

A Contribution to the Technique of Operations on the Uterine Appendages.*

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I DESIRE to bring before the Academy a short paper dealing with the technique of operations on the appendages, and with the results of some thirty cases on which I have operated in Dr. Steevens' Hospital. I do so principally because it is a subject to which this Section has not devoted much attention of recent years, and so I venture to think it may be of interest to discuss it now, and also because I am anxious to obtain the opinions of the Section on certain methods of procedure which I am in the habit of adopting and on certain principles which I think should govern operative measures in these cases. Further I desire to combat a belief, which was prevalent some years ago if it is not so still, that operations for suppurative conditions of the appendages are unsatisfactory in their after-results unless the removal of the appendages is associated with the removal of the uterus also.

I had better commence my remarks by stating exactly to what operative procedures I intend to refer. I intend to refer to those operations known as salpingectomy, oöphorectomy, and salpingo-oöphorectomy, and also to plastic operations on the ovaries and tubes. I thus exclude all reference to what is usually termed "ovariotomy," that is to say the removal of the ovary for new growths.

So far as possible I will endeavour to avoid giving you a résumé of the opinions and practices of others, and confine myself to my own opinions and practices. I shall thus be at once more brief and more open to direct criticism.

I need not spend time in describing the various lesions which are present in inflammatory diseases of the uterine appendages. It is sufficient to say that they vary from such conditions as slightly thickened tubes or soft retro-uterine adhesions through every degree of severity up to the very severe cases in which both tubes and ovaries are converted into mere abscess sacs, in which the uterine tissue is also markedly affected, and in which the presence of aggravated in-

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testinal adhesions unite to convert the pelvic contents into an unrecognizable mass of inflamed and inflammatory tissue and pus.

The first practical point in the technique of operation is the choice of the route. There is no use in repeating the often-asked question:—“Is the abdominal or the vaginal route the better?” because it is one which cannot be answered in a positive manner. Neither operation can be adopted as a routine to the exclusion of the other. I have not the smallest doubt in my own mind, as my mind is at present, that the abdominal route is the more satisfactory in all cases so far as exact surgery is concerned, and so far as the after-results are concerned—if there is no acute infection present. If, on the other hand, such infection is present, and is in a form which necessitates immediate operation, then the vaginal route is indicated. As the operative treatment of these latter cases is usually limited to drainage of pus collections, I will not discuss them, and will confine myself to the very much larger number of cases in which we have no reason to believe that there is an acute pyogenic infection present. In such cases I unhesitatingly recommend the abdominal route. The technique of abdominal coeliotomy has been so greatly improved, and in consequence the risk of operation has been so greatly diminished, that we are justified in undertaking these operations to an extent which was by no means justifiable in the past. Moreover, by the abdominal route we can, in the large majority of cases, remove the diseased tissues in an exact and surgically correct manner, and, what is equally important, we can spare organs or parts of organs that are necessary to the future welfare of the woman. It is no doubt often very tempting to tell a nervous patient that her condition can be cured without the necessity of making an external incision, but is this so? Can we deal with diseased conditions as satisfactorily, can we spare and restore tissues as completely when operating through the vagina as through the abdomen? I do not think that we can, or that we can deal with intestinal adhesions at all. The mere wholesale removal of inflamed appendages is a very small part, and indeed a very unsatisfactory part of these operations.

It may be said that I am begging the question by speaking of cases “in which we believe that there is no acute pyogenic infection present,” inasmuch as it is impossible to recognize such cases with certainty. I admit at once that this is so, but I fear that if we adopt the view, correct as it may be, that all cases are possibly cases of acute infection, we must at the same time either decide to perform a second operation on every patient or give up the idea of permanently curing her. The vaginal operation will, in many cases, save the life of a patient suffering from acute infection, but it will seldom restore her to complete health, or restore to her genital organs their normal functions unless it is followed by an abdominal operation. I there-

fore think that we are justified in operating by the abdominal route in all cases of inflammatory adnexal disease in which we have no reason from the symptoms or history of the patient to fear the presence of acute pyogenic infection. I think that the statistics which I will bring before you of my own operations support the view. Out of thirty-two patients, one died as a direct result of the transmission of sepsis from the pelvis to the general peritoneal cavity, and in this case I deliberately operated by the abdominal route on account of the patient's symptoms, and in spite of the fact that I had reason to suspect the existence of an active infection.

Having decided upon the abdominal route the first step is to expose the pelvic contents as fully as possible. The incision must be of sufficient length. The practice of cramping our procedures for the sake of saving an inch or so is unwise because it lengthens the operation and entails working in the dark. As soon as the peritoneal cavity is opened, the patient may be placed in Trendelenburg's position. It is inadvisable to place her in this position at an earlier stage, because it tends to make the peritoneum fall away from the deep fascia and to lie at a greater depth in the wound than is convenient. This is particularly the case in patients with well-developed abdominal muscles.

The intestines are next pushed upwards, and the presence or absence of adhesions ascertained. I need not spend time in discussing the management of the latter, save to say that whenever possible the complete separation of all intestinal adhesions should precede any attempts to deal with the appendages themselves. This done, and the intestines shut off from the pelvis by sponges, any adhesions between the uterus and the bladder are separated, and the anterior face of the uterus and broad ligaments thus exposed as completely as possible. This procedure, as well as all the subsequent steps of the operation, is greatly facilitated by catching the fundus with a bullet forceps and drawing it upwards. A firm hold should be taken to prevent the forceps from tearing out, and the latter should be applied at the spot at which the suspension sutures will be subsequently passed through the uterus.

