Second and third series of twenty-five cases of completed ovariotomy / by G. Granville Bantock.

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8.

SECOND AND THIRD SERIES

OF

TWENTY-FIVE CASES

OF

COMPLETED OVARIOTOMY.

BY

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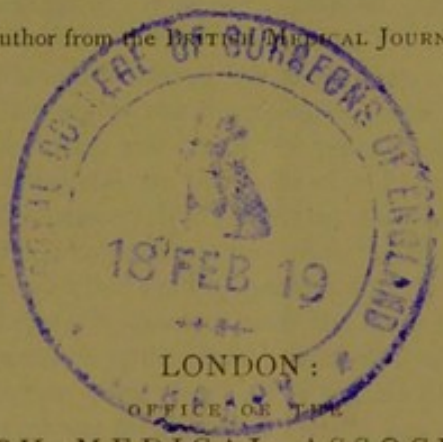

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SECOND AND THIRD SERIES OF TWENTY-FIVE CASES OF COMPLETED OVARIOTOMY.

WHILE my last paper was awaiting publication, a case illustrating another of the disadvantages of the clamp came under my notice. The patient was sent to me to have a second ovarian tumour removed, and gave the following history. Six years ago, she underwent ovariotomy in one of the general hospitals, and made a good recovery. The pedicle was secured by a clamp, which came away in about a week. Last year, when with child, she entered another hospital, and was supposed to be suffering at the same time from ovarian disease. She was advised to get through her pregnancy before having anything done. Two months before applying to me, she was confined ; the labour was rather tedious. She complained to me of pain and a sense of dragging in the left side, and said she had a small tumour in the hypogastrium. On examination, I found a globular swelling there with the line of the cicatrix very much stretched laterally, passing upwards over it. This tumour was as large as the head of a child about a year old. Careful palpation led to the diagnosis of ventral hernia. At the lower end of the cicatrix, there was some thickening, with a dull sound on percussion. The vagina was funnel-shaped, and the uterus was drawn up to such an extent that I could only just reach the os, and direct the point of the sound into it. (There was nothing abnormal in the form of a tumour in the pelvic cavity.) Although I depressed the handle as much as the perinæum would allow, I could not introduce more than an inch and a half. I then pressed the hypogastric swelling backwards and downwards, and immediately I felt the cervix descend and the body of the uterus slip over the instrument until its point could be felt close under the external hand. The case was now quite clear. The pedicle had evidently been a very short one, so that the fundus of the uterus was closely applied to the parietes. In course of time, the recti muscles had become separated, and what may be termed a hernia of the uterus was formed. Now, cases of ventral hernia after ovariotomy are by no means rare, and es-

pecially after the use of the clamp. I have seen several. It is one of the things also which may happen after the use of the drainage-tube. It has occurred in two of my cases. The first was a very severe operation (No. 11) requiring drainage, and the accident might be owing to a variety of causes, viz., first, the separation of the muscles by the tube; second, the early removal of the sutures (silk) to avoid suppuration; and, third, the getting up of the patient too soon—viz., on the eleventh day. In the second case (No. 21), I could only attribute it to the early removal of the sutures (likewise of silk) which were beginning to produce irritation. Yet it had no unfavourable influence on her subsequent labour with twins, under two years after the operation. These two cases occurred, as I have indicated, in the days when I used silk. Then the sutures were generally taken out within the week, most frequently about the fifth day. If they were left longer, there was more or less irritation in their tracks, and sometimes distinct suppuration, or even a small abscess. Although I have always been in the habit of including in the loop of the suture the peritoneum, the muscular aponeurosis, and the whole thickness of subcutaneous connective tissue and fat; yet, while using silk, I have felt that support was not given for a sufficient length of time to ensure thorough union of all the parts. Now that I use the silkworm gut, I have no fear on this score. I never take the sutures out under ten days, and often leave them for a fortnight. This is a matter of great importance when the drainage-tube is used. By leaving the sutures in for some days after the tube is removed, a firm cicatrix is ensured.

I first employed the silkworm gut in my twenty-seventh case, and then only for the sutures on each side of the drainage-tube. The remaining sutures were of silk, and, on the fifth day, there was a small red circle around each of their openings, while the gut punctures presented no trace of irritation. In my next case, I used five silkworm gut sutures and two silk, the latter at the top of the wound. A small abscess formed in the track of these, and they were removed on the fourth and fifth day. The gut sutures, on the contrary, were so far from producing irritation that they might have been left in much longer. I feared, however, that the mischief might extend to them, and the test was sufficient. From that time I have exclusively used the silkworm-gut for sutures. I find that many surgeons are not aware of the difference between this material and catgut. There is nothing in common between them. The catgut softens, swells up, and melts away in the course of a few days, whereas the silkworm-gut remains unaltered for weeks, so long as any portion of it is exposed to the air. When totally shut in, it is probable that it disappears by absorption. In one case, I left in two of the loops, merely cutting the knot away; in another, at the end of a fortnight the knot had buried itself into the tissues, and I merely cut off short one of the projecting ends of the suture; and, in a third case, where the parietes were very thin, I accidentally cut both sides of the loop close to the knot. For several days, the point of one

end of the loop could be distinctly felt, but it finally disappeared. In not one of these cases has the suture been heard of again. Several times, when taking them out at the end of a fortnight, the deeper portions of the loops have presented the appearance of becoming blended with the tissues, and they have required an unusual amount of force for their extraction.

