would remark that simple cases of abdominal section seem to recover equally well if put back, immediately after operation, into the general ward, as when isolated in a special ward for several days.

ABSTRACT OF A PAPER ON THE TREATMENT OF CHRONIC DISEASE OF THE UTERINE APPENDAGES.

Read at a Meeting of the Medical Society of London.

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My object in reading this essay is to review briefly the subject expressed in its title. Clinical records and statistics are unsuited for the purpose. Treatment by rest, which is relatively speaking expectant, cannot be satisfactorily judged by statistics. It involves essential factors hard to tabulate. Such a task demands special mental gifts and opportunities such as enabled Dr. Boxall to prepare, at the cost of enormous labour, his invaluable tables relating to pregnancy and childbed. On the other hand, the tabulation of operations, with results and after-histories, is work which most men may, with due deliberation, undertake. We do not yet know how to reduce our "rest" cases and operation cases to equal terms in a mathematical sense. We must, therefore, content ourselves with a brief review of all forms of treatment.

Throughout this communication I will, except when I specify to the contrary, speak of chronic inflammatory changes in the Fallopian tubes and ovaries as one com-

plaint, "disease of the uterine appendages." The specimens now exhibited serve to explain the principal varieties of this affection.

The different methods of treatment more or less in vogue are:—

1, Rest; 2, Electricity; 3, Massage; 4, Curetting of the uterus and Emmet's operation; 5, Catheterism of the tubes; 6, Vaginal puncture of cystic tubes; 7, Abdominal section, which includes the following subdivisions: (a) The complete operation, removal of the tube and ovary, or oöphorectomy; (b) drainage of a hydrosalpinx; (c) breaking down of adhesions and drainage; (d) essentially "incomplete operations," or simple opening of the peritoneum; (e) plastic operations on the tube, or salpingostomy.

Treatment by rest often proves successful if intelligently carried out. The action of drugs must be carefully watched in each case. Thus sulphate of magnesia is very beneficial in most cases, yet others cannot tolerate it. In one case, at least, under my care it set up tympanitic distension of the abdomen with rise of temperature. I witnessed precisely similar symptoms after giving a dose of the same salt to an ovariectomy patient on the eighth day. Intimate intestinal adhesions had been broken down during the operation, and it is evident that the disturbance to the damaged intestines set up by the saline aperient caused the grave complication which followed its administration. In the first case, where the appendages were diseased, intestinal adhesions were probably disturbed as in the second. Both did well when enemata were substituted for aperients. The tampon causes irritation in many cases. The sound had best be dispensed with, and the greatest care must be taken not to make the patient a chronic invalid.

Though electricity may check the growth of fibroids, or may even cure gonorrhœa by killing the gonococci (Prochownik), it is hard to understand how the current can open tubes, clear adhesions, and remove the products of inflammation.

Massage is open to great objections when practised on the genitals, and it is absolutely dangerous when the tubes feel in the slightest degree dilated or the ovaries uneven, that is, in almost the entire class now under consideration. Profuse purulent discharge from the uterus has followed massage, and may signify that pus has found its way out of the tubes. The dangers of deliberately submitting a suppurating tube to treatment by massage are, however, self-evident.

The curette is extensively used abroad, and occasionally in this country. That instrument is properly intended for the cure of endometritis. Foreign authorities declare that endometritis infects the tubes and thus sets up salpingitis, which extends to the ovaries. The cure of endometritis by the curette, by removing the cause will, according to these authorities, cure the disease of the appendages. This principle of treatment is purely theoretical. The curette seems to do good in pure endometritis. Should disease of the appendages be present, few proceedings can be more dangerous than dilatation and scraping. Tissues are thereby irritated in the neighbourhood of inflamed pelvic structures, all for an unsettled theory. The curette has been the direct cause of severe inflammation of the appendages, which some authorities believe that it can cure. Men must not be led astray by pretty French names like "curetage," "hersage," and "écouvillonnage." They define proceedings justifiable in endometritis, but not in cases of more extended pelvic disease.

Emmet's operation as a remedy for disease of the appendages is also based upon pure theory. Catheterism of the tubes is difficult, if not impossible, to perform, and dangerous or useless if really effected. Vaginal puncture of the cystic tube has been advocated by Leopold, who notes that even if the tube be not completely emptied by the puncture, its muscular coat can once more act, just as the uterus contracts if the membranes be ruptured and the waters escape during pregnancy. This proceeding, however, involves operating in the dark, and cystic ovaries, or even fetal sacs, have been perforated by mistake.

Oöphorectomy is the best operation in a large class of chronic cases where subacute seizures occur frequently and at gradually shortening intervals, and where careful bimanual palpation proves the existence of a mass on one or both sides

of the uterus. The tube and ovary are then degenerate and useless. The more cystic they become the more discomfort they cause, and the more probably will they form adhesions to intestine and omentum. The health suffers, the patient is crippled, and, if poor, incapacitated from earning her bread. Pyosalpinx, a not infrequent complication, is in itself a source of danger to the patient. Granting that rest is insufficient to relieve the patient, abdominal section is more satisfactory, and even safer, than the palliative measures above noted.

[The operation was then described.] As a rule, oöphorectomy for chronic disease of the appendages is followed by speedy convalescence. Unfortunately, a permanent cure is not so frequent. Mental symptoms occasionally follow double oöphorectomy. The cases where the stump suppurates are particularly unsatisfactory. Fistulous tracts open, close, and reopen in the abdominal wound for months, discharging thin pus. Such cases find their way to the consulting rooms of others, or to other hospitals than the institution where the operation was performed. The operator hears no more of them, and he or the hospital registrar records them in perfect good faith as "cures." A larger minority suffer from a continuance of the pains which preceded the operation, probably on account of intestinal adhesions, or through irremovable inflammatory products which press on nerves. The ligatures certainly set up trouble in some cases.