We now are in a position to deal with the appendages themselves. The first step is the separation of adhesions between the appendages and the rectum, the appendages and the uterus, and the appendages and uterus and the remaining peritoneum. I am afraid that I cannot offer any suggestions of value as to the method of doing this. When possible work as much by vision as by touch. When this is impossible follow the line of least resistance, unless it is obviously leading into a pus sac. Keep round the sides of the pelvis at first, and thence work towards the distal end of the tube. Cut firm adhesions with the scissors, so as to avoid, if possible, rupture of the wall of

an abscess sac. Remember that the object in view is to separate the appendages from everything save their normal attachments, in such a manner that it may be possible to draw the appendages into or outside the abdominal incision. There are cases in which this separation is impossible, but I believe that they are few in number. In such cases it may be necessary to commence work not by separating the adhesions, but by removing the uterus, either by first opening the anterior vaginal fornix or by splitting the uterus mesially from above downwards. I dislike removing the uterus in these cases if it is at all possible to avoid so doing, save in the presence of advanced tuberculous infection, and therefore I never adopt these procedures if it is possible to avoid them.

If the appendages can be satisfactorily separated, the next step of the operation consists in carefully examining them to see if there are any parts which can be allowed to remain. Nothing, I believe, has contributed to the discredit, which has sometimes attached itself to these operations, so much as wholesale removal of both sets of appendages, and, so far as I am at liberty to speak from my own small experience, complete removal is as a rule unnecessary. Perhaps I may make myself clearer if I say what in my opinion must and what need not be removed. A tuberculous appendage or uterus must be removed completely. A pyosalpinx must be removed completely, and so must an ovarian abscess or tubo-ovarian abscess. A much-thickened tube which contains pus, and whose lumen is obliterated elsewhere than at the fimbriated extremity, should be removed, and so should any tube of which the lumen is similarly obliterated. A slightly thickened or œdematous tube in which the lumen is pervious, or obliterated only at the fimbriated extremity, and which contains only a little or no pus, need not be removed unless the history of the case suggests any possibility of recent infection. A large œdematous ovary, an ovary containing blood cysts, or cystic follicles need not be removed. These are the organs that often fall unnecessary victims because they are associated with a pyosalpinx or other serious tubal lesion. If the pressure to which they have been subjected is relieved, they will return to a more normal condition, and will save the patient from a premature menopause.

It is thus obvious that the procedures which we can adopt in these cases vary from the mere separation of adhesions and perhaps some plastic operations in simple cases, to complete bi-lateral salpingo-oöphorectomy with or without an accompanying hysterectomy.

On the subject of plastic operations I should like to say a few words. In suitable cases such procedures are most satisfactory, and occasionally have resulted in future pregnancies. In performing salpingostomy, *i.e.*, the restoration of the tubal abdominal ostium, I usually make an opening into the lumen of the tube about an inch

from its end, and then, introducing the point of the knife through this opening, I split the last inch of the tubal wall. The mucous lining of the tube is then brought into contact with its peritoneal covering by means of a few catgut sutures, and a large ostium is thus left (*v. Fig. 1*). If this is done, I do not think it is necessary to suture the ostium to the ovary, as such a procedure lessens the chance of an ovum finding its way into the tube. In the case of œdematous or cystic ovaries I split the ovary in the usual manner and tear away the cyst walls. The incision is then closed with catgut. In this connection it is worth calling attention to the tendency of such ovaries to bleed after they have been returned to the pelvis, though so long as they were held up there was no bleeding. It is always well to examine them carefully a second time, after they have been replaced, to see if there is any oozing, and, if so, to insert the necessary additional sutures.

Salpingectomy is an extremely simple proceeding, and the only precaution necessary is to avoid the escape of any infective material from the uterine end of the tube during division. If the interstitial portion of the tube is thickened or contains pus, it is well to dissect it out of the uterus. Otherwise, I do not place any ligature on the tube itself, and merely tie the vessels beneath it. By so doing the lumen of the tube is preserved, and possibly an ovum may at some future time find its way through it.

I think that the simplest way in which to perform salpingectomy is to apply a long and slender clamp to the broad ligament half an inch or so below the tube, and then, catching the tube in a clip forceps, to cut across the broad ligament above the clamp right up to the uterus (*v. Fig. 2*). If the stump of the tube is to be left, a suture may be then inserted just below the tubal insertion into the uterus, and in such a manner as to include the terminal branch of the artery just where it is leaving the uterus and entering the tube. This suture does not include the tube (*v. Fig. 4, B*). The uterus is then drawn well up into the abdominal incision by means of an American forceps which has previously been applied to the fundus, and the tube is isolated by packing a sponge round it and cutting across. The lumen can then be disinfected by passing into it a probe dipped in pure carbolic acid. This done, the long clamp is removed from the broad ligament, and any vessels are caught in clips and tied separately by catgut sutures passed so as to include with them a piece of the broad ligament (*v. Fig. 3*). By this means puckering or contraction of the broad ligament is avoided. Lastly, if the broad ligament is thick, the cut peritoneal edges are brought together with a catgut suture.

If the uterine end of the tube is infected, it is well to extirpate it completely, by dissecting it out of the uterus. The resultant cavity in the uterine wall is then closed with catgut sutures (*v. Fig. 4, A*).

