A THIRD SERIES
OF
ONE HUNDRED CASES OF OVARIOTOMY,
WITH
REMARKS ON TAPPING OVARIAN CYSTS.

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THE "History and Progress of Ovariotomy in Great Britain," the "Selection of Cases for the Operation," and the "Situation and length of the incision" required, were brought before this Society in three papers, which have been published in the 46th, 48th, and 50th volumes of the 'Transactions.' These papers contain tables of 200 cases in which I have completed the operation, arranged in the order of performance in four series of fifty. All the cases where I had commenced the operation but had not completed it, or had made an exploratory incision, were also arranged in separate tables.

Following up the same plan, I now bring before the Society a third series of 100 cases in which ovariotomy was completed, seven cases where it was commenced but not completed, and seven cases where an exploratory incision was made. The tables are in the same form as before. But as all the hospital cases have been published and none of the cases in private practice, I have distinguished the private cases by adding the name of the patient's ordinary medical attendant, or of some gentleman who has seen her with me in consultation.

TABLE OF CASES.

The Tables are arranged in Three Series:—

- SERIES I.—Cases in which Ovariectomy was completed—100 cases : 77 recoveries, 23 deaths.
 " II.—Cases in which Ovariectomy was commenced, but not completed—7 cases : 4 relieved or cured, 3 died.
 " III.—Cases where an Exploratory Incision was made—7 cases : 5 relieved or cured, 2 died.

SERIES I.—CASES IN WHICH OVARIOTOMY WAS COMPLETED.

No.	Medical attendant.	Date.	Age.	Condition.	Adhesions.	Treatment of pedicle.	Weight of fluid or tumour.	Length of incision.	Results.
		1867.					Pounds.	Inches.	
201	Mr. Illingworth	March	40	Single	None	Cautery	14	5	Recovered.
202	Mr. Wakefield	March	27	Single	None	Cautery and ligature	16	5	Recovered.
203	Hospital	March	47	Married	Parietal	Clamp	25	5	Recovered.
204	Dr. Hingston, Plymouth	March	43	Single	None	Cautery	14	6	Recovered.
205	Hospital	March	35	Single	Extensive	Ligature returned	23	6	Died, 20th day.
206	Mr. Shipman, Grantham	April	43	Married	Parietal	Clamp	32	5	Recovered.
207	Dr. Graily Hewitt	April	43	Married	Parietal	Clamp	14	6	Recovered.
208	Hospital	May	31	Single	Parietal	Clamp	37	5	Recovered.
209	Hospital	May	29	Married	Parietal	Clamp	38	5	Recovered.
210	Mr. Marsack, Tunbridge Wells	May	40	Married	None	Clamp	18	5	Recovered.
211	Hospital	May	53	Married	None	Clamp	14	5	Recovered.
212	Mr. C. Reade, Clifton	May	37	Single	Ruptured adherent cyst	Clamp	42	5	Recovered.
213	Hospital	June	33	Widow	None	Clamp	52	4	Recovered.
214	Mr. Tapon	June	57	Single	Parietal, omental, and intestinal	Clamp	15	5	Died, 42 hours.
215	Hospital	June	52	Married	Parietal	Clamp	17	4	Recovered.
216	Dr. Burrows	June	35	Married	None	Clamp	16	5	Recovered.

217	Dr. Southey	June	39	Single	Parietal	Clamp	26	5	Recovered.
218	M. Nélaton	June	42	Married	Omental	Clamp	28	8	Recovered.
219	Dr. Barnes	June	38	Single	Parietal & intestinal.	Clamp	19	5	Recovered.
220	Hospital	July	50	Single	Parietal	Clamp	27	5	Recovered.
221	Hospital	July	56	Married	None	Clamp	5	4	Recovered.
222	Dr. Priestley	July	59	Widow	None	Clamp	40	6	Recovered.
223	Hospital	July	51	Married	None	Clamp	13	4	Died, 8th day.
224	Hospital	July	53	Married	Parietal and omental	Clamp	41	6	Died, 8th day.
225	Hospital	Aug.	25	Married	Pelvic	Cautery	12	4	Recovered.
226	Dr. Symonds, Clifton	Aug.	41	Widow	None	Cautery	11	4	Recovered.
227	Dr. Grasmann	Aug.	25	Single	None	Cautery	13	4	Recovered.
228	Mr. Franks, Sevenoaks	Aug.	27	Single	Parietal	Cautery	16	5	Recovered.
229	Mr. Woolmer	Oct.	27	Married	Parietal	Cautery and ligatures	40	5	Died, 51 hours.
230	Dr. Bowles, Folkestone	Oct.	52	Married	None	Cautery and ligatures	18	4	Recovered.
231	Dr. Budd, Clifton	Oct.	56	Single	Parietal	Cautery	6	4	Recovered.
232	Hospital	Oct.	40	Married	Omental	Clamp	32	5	Recovered.
233	Dr. West	Oct.	40	Single	None	Cautery and ligatures	18	4	Recovered.
234	Hospital	Nov.	42	Single	Parietal	Clamp	30	5	Recovered.
235	Hospital	Nov.	46	Married	Parietal and omental	Clamp	15	5	Recovered.
236	Dr. Whitehead, Manchester	Nov.	51	Married	Omental	Ligature	9	7	Died, 13th day.
237	Mr. Kesteven	Nov.	34	Married	Parietal	Clamp	20	5	Recovered.
238	Hospital	Nov.	23	Single	Parietal and omental	Clamp	19	5	Recovered.
239	Hospital	Nov.	30	Married	Parietal	Clamp	10	5	Recovered.
240	Hospital	Dec.	25	Single	None	Clamp	10	4	Recovered.
241	Hospital	Dec.	51	Married	Intestinal	Cautery	11	5	Recovered.
242	Mr. E. P. Young	Dec.	40	Single	Parietal and omental	Clamp	16	5	Recovered.
243	Dr. De Musy	Dec.	41	Single	Parietal	Clamp	24	5	Recovered.
244	Hospital	Dec.	23	Single	Parietal and omental	Clamp	21	7	Recovered.
1868.									
245	Hospital	Jan.	22	Single	None	Clamp	26	4	Recovered.
246	Hospital	Jan.	48	Married	None	Cautery and ligatures	14	4	Died, 5th day.
247	Dr. Cleveland	Jan.	25	Single	Parietal	Cautery and ligatures	11	5	Recovered.
248	Hospital	Jan.	34	Single	None	Clamp	25	5	Recovered.