I am glad to find that silkworm-gut is making its way in professional estimation. I have taken every opportunity of urging its adoption, and it is satisfactory to me to find other workers in the field, such as Mr. Bryant, Dr. Heywood Smith, and Mr. Walters of Reading. A short time ago, I removed five of these sutures from the vagina of a patient whose perinæum I had restored three weeks previously; not one of them had cut its way out, and there was absolutely no irritation about any of them. They might have been left in indefinitely, but for the chance of being a source of inconvenience in the case of a married woman. I repeat that I know of no substance which yields such satisfactory results in the closing of wounds.

I think that, after gastrotomy, there is an undoubted advantage in including the peritoneum in the suture. But it is not sufficient merely to take this up with just the thickness of the skin; such a practice tempts the formation of a hernia. In a sufficient number of *post mortem* examinations of patients, dying at various periods beyond three days after operation, in which the parietes have been reflected so as to show the peritoneal aspect of the wound, not once have I seen any of the sutures exposed. They have been invariably covered in by lymph. Kœberlé distinctly objects to the inclusion of the peritoneum. He says: "Spencer Wells believes it to be of the highest importance to include the peritoneum in the suture. Evidently this importance is exaggerated, since I have never done it, and the general results of my operations, as well as the results obtained during the later years, are in nowise inferior to those of my eminent *confrère*. On the contrary, one can reproach this suture with interposing the peritoneum between the fibrous tissues, whose juxtaposition becomes impossible, and with disposing to abdominal hernia" (*Maladies des Ovaires et de l'Ovariotomie*, par E. Kœberlé, 1878). This is a valid objection where the imperfect practice above referred to is observed; yet I cannot conceive anyone preferring the complicated method of Kœberlé to that of including the whole of the tissues in the simple suture. Kœberlé's method consists in leaving the peritoneum, and in applying sutures to the muscular aponeurosis alone, bringing the ends out in pairs between the lips of the wound, and then closing the skin by hair-lip pins. It is impossible to get union by first intention in this way, for these sutures come away by sloughing. Is it not better to adopt a method by which primary union is not only possible, but almost certain?

It is curious to notice the strong conservatism which reigns amongst French surgeons, with reference to the management of the ligature

applied to bleeding points. The practice appears to be almost universal, of bringing out the ends of the ligatures through the wound, as in the early days of ovariotomy. It would seem as if they had not emancipated themselves from the old notion, that the portion of tissue beyond the ligature must necessarily die. They seem to be unacquainted with, or at least not to accept, the experience of British and American surgeons on this subject, of which I treated fully in my last paper. But perhaps we may attribute to their incredulity the actual gain from the use of forcipressure, introduced and perfected by Kœberlé, Péan, Verneuil, and others. No one who has tried it can be insensible to the great value of forcipressure as a definite hæmostatic; yet there are many instances in which it is found to be insufficient, such as bleeding points, sometimes on the parietes, sometimes in the great omentum, etc. The former often require that the ligature should be passed under the vessel by means of a fine curved needle. This, also, is very often necessary in the case of a torn uterus, in which bleeding points cannot be secured either by the ordinary ligature or by forcipressure. As, then, it is not at all uncommon to see a dozen or more ligatures applied in a bad case of ovariotomy, one can imagine how much the chances of recovery are diminished when the ends of these are brought out through the wound, some of them from distances of several inches, and in various directions.

The occurrence of a sanguineous discharge from the vagina after ovariotomy has been frequently observed by all operators. The explanation hitherto offered is, that it is due to an effort of nature to compensate for the sudden reduction of the area of blood-distribution. Were this so, we ought to find some definite relation existing between the size and vascularity of the tumour and the occurrence of metrorrhagia ; that is to say, the larger and more vascular the tumour, the more certain the metrorrhagia. But, in fact, this is not the case. I have paid some attention to this matter, and the result of my observation is that, in nine cases out of ten, it will be found to occur in the case of short pedicles. This is my personal experience, and, where mention is made of it in published cases, I find the same condition. In a case—to take one of the most recent—on which I operated on October 30th last, removing both ovaries, the patient had metrostaxis from the third to the seventh day. Both pedicles were very short, and the ligatures almost involved the uterine cornua. I now regard metrorrhagia as a matter of course, either when the ligature is close to the uterus, or when the Fallopian tube is enlarged. I have not seen it occur in the case of a long and slender pedicle. That it may be due to mechanical irritation of the ovarian nerves I am not prepared to deny; but I have not observed this. I am of opinion that, in the great majority of cases, it is traumatic, and this opinion is confirmed by what I observed *post mortem* in a case of fibroid tumour of the uterus, which I extirpated under strict antiseptic precautions last year. The patient