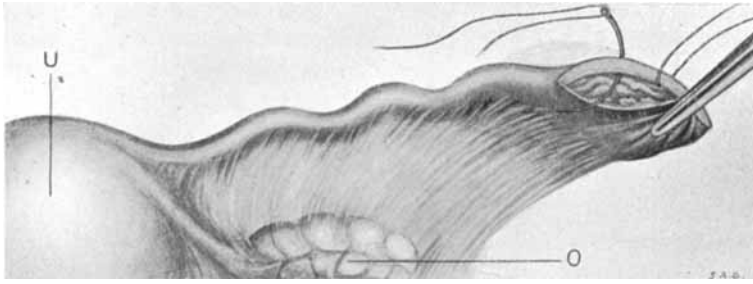


Fig. 1. The method recommended of performing salpingostomy. The needle is shown in the act of suturing together the tubal mucous membrane and the peritoneum. U, uterus. O, ovary.

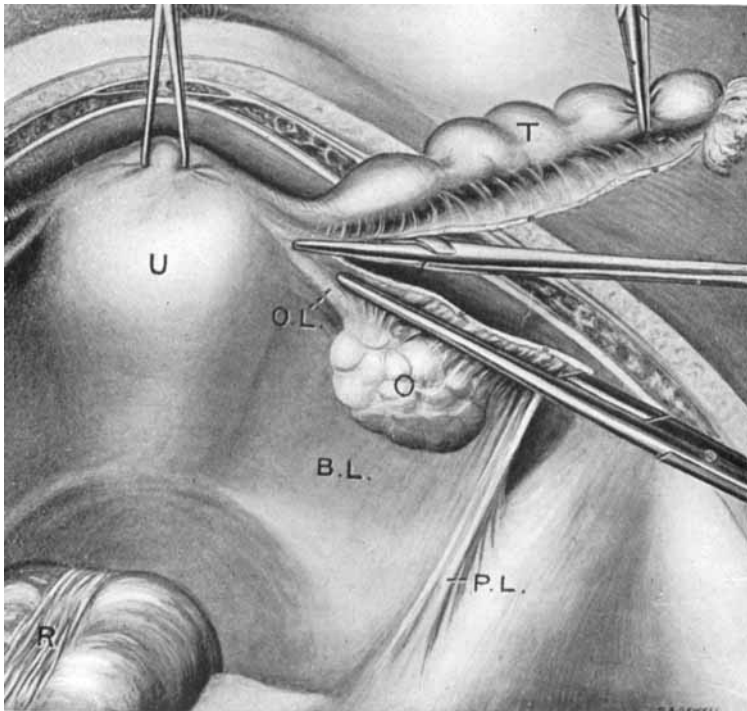


Fig. 2. The method recommended of performing salpingectomy. First stage. The clamps have been applied and the tube has been separated from the broad ligament.

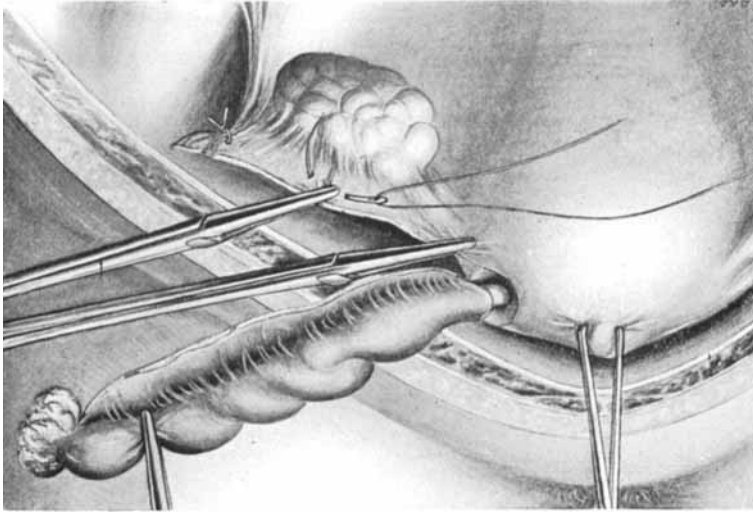


Fig. 3. The method recommended of performing salpingectomy. Second stage. The long clamp at the top of the broad ligament has been replaced by clips on the vessels, and the latter are being tied. The uterine end. The stump of the tube is in process of being completely removed.

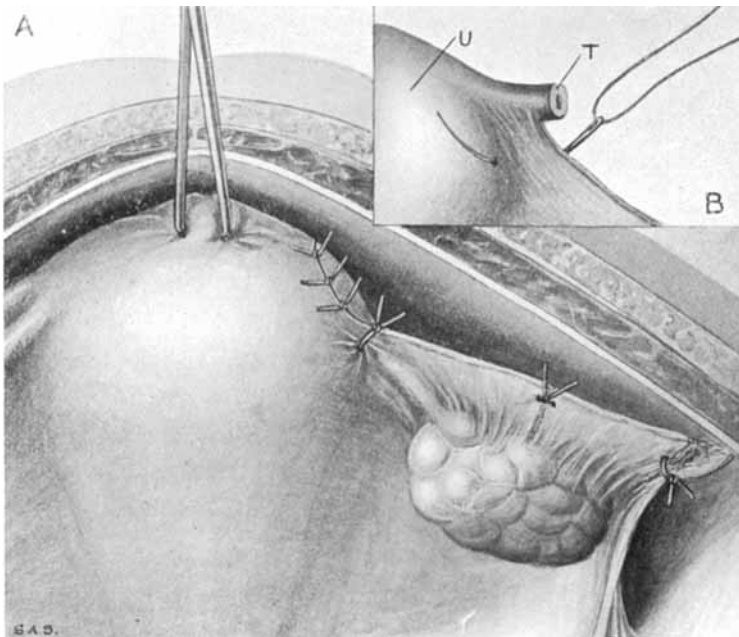


Fig. 4. The method recommended of performing salpingectomy. A, the final stage. The vessels in the broad ligament have been tied, and the cavity in uterus has been closed by sutures. B, the method adopted of tying the tubal branch of the uterine artery in cases where the stump of the uterus is left. U, uterus. T, tube.