A pure hydrosalpinx is often very hard to remove, yet it is a source of great pain, especially during menstruation, when the cystic tube becomes tender and its capsule congested. I have found incision and drainage very efficacious in removing the cause of pain. A considerable part of the cyst and capsule should be trimmed away, so as to prevent any chance of closure and refilling. The great advantage of this practice is that no ligatured stump is left behind in the pelvis. Most satisfactory cases have occurred in my own practice.

Another operation, less radical than oöphorectomy, and yet often effectual, is the simple breaking down of adhesions and subsequent drainage, the appendages, relatively healthy, being left behind. The operation is not always easy; and we have not the advantage of reliable statistical records. We hear much about consecutive cases of oöphorectomy, yet little about this simple breaking down of adhesions. Men do not like to record what may be set down as a "partial operation." They fancy it may be reckoned as a failure. The most honest operator in these cases usually sets to work with a fixed idea that the tube or ovary is at the time the chief or even sole cause of trouble. The cutting away of a tube and ovary after ligature is definite, and in the amputated part there is something to show for one's trouble and for the risk to which the patient is exposed. In so many operations it is right to take something away that surgeons very naturally tend to believe that it is wrong to take nothing away. The patient, too, often averse to the prospect of amputation before she submits to any operative proceeding, is often dissatisfied if she learns afterwards that nothing has been removed. Hence the surgeon must clearly explain beforehand, in all cases where he intends to operate, that the abdominal section is intended to set right what is wrong, and is not necessarily undertaken in order to remove anything. The operation for breaking down of adhesions is not easy, and it requires some experience to know what adhesions may safely be sundered and what should be left alone; and to recognise if the appendages may safely be left behind. A free separation of adherent coils of intestine high above the pelvis is dangerous and useless, and a dilated tube and an enlarged cystic ovary will be a greater source of danger and pain after they have been disturbed than before. The breaking down of adhesions, as a distinct operation, always necessitates flushing of the peritoneum and drainage, for capillary oozing is free in these cases, and suppurating foci are sometimes opened up between coils of intestine. The chief advantage of this proceeding is that there is no fear of the grave mental symptoms which sometimes follow double oöphorectomy.

A simple abdominal incision has sometimes proved sufficient to cure all the indications of disease of the appendages, even the most characteristic objective symptoms. This is often seen when the operator finds numerous intestinal adhesions which he fears to disturb. The same result may follow where the patient suffers great pain before-

hand, although no visible or tangible pathological lesion is detected when the abdominal cavity is opened. Statistics on these cases are wanting, for evident reasons explained in relation to the operation for breaking down adhesions. The explanation of these cases is difficult. I find that where chronic peritonitis is present incision of the walls most frequently does good, especially when the parietal peritoneum is much thickened, as in a case under my care a few years ago.

Skutsch and Martin have saved dilated tubes by a plastic operation termed salpingostomy. A hole is cut in the end of the tube, and the serous and mucous coats are then sewn together. This operation may have a great future, but it is inadmissible when suppuration exists, and is almost certain to fail when active adhesive inflammatory processes are in progress, since the new opening must soon be covered up by fresh bands of lymph.

Removal of diseased appendages should be avoided whenever possible. In long-standing neglected cases it is hardly avoidable, yet even then a less severe operative measure, already indicated, may suffice. Practitioners and nurses are growing more and more skilled. Hence neglected cases are becoming rare; unfortunately certain circumstances preclude the chance of their total extinction. I hope, on a future occasion, to be able to analyse a series of cases within my own practice, especially in respect to the relative results of complete and incomplete operations.

THE HISTOLOGY AND PATHOLOGY OF THE FALLOPIAN TUBES.

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THE progressive elucidation of the many vexed questions in the anatomy and physiology of the Fallopian tubes has of late years made it possible to approach the subject of their pathology in a more comprehensive and more rational manner; but there are yet many interesting details in the microscopic anatomy of the oviducts which deserve and require careful scrutiny, and it is with these histological details that the first part of this paper is occupied. It will thereafter be easier more fully to grasp the meaning of the pathological changes observed in the material upon which the second part of the communication is based. To take a single example: the study of the normal tortuosities observed in the tubes of infants and fetuses must considerably influence the conception formed of the twists and dilatations so frequently found as pathological conditions in the tubes of the adult.

The conclusions arrived at in this paper are founded upon the examination of material obtained from Professor A. R. Simpson's operative clinic, from the *post-mortem* theatre in the Royal Infirmary, and in the Sick Children's Hospital, Edinburgh, and from specimens in the possession of Dr. J. W. Ballantyne. Pairs of tubes to the number of 110 were examined, and in all these cases, except 7, the other pelvic organs were, in addition, investigated; 94 pairs of tubes came from adults varying in age from 17 to 76 years, 5 pairs came from children between the ages of 3 and 15, and 11 pairs from fetuses and newborn infants. Of the 94 cases above mentioned, 61 were consecutive. The methods of research adopted were those usually employed in the microscopic investigation of normal and pathological tissues; but the testing of the patency of the tubes was invariably carried out by means of a mercurial pressure column, and never by the somewhat unreliable probe or bristle. The microscopical examination of longitudinal sections of the tube was found to be a most profitable method of investigation.

Histology of the Tubes.—The examination of the specimens in our possession has revealed the fact that the masterly searches of Henle, Farre, Beigel, Wyder, Martin and others, have so thoroughly exhausted this domain of histology, that