died of septic poison, derived from something under an ounce of blood, which must have slowly oozed into the peritoneal cavity from the surface of the stump. On examining the interior of the uterus, there was observed, corresponding with the line of constriction near the internal os, a well marked congestion of the mucous membrane from which the blood had evidently flowed. On looking over my cases of ovariotomy, I find that, of the first hundred, metrostaxis occurred in 31. Of these, one ovary only was removed in 23 cases; and in these, either the pedicle was so short that the ligature actually or very nearly involved the uterine cornu, or the Fallopian tube was very much enlarged. Eight of the 31 cases were double ovariotomies, and one or both pedicles presented the same condition. In 2 cases, the discharge appeared within twenty-four hours after operation. One of these was a double case, and the discharge lasted for five days, the uterus being somewhat hypertrophied. In 16, it occurred within forty-eight hours; in 10, within seventy-two hours; in 2, on the fourth day; and in 1, on the fifth day. The duration of the flow also varied; thus, in 7 cases, it was under two days; in 12, under three days; in 5, under four days; n 3, under five days; and in 4, it lasted over six days. That the metrostaxis, either in quantity or duration, bore no relation to the size of the tumour, the analysis makes quite evident, and it will be enough to state the fact. The longest duration was in the case of a tumour which weighed nine pounds only. It also appears that, when the uterus was large, the flow was more abundant. This was particularly so in the case just alluded to. One patient was fifty-six years old, and had not menstruated for twelve years, and this case furnishes conclusive evidence, as far as one case can be said to do so, in favour of my view. The tumour weighed only thirteen pounds. That the flow is not due simply to irritation of the uterine nerves may be assumed from the fact that, when the uterus has been torn so as to require ligatures (which I have usually applied by passing the thread under the bleeding point by means of a fine needle), it has not occurred; nor have I seen it once happen in a case of a long pedicle, where the ligature has been placed more than an inch from the uterine cornu, however large the tumour might be. The occurrence for a long time puzzled me, but the frequent association of a short pedicle with a metrostaxis led me to the conclusion here presented. I am seldom now at fault in anticipating the flow, and look for it more confidently in proportion to the nearness of the ligature to the body of the uterus.

The effect of tapping previously to ovariotomy, not with a view to immediate operation, has been discussed by Spencer Wells, Peaslee, Stilling, and others. Peaslee says: "According to my own table, tapping does apparently somewhat reduce the percentage of success." The late Mr. Baker Brown was of opinion that patients did badly who had been tapped very many times. Founding his remarks on the results of five hundred cases, Mr. Wells says: "It may be taken, then, as almost

TABLE *of Fifty Cases of Completed Ovariotomy.*

The Capital letters, R. and L., in Treatment of Pedicle column, mean respectively Right and Left Ovary.

No	Previous Medical Attendant.	Age.	Condition.	Children.	Previous Tappings.	Date of Operation.	Adhesions.	Side and Treatment of Pedicle	Weight of Tumour.	Duration of Operation.	Drainage.	Result.	Cause of Death.	Remarks.
26	Mr. Lloyd, Shanklin	27	S.	0	0	Oct. 24, 1877	Parietal, omental, intestinal (many ligatures)	R. Ligature (1)	7lb	45 m.	Glass tube, 6 days	Recov.	..	Dermoid cyst; adhesions unusually firm and vascular
27	Dr. Fletcher, Camden Road	41	S.	0	1	Nov. 7, ,,	Parietal, omental	L. Ligs. (2) R. Ligs. (2)	19lb 2 oz.	60 ,,	Glass tube, 5 days	,,	..	Infection of pelvic peritoneum. Small uterine fibroids. Died of malignant disease, 1879
28	Dr. Granville Bantock	48	S.	0	0	,, 15, ,,	None	L. Ligs. (2)	20lb	25 ,,	..	,,	..	Experiment with silk and silkworm gut-sutures, former suppurating on sixth day
29	Dr. Robertson, Dulwich	56	M.	9	1	Dec. 6, ,,	None, ascites	R. Ligs. (2)	13lb	30 ,,	..	,,	..	Highest temperature, 99.6 deg.
30	London Hospital	36	M.	7	1	,, 28, ,,	Universal, parietal, omental, intestinal, pelvic	R. Ligs. (2)	21lb	60 ,,	Glass tube	Death	Septicæmia, 25 hours	Heart weighed only four ounces. Liver fatty, spleen pulpy
31	Dr. Bradshaw, Nottingham	33	M.	6	0	Feb. 13, 1878	None	R. Ligs. (2)	19½lb	40 ,,	..	Recov.	..	Done under thymol spray, etc.
32	Mr. Parker Young, Delamere Crescent	49	M.	3	0	,, 20, ,,	Parietal, intestinal, (very vascular, many ligatures)	R. Ligs. (4)	15lb	60 ,,	Gls. tu., 4½ dys.; elastic tu., 1 day	,,	..	Inflamed cyst; high temperature before and at time of operation
33	Mr. Cockey, Frome	48	M.	4	2	,, 27, ,,	None, ascites	L. Ligs. (2)	17½lb	45 ,,	..	,,	..	Injection of pelvic peritoneum, very short pedicle. Died five months after
34	Mr. Redmayne, Bolton	36	M.	6	0	Mar. 2, ,,	Omental, uterine (many ligatures)	L. Ligs. (2)	23½lb	75 ,,	..	,,	..	
35	Mr. Cheatle, Burford	45	M.	0	0	,, ,, ,,	None	R. Ligs. (9)	3lb	60 ,,	..	,,	..	Tumour sessile. One of the ligatures discharged some months afterwards
36	Dr. Brunton, Euston Rd.	40	S.	0	0	,, 13, ,,	Parietal	L. Ligs. (5)	9½lb	65 ,,	..	Death	Septicæmia	Colloid tumour; very short pedicle. Very fatty heart and liver. *Cheyne-Stokes's* respiration
37	Dr. Wynn Williams	47	M.	3	0	,, 20, ,,	Pelvic	L. Ligs. (4)	15½lb	35 ,,	..	Recov.	..	First operation under carbolic acid
38	Mr. Fowke, Charwelton	51	S.	0	1	,, 27, ,,	Parietal, omental, epiploic (many ligatures)	L. Ligs. (5)	33½lb	75 ,,	..	Death	Acute congest. of lungs	Abdominal cavity perfectly healthy, and all ligatured tissues
39	Dr. Cole, Bath	23	S.	0	0	,, 28, ,,	Omental (6 ligatures)	R. Ligs. (4)	13lb	60 ,,	..	Recov.	..	
40	Mr. Thomson, Ramsgate	41	M.	2	0	Apr. 10, ,,	None	L. Ligs. (7)	7¾lb	90 ,,	..	Death	Septicæmia, 5 days	Dermoid, almost sessile, slight oozing from ligature-hole, and hæmatocele in broad ligament
41	Dr. Jeafferson, Wandsworth	37	S.	0	2	,, 11, ,,	Parietal	R. Ligs. (2)	17lb	20 ,,	..	Recov.	..	Urine contained one-third albu-