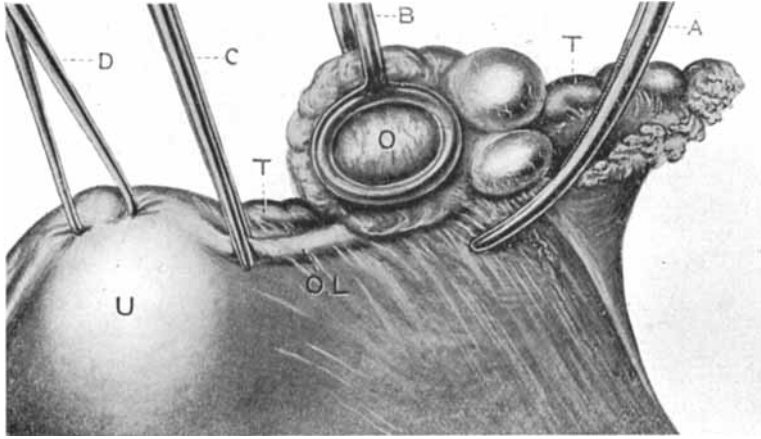


Fig. 5. The method recommended of performing oöphorectomy. The outer end of the attachment of the ovary to the uterus and the ovarian ligament are caught in clips. The ovary is then removed and the clips replaced by ligatures. U, uterus. O, ovary. T, tube. OL, ovarian ligament.

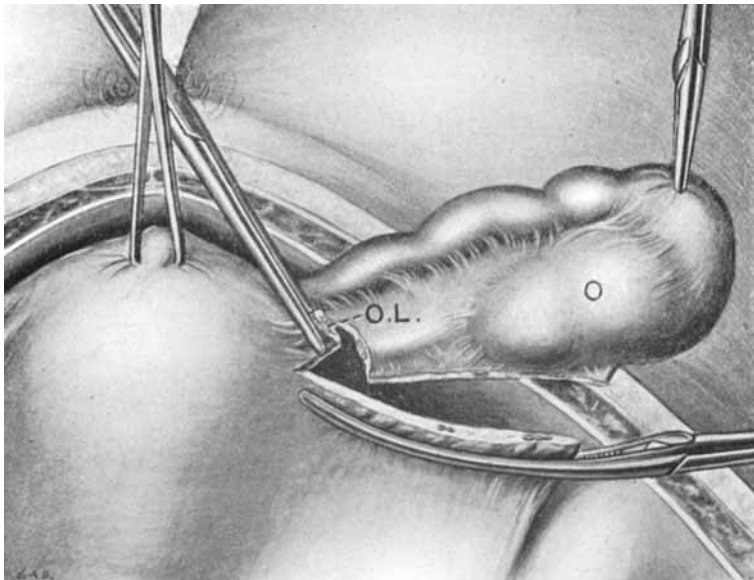


Fig. 6. The method recommended of performing salpingo-oöphorectomy. The broad and ovarian ligaments have been clamped, and the ovary and tube separated save at the uterine end of the latter. OL, ovarian ligament. O, ovary.

It is a very simple procedure, and effectually prevents the subsequent formation of adhesions between the tubal stump and any part of the peritoneum.

Simple oöphorectomy is performed in a somewhat similar manner. The ovary is caught in a forceps and drawn upwards. Thin clamps are applied to the ovarian ligaments and to the vessels which pass to the ovary through the infundibulo-pelvic ligament (*v.* Fig. 5). The ovarian ligament is divided and the ovary is then removed from the back of the broad ligament. The ovarian ligament and any bleeding vessels in the broad ligament are tied separately. Salpingo-oöphorectomy is only a combination of the two procedures, the essential features being first to remove the appendages and then to apply the ligatures, tying each bleeding point separately and avoiding anything like ligature *en masse* (*v.* Fig. 6).

The final step of the operation, so far as the pelvic organs are concerned, is the performance of ventro-suspension of the uterus. This procedure I always perform as a routine measure in these cases, and I regard it as essential to the future well-being of the patient. If the fundus is left free with probably some of its ligaments gone, and with certainly their functions impaired, it will fall back and become adherent. If this happens, it is no wonder that the patient's symptoms persist, and that the operator is driven to the conclusion that he should have removed the uterus also.

I may say here that for the past three years I have not washed out the peritoneal cavity after operations on the appendages, neither have I drained a case through the abdominal wall. In the very few cases in which drainage was considered necessary I drained through Douglas's pouch into the vagina by means of iodoform gauze. As I have mentioned, one patient died within thirty-six hours of the operation from acute sepsis due to *Staphylococcus Aureus*, apparently derived from septic tubes. In this case I had drained Douglas's pouch into the vagina. I do not think that, in the presence of so virulent an infection as this proved, washing out of the abdomen would have altered the result.