42	Dr. Horne, Scarborough	27	S.	0	0	,, 24, ,,	Parietal	L. Ligs. (4) R. Ligs. (2)	37lb 1 oz.	60 ,,	..	,,	..	
43	Dr. Parnell, Wells	35	M.	3	0	May 1, ,,	Parietal, omental (about 20 ligatures)	R. Ligs. (3)	17½lb	90 ,,	..	,,	..	Bleeding from torn adhesions so free that many of the ligatures had to be applied by transfixing
44	Mr. Plewitt, Fenchurch Street	58	M.	0	1	,, 22, ,,	Parietal, omental	R. Ligs. (7)	17¾lb	50 ,,	..	,,	..	
45	Dr. Jones, Clapham	24	M.	Twins	3	,, 29, ,,	Parietal, pelvic, uterine, vesical (many ligatures)	R. Ligs. (5)	16lb	105 ,,	Glass tube, 5 days	Death	Obstruction of ileum 7th day	Suppurating cyst; bladder ruptured; uterus torn; knuckle of intestine confined by patch of lymph or decolorised blood-clot
46	Dr. Shephard, Bristol	45	M.	0	1	July 10, ,,	Parietal (very extensive), omental, epiploic (4 ligatures)	R. Ligs. (5)	23½lb	75 ,,	..	Recov.	..	
47	Mr. Hewby, Notting Hill	39	M.	2	0	,, 17, ,,	None	L. Ligs. (4) R. Ligs. (2)	18½lb 6 oz.	30 ,,	..	Death	Acute Bronchitis	Peritoneal cavity normal. Chronic pneumonic consolidation
48	Dr. Briggs, Jersey	23	S.	0	0	,, 19, ,,	Universal	L. Lig. (1)	10lb	60 ,,	..	,,	Shock	Patient moribund at time of operation
49	Dr. Haughton, Mount Street	38	S.	0	0	,, 24, ,,	Parietal, omental (5 ligatures)	R. Ligs. (5)	34½lb	35 ,,	..	Recov.	..	Suppurating cyst
50	Dr. Mackern, Longeaton, Derbyshire	14	S.	0	0	,, 26, ,,	None	R. Ligs. (5)	4½lb	20 ,,	..	,,	..	Dermoid
51	Dr. Swift Walker, Hanley, Staffs	19	S.	0	0	Oct. 17, ,,	Parietal, omental	R. Ligs. (5)	16lb	40 ,,	..	,,	..	
52	Mr. Evans, Tir Phil, Cardiff	32	M.	0	0	,, 23, ,,	Omental (2 ligatures)	L. Ligs. (2)	28½lb	40 ,,	..	,,	..	Consolidation of base of right lung. Rupture of cyst, spontaneous evacuation through umbilical protrusion. Died of malignant disease, March 1879
53	Mr. Jas. Ceely, Aylesbury	36	S.	0	0	,, 30, ,,	None	R. Enucleation	14lb	75 ,,	Gls. tu., 2 days; elas. tu., 9 days	,,	..	Papilloma lining cyst
54	Mr. Alban Doran	32	M.	2	0	Nov. 2, ,,	Pelvic (3 ligatures)	L. Ligs. (5) R. Ligs. (3)	15½lb 1 oz.	45 ,,	..	,,	..	
55	Mr. Pocock, Kensal New Town	32	M.	Twins	0	,, 20, ,,	Parietal, omental, intestinal, and iliac fossa (many ligs.)	R. Ligs. (2)	21½lb	105 ,,	Glass tube, 3½ days	,,	..	
56	Dr. Spooner, Blandford	19	S.	0	0	,, 29, ,,	Universal, almost enveloped in oment., and to append. cæci (many ligatures)	R. Ligs. (2)	17½lb	75 ,,	..	,,	..	
57	Mr. Manser, Tunbridge Wells	26	S.	0	0	Dec. 4, ,,	Intestinal, about a foot of ileum, opposite Fallop. tube (6 ligatures)	R. Ligs. (2) L. Ligs. (5)	2 oz. 7½lb	55 ,,	..	Death	Rupture of intestine	Suppurating cyst, gastro-enteric catarrh, ulceration and rupture of intestine

TABLE *of Fifty Cases of Completed Ovariotomy—continued.*

No.	Previous Medical Attendant.	Age.	Condition.	Children.	Previous Tappings.	Date of Operation.	Adhesions.	Side and Treatment of Pedicle.	Weight of Tumour.	Duration of Operation.	Drainage.	Result.	Cause of Death.	Remarks.
58	Mr. Sam. Berry, Birmingham	31	S.	0	0	Dec. 11, 1878	Parietal	L. Ligs. (5) R. Ligs. (5)	30lb 13 oz.	80 m.	Gls. tu., 5½ dys.;	Recov.	..	
59	Dr. Wynn Williams	45	W.	8	0	,, 18, ,,	Parietal, omental (2 ligatures)	L. Ligs. (5) R. Ligs. (3)	33lb 1 oz.	45 ,,	..	,,	..	
60	Mr. Nason, Stratford-on-Avon	27	S.	0	0	Jan. 2, 1879	None	L. Ligs. (5)	17lb	50 ,,	..	,,	..	
61	Mr. Ruttley, High Wycombe	28	M.	5	0	,, 8, ,,	To omentum, pelvis, opp. Fallop. tube, uterus (many ligatures, uterine applied by needle)	L. Lig. (1) R. Ligs. (3)	10½lb Norm.	40 ,,	Glass tube, 7 days	,,	..	
62	St. Thomas's Hos.	41	M.	4	3	,, 30, ,,	Pelvic (3 ligatures)	L. Ligs. (3)	14lb	75 ,,	..	,,	..	About 14 pints of ascitic fluid
63	Dr. Robinson, Huddersfield	45	M.	7	0	Feb. 12, ,,	None	L. Ligs. (4)	19½lb	40 ,,	..	,,	..	
64	Mr. Bradshaw Smith, Hinckley	45	M.	7	1	,, 19, ,,	Parietal, omental, epiploic, many ligatures	L. Ligs. (2)	14lb	45 ,,	..	,,	..	
65	Dr. Galabin	31	S.	0	0	,, 26, ,,	Extensive parietal	L. Ligs. (2)	19lb	60 ,,	..	,,	..	
66	Dr. Cremen, Cork	19	S.	0	0	,, 27, ,,	None	L. Ligs. (4)	16 lb.	45 ,,	..	,,	..	
67	Dr. Rowland, Malvern Wells	57	M.	5	1	Mar. 12, ,,	Very firm and extensive parietal	L. Lig.	28½ lb.	50 ,,	..	,,	..	Disease of 30 years' duration, 18 years' since tapping
68	Dr. Granville Bantock	26	S.	0	0	,, 19, ,,	Omental, extensive	R. Lig. (3)	12 lb.	40 ,,	Glass tube	Death, 25 hrs.	Exhaustion	Soft sarcoma of ovary; infection of lumbar glands. High temperature before operation
69	Mr. Alban Doran	39	M.	6	0	,, 26, ,,	Omental, pelvic, uterine (many ligatures)	L. Ligs. (5) R. Ligs. (3)	8 lb. 1 oz.	80 ,,	Glass tube	,,	Carbolic nephritis	Intense congestion of kidneys. Fatty heart
70	Dr. Colbeck, Dover	39	M.	8	0	Apr. 2, ,,	Recent parietal	L. Ligs. (4) R. Ligs. (3)	28 lb. ½ oz.	45 ,,	..	Recov.	..	
71	Mr. Gilbertson, Aberystwith	55	W.	4	0	,, 7, ,,	None	R. Ligs. (2)	9 lb.	25 ,,	..	,,	..	
72	Dr. Fowler, Cirencester	55	M.	4	10	,, 10, ,,	Extensive parietal, omental	L. Ligs. (4)	51 lb.	35 ,,	..	,,	..	Carbolic nephritis. Temperature 107.2°. Cold pack
73	Mr. Ingoldby, Finsbury Square	49	M.	3	0	,, 16, ,,	None	R. Ligs. (4)	15 lb.	20 ,,	..	,,	..	
74	Dr. Blake, Reigate	44	S.	0	0	,, 30, ,,	Omental	R. Ligs. (4)	17 lb.	40 ,,	..	,,	..	
75	Dr. Bulmore, Falmouth	32	M.	0	2	May 3, ,,	Omental, pelvic	R. Ligs. (3)	40 lb.	60 ,,	Gls. tu., 3½ dys.;	,,	..	Enucleated from meso-colon and broad ligament