There are certain principles which I think apply to all operations on the uterine appendages, and to which I venture to draw your attention:—

(1) Never tie the broad ligament with interlocking sutures or with a so-called Staffordshire knot. The objections to each of these methods are obvious. In the first place such methods pull the top of the ligament together and so shorten it, and the contracted ligament in turn tends to drag the uterus backwards. Secondly, they necessitate the use of silk, the objection to which I shall mention in a moment, as it is difficult or impossible to include so great a mass satisfactorily or sufficiently tightly in a catgut ligature. Thirdly,

SHOWING THE NATURE OF THE OPERATION AND THE RESULTS

No.	Name	Age	M or S	Date of operation	Extent of lesion	Remarks	Right tube	Left tube
1	M.H.	—	—	8/5/04	slight	—	—	—
2	R.B.	—	—	22/9/04	considerable	ruptured tubal pregnancy & hæmatocele	freed	removed
3	McC.	22	M	21/11/04	very considerable	tuberculous (see below)	removed	removed
4	M.B.	32	M	29/3/05	slight	(see below)	—	—
5	C.J.	31	M	29/3/05	considerable	—	freed	freed
6	N.S.	24	M	29/3/05	slight	—	outer half removed	removed
7	E.W.	34	M	12/4/05	considerable	tuberculous	removed	removed
8	E.C.	35	M	10/5/05	considerable	—	ostium restored	removed
9	—L.	24	M	31/5/05	considerable	—	outer half removed	freed
10	—O'C.	18?	M	7/6/05	considerable	—	ostium restored	ostium restored
11	—B.	30?	M	21/6/05	slight	—	—	—
12	A.C.	29	M	13/9/05	considerable	—	freed	freed
13	A.M.	33	M	13/9/05	slight	—	—	—
14	—S.	26	M	22/9/05	very considerable	(see below)	removed	removed
15	E.B.	25	M	27/9/05	considerable	—	ostium restored	ostium restored
16	A.H.	27	M	17/10/05	considerable	old tubal pregnancy and pyosalpinx (see below)	removed	removed
17	—B.	22	M	8/11/05	considerable	—	removed	removed
18	J.C.	27	S	15/11/05	slight	chronic cortical oöphoritis (see below)	—	—
19	—M.	30	M	21/1/06	slight	—	—	—
20	—B.	32	M	7/2/06	considerable	(see below)	ostium restored	ostium restored
21	E.M'C	31	M	14/3/06	slight	—	—	—
22	—D.	26	M	21/3/06	considerable	—	outer half removed	removed
23	M.F.	24	S	31/3/06	considerable	tuberculous	removed	—
24	M.M'C.	38	M	11/4/06	considerable	old hæmatocele	freed	freed
25	—D.	42	M	30/5/06	very considerable	uterine myomata and salpingo-oöphoritis	removed	removed
26	A.S.	35	M	29/8/06	very considerable	(see below)	removed	—
27	—M.	40	S	24/10/06	slight	—	freed	freed
28	—P.	27	M	5/12/06	considerable	—	ostium restored	removed
29	L.D.	23	M	12/12/06	considerable	tuberculous (see below)	removed	removed
30	M.M.	29?	S?	14/12/06	considerable	—	removed	removed
31	—F.	36	M	23/1/07	considerable	—	freed	freed
32	—B.	26	M	30/1/07	slight	—	—	—

N THIRTY-TWO CASES OF OPERATIONS ON THE APPENDAGES.

Right ovary	Left ovary	Uterus	Drainage	Immediate result	Condition when last seen	Date when last seen
resection of cysts freed	— removed	ventro-suspension ditto	— —	good good	good good	15/8/04 13/6/06
removed	removed	removed	gauze into vagina	very unsatisfactory	better but still unsatisfactory	16/7/06
removed	—	ventro-suspension	—	good	good	29/3/06 (about)
removed —	resected resected	ditto ditto	— —	good good	good good	25/5/05 24/8/05
resected freed	removed removed	ditto ditto	— —	good good, save for slight infection of wound with Staphylococcus P. Aureus	good good	11/9/05 27/8/06
resected resected	freed resected	ditto ditto	— —	good good	good good, save for pulmonary trouble, probably tuberculous	21/8/05 21/8/05
resected freed resected removed	removed resected resected removed	ditto ditto ditto	— — —	good good good	not seen again good good	— 5/10/05 4/12/06
removed	resected	removed ventro-suspension	gauze into vagina	good	good save for pulmonary trouble	22/1/06
removed	resected	ventro-suspension ditto	—	good	good	15/2/06
resected resected	resected resected	ditto ditto	— —	good good	good good, save for infection of abdominal wall	2/8/06 17/7/06
resected resected —	resected resected resected	ditto ditto ditto	— — —	good death good	good — good	23/4/06 — 10/1/07
—	removed	ditto	—	good, save for infection of abdominal wall	good	10/12/06
freed	freed	ditto	gauze into vagina	good	good	10/1/07
removed	removed	removed	—	good	good	3/5/06
—	resected	ventro-suspension	gauze into vagina	death	—	—
freed	freed	ditto	—	good	good	29/10/06
resected freed	removed freed	ditto ditto	— —	good good	— see below	— —
freed resected resected	freed freed resected	ditto ditto ditto	— — —	good good good	good — good	6/3/07 — 28/2/07

there is always a risk of the slipping of ligatures so applied, unless a considerable amount of tissue is left beyond them, and, as this tissue is deprived of blood and is probably bacteria-laden, it may subsequently slough and give rise to the formation of adhesions or even to general infection.

(2) Never use silk in the presence of inflammation unless it is impossible to avoid doing so. Silk remains permanently, and if infection is present tends to become a permanent depositary of infection, whilst catgut is absorbed.

(3) Never remove more than is necessary, and do not tie the stump of the tube if one is left. The complete removal of the uterine appendages on both sides is sometimes necessary, but more often is unnecessary. The retention of even a portion of the ovary adds very greatly to the future comfort of the patient, and if to this is added even the stump of a patent Fallopian tube, there is present, at any rate the possibility of a future pregnancy instead of the certainty of sterility.

(4) Always conclude the operation by performing ventro-suspension of the uterus. The reason of this is obvious. If the pelvis prior to operation has contained inflammatory masses, when these are removed the uterus is almost certain to fall back, and, as its peritoneum is probably roughened, it will contract fresh adhesions and remain permanently fixed. Personally, I think that the persistence of pain which is said so often to follow operations on inflamed uterine appendages is frequently due to neglect of this precaution.