certain, that the mortality of ovariotomy is but little affected by tapping; that the fact of a patient not having been tapped, or having been tapped very often, is by itself of little or no value in prognosis..... Such adhesions as are apt to follow tapping have no appreciable effect upon the mortality after ovariotomy.....In some of the patients who had been tapped most frequently, there were no adhesions, and there were firm adhesions in some who had never been tapped" (*Diseases of the Ovaries*, p. 275). This is all very true as far as it goes, but it does not answer the question, Ought tapping to be practised by a surgeon who contemplates recommending the radical operation at a future, more or less remote, period? This is the question it behoves us to ponder over. It is not what proportion the mortality after operation bears to the number of previous tappings. In considering the question, one must not overlook the cases that die after or because of the tapping, nor those which are refused operation in consequence of recognised adhesions or other unfavourable conditions, nor those other distressing cases in which a previous tapping has led to infection of the peritoneum, and the patient, after recovering from the ovariotomy, dies in a few months of the secondary disease. My list includes three cases in which inoculation appears to have taken place in this way, and the patients died at varying periods after operation, from four months to eighteen months. On the other hand, take the following case. I removed both ovaries from a patient aged 33, on October 30th last. Both tumours were studded in their larger cysts with abundant papilloma. Neither had been tapped, and the peritoneum was to all appearance perfectly healthy. It needs not that I should state the probable result of tapping such a case as this. And it is worthy of special mention that the true unilocular cysts of the parovarium are not wholly free from this form of disease, those cysts which we are often counselled to tap rather than remove. Such a case was No. 53, in which I enucleated a parovarian cyst, whose base was too extended for any other method of treatment. This may be contrasted with another, not included in the table, as not being a case of extirpation, in which, for the same reason, I could not remove the cyst in the ordinary manner, but was enabled to treat it in a much more simple way. I stitched the cyst-wall to the parietal wound and drained, with the most satisfactory result. My first death was fairly attributable to the tapping. Inflammation in the large cyst followed, causing extensive parietal adhesions, and I operated during this process. My patient died of septicæmia. I did not then know the value of the drainage-tube; nor can I withhold from previous tappings the blame of causing the adhesions which, in most of my incomplete cases, rendered my efforts unavailing. I am sure I am expressing the experience of every ovariotomist when I say that I have repeatedly had to regret, during an operation, that my patient had ever been tapped. One gets impressions in the course of a long experience which no statistical table can express, and these im-

pressions are of great value. But the immediate and palpable results of tapping are not the only ones we have to consider. A patient arrives at that stage in which it is necessary something should be done. She is tapped. The cyst refills, it may be slowly or it may be rapidly, and becomes the seat of an acute or subacute inflammatory process; irritation of vital organs is set up, especially of the kidneys, insidious in inverse proportion to its acuteness; and, when the time comes for the radical operation the patient dies, because her kidneys are unequal to a little extra elimination. This is a condition, so fatal to the hopes of the surgeon, which does not declare itself in the state of the urine. It has unfortunately happened to me in several cases to find, *post mortem*, fatal organic disease which has not been revealed by the usual tests. Such are cases 30 and 36 of the table.

Stilling has written very forcibly on the subject of tapping. He says: "No surgeon should ever puncture an ovarian cyst. Tapping is a crime. .....Ovariotomy becomes more difficult the oftener a patient is tapped before it, and the patient is made worse by every tapping." Had Stilling said: "No surgeon should *voluntarily* puncture a *multilocular* ovarian cyst", I almost think I could agree with the remainder of the above quotation. However, avoiding such extreme language, I would strongly urge that tapping should not be resorted to as a means of putting off the evil day (of operation). Of course, the surgeon has no choice when a patient refuses the radical operation. He is bound to give relief by the only alternative. But the more certain he is of the multilocular nature of the tumour, the more strenuously he ought to urge the radical operation in preference to tapping. There are few patients who will not prefer the former when the matter is put plainly before them.

As a preliminary to ovariotomy, tapping stands on a different footing. Dr. Keith appears to be rather fond of this procedure, and I have myself recently had proof that, as a preliminary step, it is sometimes of the greatest service, in the case of a patient aged 65, from whom I removed a large (40 lbs.) tumour on December 3rd, 1879. The breathing was much oppressed; the urine contained a small quantity of albumen, and the specific gravity was only 1015. The removal of thirty-seven and a half pints of fluid by aspiration gave great relief to the dyspnœa, and enabled me to demonstrate that the albumen and low specific gravity were due to the pressure of the tumour, and not to organic disease of the kidneys. I have also no doubt that there was much less shock from removing the collapsed cyst than would have resulted from the radical operation without the preliminary aspiration. This preliminary tapping can only be of service where there is one very large cyst.

One of the strongest arguments against tapping arises from the fact that very large tumours are very often already adherent to the parietes. In these, the cyst cannot collapse, fluid is rapidly poured out, some-

times bleeding takes place within from rupture of vessels in the cyst-wall, and inflammatory action is set up, as indicated by the rise of temperature and pulse. Consequently, the condition of the patient is rendered more unfavourable for operation than it was previously.

I have no belief in the theory that the danger from tapping arises from the introduction of the elements of putrefaction into the cyst, and the consequent infection of the system. Every ovarian cyst is full of the elements of putrefaction or necrosis, which is not the generator of septicæmia. Case 91 in my fourth series will be found a case in point. About six weeks before operation, I had to tap her (it was not possible to do ovariotomy at the time), removing by the aspirator about twelve pints of very offensive purulent ovarian fluid. I need not say that the patient had the usual symptoms of irritative fever, and that they continued till the date of the operation. The contents of the cyst were still of the same character, and the tumour was universally adherent to the parietes, omentum, pelvis, etc.; yet the high temperature went down, the other symptoms of irritative fever gradually subsided, and the patient made an excellent recovery, thanks to the drainage-tube. Such, too, is a case not included in the tables. The patient had been previously tapped (in the ordinary way) of several pints of purulent ovarian fluid. When I attempted to remove the tumour, the fœtor of the contents was almost unbearable, and the adhesions were so firm and extensive in the pelvis, and the cyst-walls so rotten, that I had to desist from further efforts after breaking down the parietal, omental, and intestinal adhesions, and rest content with draining the putrescent cyst. The result was a complete success. Here, then, we have the evidence of constitutional disturbance of the most marked kind, but, as far as I can see, it had nothing to do with the entrance of germs or elements of putrefaction.

The most remarkable case in the second series is No. 45, in which the bladder was ruptured in the course of the separation of the adhesions. The patient was a married woman, aged 24. She had been already tapped three times. I first saw her at her own home, as she was too ill to bear removal to the hospital. She was very much emaciated and enfeebled, had an aspect of great suffering, and her stomach rejected all food. The abdomen was so distended, that she could with difficulty turn in bed. I at once tapped her of thirty-three pints of purulent ovarian fluid, leaving a large mass projecting forwards between the umbilicus and pubes, evidently adherent. Twelve days later, she entered the Samaritan Hospital. She then showed considerable improvement; her appetite was good, her tongue was clean, and the bowels acted regularly.

The operation was performed on May 29th, 1878, with the usual observance of Lister's method. There were extensive parietal adhesions. These were broken down over the upper part of the tumour by passing the hand through them; but below, this was impossible. I

therefore emptied the large superior cyst, and broke down as much of the mass as I could, giving exit to about fourteen pints of a mixed purulent and gelatinous fluid. The tumour was now drawn out as far as the inferior adhesions would allow. After a little examination, I found the pedicle on the right side, and at once secured it in three divisions, with a separate fine ligature to the outer edge. I then divided the pedicle, and secured the vessels on the distal side by forceps, to prevent return bleeding. Still the tumour remained fixed inferiorly, and it seemed, so intimate was the connection, that there was no alternative but to leave it to be drained. With this intent, I broke up more of the small cysts, so as to reduce the mass to the greatest extent possible. This enabled me to examine more thoroughly the attachments, and I came to the conclusion that, in spite of its close connection with the uterus and bladder, separation might be effected, and should at least be tried. After making an incision at what appeared to be the line of adhesion, I proceeded with the separation. Bleeding points were secured, as they presented themselves, either by ligature or compression forceps. The separation was effected partly by the fingers and partly by means of the sponge; and as it proceeded, it became evident that the uterine tissue was being extensively exposed; but this was a minor matter in view of the accident which occurred at a later stage. After the separation was effected over the whole anterior face of the uterus, the greatest care was taken, as I knew the bladder was just beneath. But all my care was not sufficient to prevent a rupture of this organ transversely, to the extent of about an inch and a half. A small piece of sponge was passed into the bladder, and the separation proceeded with until the tumour was set free. Two bleeding vessels near the edge of the tear were ligatured, the sponge was removed, and the wound closed by a continuous suture of fine silk, avoiding the mucous membrane. Several bleeding points on the uterus were secured by passing a fine ligature under by means of a suitable needle. Still some oozing went on from the torn uterus. Projecting from the fundus there was a ragged wing of membrane, part of the outer cyst-wall. I took advantage of this to keep the uterus close to the parietes, and to double the raw surface over the bladder upon itself, by catching it up with the second abdominal suture. After the peritoneal cavity was cleaned out as thoroughly as possible, I put in a drainage-tube six inches long, communicating with the bottom of Douglas's pouch, and coming out between the second and third sutures (counting from the lower end of the wound). After her removal into bed, a catheter was passed into the bladder and secured there, and to it was attached a long piece of India-rubber tubing, which conveyed the urine into a bottle containing a 10 per cent. solution of sulphurous acid, *B. P.*, into which the end of the tube dipped. The operation occupied one hour and three-quarters.