This table may be summarized as follows:—Thirty-two cases in all were operated upon. In ten of these the extent of the lesion was "slight," that is to say the inflammatory trouble present was confined to the tubes and ovaries, and there was little involvement of the pelvic peritoneum. In eighteen cases the extent of the lesion was "considerable," that is to say the inflammation had spread outside the tubes and ovaries and had resulted in the formation of dense adhesions. In four cases the extent of the lesion was "very considerable," that is either owing to the presence of unusually firm and extensive adhesions, or to involvement of the uterus, or to the presence of some complication such as myomata. Two patients, Nos. 20 and 26, died. In one case of extensive tuberculosis, No. 3, the immediate result was most unsatisfactory, and the remote result only slightly better. In another case, No. 18, the immediate result was good but the remote result was unsatisfactory inasmuch as the patient's pain still continued. It was a case of so-called chronic cortical oöphoritis. In four cases, Nos. 3, 14, 24, 26, I drained Douglas's pouch with gauze into the vagina; in the remaining cases I did not use any form of drain. In four cases a varying degree of

infection of the abdominal wound occurred, and two of these were tuberculous cases. It is on account of these cases that I have given up using anything but catgut for buried sutures in the presence of infection. In all the other cases primary union occurred, and in all but the two to which I have referred above the after-results were good, that is to say the pelvic contents returned to a normal state, the uterus remained in a normal position, and the patient's symptoms disappeared.

In three cases I removed both sets of appendages and the uterus. One of these (No. 3) was on account of very extensive tuberculosis. The second (No. 14) was partly on account of the very extensive nature of the infection which involved the uterus, and partly on account of suspected tuberculosis. Microscopical examination did not, however, show any evidence of tuberculous disease, but at the present time I believe the patient is suffering from pulmonary tuberculosis. In the third case (No. 25) a myomatous uterus was associated with advanced tubo-ovarian disease. Not alone were these the only cases in which I found it necessary to remove the uterus, but they were the only cases in which I found it necessary to remove both ovaries. I wish especially to emphasize this point, and to repeat that although in sixteen cases the extent of the lesion was "considerable," and in four cases "very considerable," yet in only three cases was it necessary to remove both ovaries, and in these three it was found necessary to remove the uterus also. In eleven cases I removed one ovary. In five cases I removed both tubes (in addition to the three cases in which both appendages and uterus were removed), in three cases I removed the whole of one tube and half the other, and in five cases I removed one tube alone. In five cases I made a new ostium in either one tube or both tubes, and in nineteen cases I resected one ovary or both ovaries.

FATAL CASES.—No. 20. Mrs. B., aged 32, married twelve years, no children, had suffered from pain in back, severe dysmenorrhœa and intense vaginal congestion and irritation for a number of years. On vaginal examination, the uterus was found to be enlarged, retroverted and fixed. On February 7th, I opened the abdomen, and found the uterus adherent to the rectum by soft adhesions, the tubes were also adherent, their fimbriæ obliterated, and their abdominal ostia closed. I broke down the adhesions, opened the tubal ostia, excised some small cysts in the ovaries, and, having sutured the incisions, performed ventro-suspension and closed the abdomen. An hour after the operation the patient became collapsed, but subsequently rallied a little. Two hours later she again became collapsed, her pulse was imperceptible, and her temperature 96°F. I made a diagnosis of internal hæmorrhage, and re-opened the abdomen. I found clots to

the extent of about a pint or a pint and a half due to bleeding from the incisions in the ovaries. I sutured the latter again, and stopped the bleeding. I then poured saline solution into the peritoneal cavity and closed the abdomen. The patient's condition was then very serious, though not hopeless. Saline infusions into the breasts and saline enemata were administered, and she rallied somewhat. She however became semi-delirious and very violent. Small doses of morphia were given, but she again became collapsed towards morning and died at 8 a.m., nearly sixteen hours after the second operation.

At the *post mortem* examination, the abdomen was found to contain a quantity of dark-coloured fluid, composed of the saline solution of the night before. There had been no further hæmorrhage. The cause of death was probably to be found in the effect produced by the comparatively slight amount of hæmorrhage on a not very strong heart.

No. 26. Mrs. S., aged 35, married ten years, two children and two abortions, was admitted to the Hospital on June 7th, 1906. She said that she had had a miscarriage four days previously, and was suffering from severe pain and diarrhœa. On examination, the uterus was found to be retroverted and adherent, and Douglas's pouch was occupied by a soft swelling formed by the uterine appendages. The patient's pulse was quick and her temperature high, and she was obviously suffering from septic poisoning. She was kept in bed and suitably treated until her temperature fell to normal, when she was sent home with directions to return in some months. She returned again at the end of August complaining of very severe pain, and expressing a desire to have something done for it. Her temperature was normal, but her abdomen was swollen owing to partial intestinal obstruction. On account of her condition and her desire for operation, I consented to operate. On opening the abdomen, three distinct coils of intestines were found so densely adherent to the uterus and appendages that on separating them the outer coat of the intestine was torn in three places and had to be sutured. The rectum was then found to be densely adherent to the back of the uterus, its mesentery being so much thickened as to suggest malignant disease. After separating the adhesions the right tube was removed, as well as a small cyst from the left ovary. The lumen of the left tube was found to be patent and so the tube was left. There was a very small amount of pus encysted amongst the adhesions. As there was considerable bleeding from the back of the rectum, and as this could not be completely checked, an opening was made into the posterior fornix, and Douglas's pouch was plugged with iodoform gauze, the end of which was brought down into the vagina. Ventro-suspension of the uterus was done, and the abdomen was closed. The next morning the patient's pulse was extremely rapid and gradually rose to nearly 180.