Nothing could have been more satisfactory than the progress of the

patient for three days. By that time, the urine had lost all trace of blood, and was clear and normal. On the fourth day, the temperature began to rise above 99°. She was sick, and, to my surprise, the fluid from the tube increased in quantity. I thought I had met with an instance of irritation of the peritoneum by the tube, and as the fluid was now quite pale, I removed it, substituting a small piece of India-rubber tubing, to prevent too early closure of the opening. There was no perceptible distension of the abdomen, and I hoped the sickness was due to some other cause than obstruction. However, she grew worse, and died on the sixth day, with undoubted symptoms of obstruction of some portion of the small intestine.

The *post mortem* examination showed that there was not a trace of peritonitis along the whole course of the tube; the small intestines were moderately distended, and the ends quite free; the torn parts between the uterus and symphysis pubis were well united, though now easily broken down. On drawing up the intestines out of Douglas's pouch, there was brought to view about the last foot of the ileum, firmly contracted and cord-like. The constriction began at a point where a knuckle of intestine was caught and bound by a patch of what looked like slightly stained lymph, and which I believe was nearly decolorised blood-clot. I now saw that, had I had the courage to open up the wound and search for the obstruction, nothing could have been easier than to undo it. But I was deterred from the attempt by feeling that any injury I might do by disturbing the uterus would be irreparable, and that, in trying to remove one source of evil, I might be inflicting a worse. Moreover, the passage of small quantities of flatus induced me to think that the obstruction would give way, and the absence of decided distension led me to temporise, and then delay, till it was too late.

Now I would not have this mishap set down to the drainage-tube. Without it, the patient would not have had the remotest chance. A large quantity, more than half a pint, of blood more or less coagulated came away through the tube, and my explanation is that a small clot had become attached to the intestine, which lay at the bottom of the pouch and prevented its uncoiling. There was no true constriction.

More recently, Dr. G. Eustache of Lille has sent me the particulars of a case in which he wounded the bladder in making the abdominal incision. His patient recovered. Two drainage-tubes were used (*Journal des Sciences Médicales de Lille*; and BRITISH MEDICAL JOURNAL, October 25th, 1879).

No. 41 was interesting from the fact that, before the operation, the urine contained a very large quantity of albumen—one-third. Otherwise it was normal, *i.e.*, specific gravity was normal and the quantity average in amount. As the patient looked healthy, I had no hesitation in operating, as I believed the albumen was due to pressure, and not to organic disease. Dr. Marion Sims was amongst the spectators. The

result confirmed my diagnosis. She never had a bad symptom, the albumen gradually decreased and disappeared by the fourth day. The patient is now in the most robust health.

A word or two about the fatal cases in these two series. No. 30 was that of a patient in a condition of great debility—anæmic and emaciated—whose heart weighed only four ounces, and whose kidneys were in a state of fatty degeneration (unrevealed by signs). The operation was one of the most severe I have been called upon to perform. She died of the most rapid septicæmia in about twenty-five hours. No. 36 was a case of ruptured colloid. It was my sixth case done under thymol spray. She died on the fifth day. Both heart and kidneys were in a state of fatty degeneration. No. 38 died of acute congestion of the lungs, the peritoneal cavity perfectly healthy. This case was done under Lister's system with carbolic acid. No. 40 was a case of cancer, and which might be regarded as an incomplete case, because of the amount of cancerous diseased tissue left behind—notably a confused mass of mingled omentum, parietes, and cyst wall. The lumbar glands were also extensively affected. No. 45 has already been dealt with. No. 47 had not recovered from an attack of pneumonia contracted some months previously and died of superinduced acute bronchitis. No. 48 was actually moribund at the time of the operation and should not have been touched ; but I did my task as an operator in accordance with the decision of a consultation. It was a case of universally adherent suppurating cyst. The patient died before the operation was concluded. This really might be included among the incomplete cases, but I put it in the table at the time, and there it must now stand. No. 57 afforded an interesting specimen of rupture of intestine, which was exhibited at the Pathological Society by Mr. Alban Doran, at the meeting of February 18th, 1879. It was an unfortunate accident, for which I have nothing to reproach myself. No. 68 was a case of soft sarcoma of the right ovary with extensive glandular infection, and the operation was undertaken at the express desire of the patient and as a *dernier ressort*. She died within twenty hours. No. 67 succumbed to an attack of acute nephritis caused, as I believe, by the carbolic acid. In connection with this, I may here state that I nearly lost another from the same cause. I purpose publishing these two cases in detail. So far (January 1880), I have not lost a single uncomplicated case.


TABLE(S)
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GUTTER