She died the same night with all the symptoms of a most acute septic poisoning.

At the *post mortem* examination pus was just commencing to form in the peritoneal cavity, which also contained some dark-coloured fluid. Cultures of the pus were made with the result that colonies of the *Staphylococcus Pyogenes Aureus* grew freely. I have little doubt that the infection was derived from the appendages and was not introduced from without during the operation.

It is undoubtedly technically wrong to operate on such cases through the abdomen at so short an interval as three months after the original infection, but looking at the case as it was, it is difficult to see what else could have been done. The patient's condition called for some relief, and a vaginal operation would have done little to relieve the intestinal adhesions which were the chief cause of her trouble.

UNSATISFACTORY CASES.—No. 3. Mrs. McC. was admitted to hospital on October 15th, 1904. She had been confined on the preceding 31st of July, and since then had complained of severe pain in the iliac region and profuse discharge. She was very much emaciated and was becoming gradually worse. On examination, Douglas's pouch was found to be occupied by an elastic swelling corresponding to the appendages. On account of the short time which had elapsed since infection, I decided to operate by the vagina. On opening into Douglas's pouch, it was found to be occupied by a mass of friable tissue which tore away and could not be drawn down. Accordingly a piece was removed for examination, and the cavity was plugged. On examination of the removed portion, the pathologist reported it to be tuberculous. Ten days later I opened the abdomen and found extensive tuberculous peritonitis and advanced disease of the appendages. I removed the latter and the uterus. There was a very foul-smelling abscess between the appendages. Subsequently, a recto-vaginal fistula formed, due to injury of the much-softened rectal wall. In addition to this, infection of the wound occurred, and of the peritoneal cavity in the neighbourhood of the incision. As the patient's condition was gradually becoming worse I had to open the abdomen again. The tuberculous peritonitis was then found greatly to have extended, and in one place it had so softened the intestinal wall that in separating an adhesion I pushed my finger through the wall. I tried to suture the tear, but the tissue was so rotten that it would not hold the stitch, consequently a second fistula formed here. The patient's condition, however, gradually improved, and she was able to be sent to a Convalescent Home some three months after the first operation. I have seen the patient at intervals since then, the last time being on July 16th, 1906. Her general condition was then

slightly better, and she had put on flesh. The vaginal fistula was, I think, healed, and the abdominal fistula was still open. It however did not cause her much trouble. I tried to persuade her to come regularly to the Hospital to have injections of tuberculin, but although she said she would come, she has not done so, nor have I seen her since.

No. 18. This case was one of chronic cortical oöphoritis. There were no adhesions, the capsule of the ovaries was thickened, and they contained numbers of small cysts. These last were punctured and scraped out. The patient made an uneventful recovery, but the pain from which she had previously suffered for a considerable time did not get any better.

CASES OF SPECIAL INTEREST.—No. 29. L.D., aged 23, married, was admitted to the Hospital under my colleague, Dr. Kirkpatrick, on account of renal disease dating from her past pregnancy three months before. Her legs and other parts of the body were very œdematous, the urine was loaded with albumen, and she had marks of extensive tuberculous glands in her neck. In addition she complained of very severe pain in the pelvis. On examination I found the pelvis completely filled with a soft mass representing thickened appendages. As I thought the case was certainly tuberculous, and as the patient complained of very severe and continuous pain, I decided to operate, with a faint hope that I might find that her pelvic condition had something to do with her renal condition by causing pressure on the ureters. On opening the abdomen the thickened tubes and some adherent intestines filled Douglas's pouch to which they were adherent. I freed the adhesions and removed two thickened tubes which contained pus, the ovaries were apparently healthy, and so I did not interfere with them. On subsequent microscopical examination, the tubes were found to be tuberculous. The patient made an excellent recovery from the operation and her pain entirely disappeared. Her renal condition, however, got no better, and at the present time she is passing very little urine, which is loaded with albumen and contains tube casts, and she is suffering from general anasarca. I should have mentioned that at the operation I found that there was a row of calcified mesenteric glands situated in the mesentery, and forming a regular chain, so far as I could ascertain, along the entire length of her intestine. I am afraid that there may be in the future an autopsy in this case, and I should not be in the least surprised to find that there was pressure exerted by these calcified glands upon the renal vessels.

No. 4. M.B., aged 32 (?42), was transferred to my care by my colleague Mr. Haughton, who had previously operated upon her for ascites and hepatic cirrhosis, performing a Talma-Morrison operation.

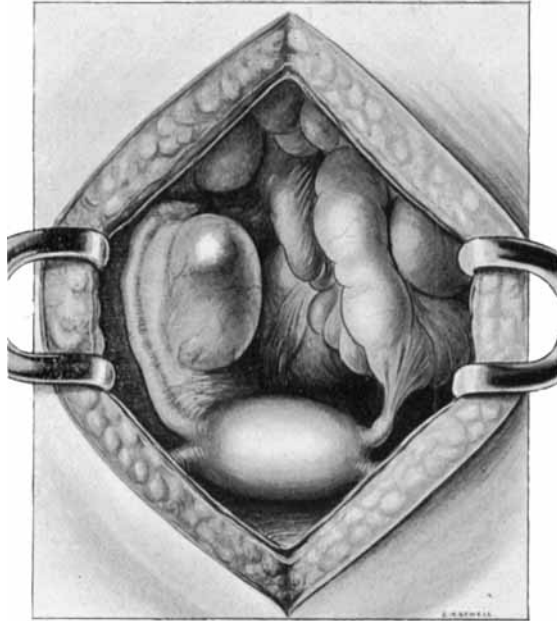


Fig. 7. Drawing made of the pelvic organs in Case iv. Showing the absence of the uterine appendages on the left side.

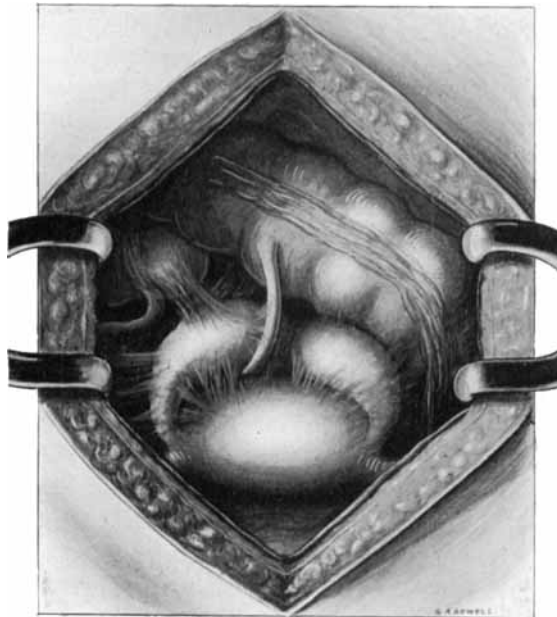


Fig. 8. Drawing showing intestinal diverticulum met with in Case iv.

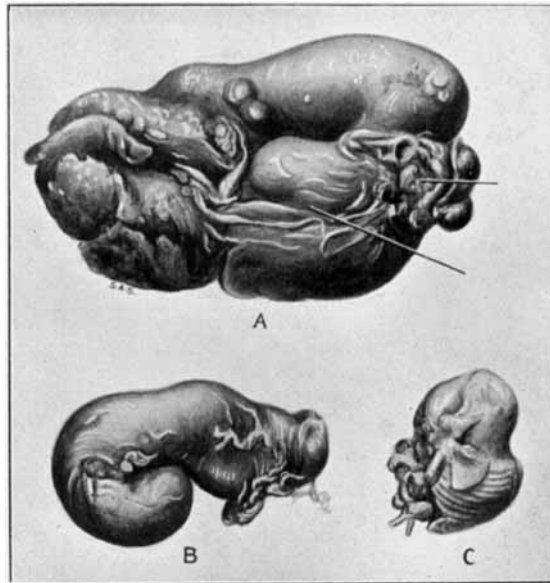


Fig. 9. Uterine appendages removed in Case xvi. A, appendages from right side. The upper line points to the still adhering remains of the frontal pelvis, the lower line to the ovary. B, the left tube. C, trunk and head of foetal skeleton.

She complained of irregular and profuse menstruation and pain in the lower part of the abdomen. On examination, the uterus was found to be slightly enlarged and a firm round swelling the size of an orange corresponding to the right ovary was felt. I opened the abdomen on March 29th, and found some pelvic adhesions, and an ovary enlarged to some four or five times its original size. I removed the ovary, leaving the tube. On proceeding to look for the appendages on the opposite side, I found that the only structure representing them was the stump of a Fallopian tube some half an inch in diameter. The end of this stump was adherent to part of the small intestine. There was no trace of an ovary, and the peritoneum of the broad ligament was absent save for a small fold corresponding in length to the tubal stump and adherent to the surrounding structures. The patient said that she had never had a previous operation save that performed by Mr. Haughton, and there was no evidence of any such operation having been performed. I think that the patient's statement was certainly correct, and consequently in this case the removal of the left appendages must I think be attributed to the destruction of their blood supply by torsion and their subsequent absorption. (Further notes on this case will be found in the *British Gynaecological Journal* for May 1906.)

No. 14. M.S., aged 26, married, came to me complaining of pain in the lower part of the abdomen. On examination, the uterus was found to be fixed and Douglas's pouch to be occupied by two swellings, each equal in size to a small orange. She had a history of previous septic trouble after labour, and had had a pelvic abscess opened and drained in another hospital. On opening the abdomen, I found the pelvis so occupied by inflamed appendages and adhesions, and the uterus so extensively involved, that I had no option but to remove both appendages and uterus. The interesting feature in the case is shown in Fig. 8, and consisted in the presence of a tube which could be seen running from the large intestine into the mass occupying Douglas's pouch. It was some two and a half to three inches in length, and about a quarter of an inch in diameter. At first, I assumed that it was the appendix, and, as I could not free it, I ligatured it and cut it across. On subsequent examination, however, it turned out to be a diverticulum from the pelvic colon with which its walls were structurally continuous. It presumably must be considered to have been an unusually placed Meckel's diverticulum. (Further notes of this case will be found in the *British Gynaecological Journal*, May 1906.)

No. 16. A.H., aged 27, married, was admitted to the Hospital complaining of pain in the lower part of the abdomen and back, too frequent menstruation, and bleeding after coitus. She had no children, but said that she had had a miscarriage at the eighteenth

or twentieth week about eighteen months before. On examination, Douglas's pouch was found to be occupied by enlarged appendages, and at one point a hard and irregular mass about the size of a hazel nut could be felt. On opening the abdomen, I found that both tubes were dilated and contained pus, while the left ovary was cystic. The skeleton of a four months' fœtus projected from the ampulla of the right tube. Apparently, the supposed miscarriage was really the termination of an extra-uterine pregnancy, the remains of which had become infected. The condition is well shown in the accompanying drawing.