No.	Medical attendant.	Date.	Age.	Condition.	Adhesions.	Treatment of pedicle.	Weight of fluid or tumour.	Length of incision.	Results.
							Pounds.	Inches.	
249	Hospital	Jan.	32	Married	Parietal and omental	Clamp	46	7	Recovered.
250	Hospital	Feb.	33	Single	Intestinal	Ligature	11	5	Died, 4th day.
251	Hospital	Feb.	30	Single	Parietal	Clamp	16	5	Recovered.
252	Mr. Smith, Battle	Feb.	50	Married	Parietal	Clamp	21	5	Recovered.
253	Hospital	March	33	Single	None	Clamp	19	6	Recovered.
254	Dr. Buckall, Chichester	March	34	Married	Parietal and omental	Clamp	20	5	Recovered.
255	Mr. Morris, Edmonton	March	54	Married	None	Clamp	19	5	Recovered.
256	Hospital	March	38	Widow	Omental	Clamp	28	5	Recovered.
257	Hospital	March	28	Single	Omental	Clamp	19	5	Recovered.
258	Mr. Nunn	March	34	Married	Parietal, omental, and intestinal	Ligature	50	6	Died, 48 hours.
259	Mr. Crompton, Birmingham	March	62	Married	None	Clamp	20	3	Recovered.
260	Dr. Tilt	March	50	Single	Parietal	Clamp	7	4	Recovered.
261	Hospital	April	39	Widow	Parietal	Clamp	18	4	Recovered.
262	Hospital	April	20	Single	Parietal and omental	Clamp	32	4	Recovered.
263	Hospital	April	42	Married	Parietal	Clamp	21	4	Recovered.
264	Dr. E. Ellis	April	54	Single	Parietal and omental	Pins and ligatures—both ovaries removed	30	5	Died, 80 hours.
265	Hospital	May	50	Widow	Parietal	Clamp and ligatures—both ovaries removed	32	5	Recovered.
266	Hospital	May	39	Widow	None. — Ruptured cyst	Clamp	25	5	Recovered.
267	Mr. Mason, Surbiton	May	43	Married	Parietal, intestinal, and pelvic	Ligatures	24	6	Died, 2 hours.
268	Dr. Pocock, Brixton	May	24	Married	Parietal and omental	Clamp	26	5	Recovered.
269	Hospital	May	32	Single	None	Clamp	17	5	Recovered.
270	Hospital	June	23	Single	None	Clamp	20	4	Recovered.
271	Hospital	June	42	Married	None	Clamp	13	4	Recovered.

272	Dr. Redlich, Moscow	June	57	Widow	Parietal	Clamp	31	5	Recovered.
273	Hospital	June	49	Single	Parietal	Clamp	50	4	Recovered.
274	Hospital	July	45	Widow	Parietal and omental	Clamp	9	5	Recovered.
275	Hospital	July	27	Married	None	Clamp	15	4	Recovered.
276	Hospital	July	35	Married	Parietal and omental	Clamp	28	5	Recovered.
277	Hospital	July	52	Married	Parietal	Clamp	12	4	Recovered.
278	Mr. Wright, Clapham Road	Aug.	48	Single	Parietal	Clamp	26	5	Died, 3rd day.
279	Hospital	Oct.	46	Single	Parietal	Clamp	17	5	Recovered.
280	Dr. J. Clarke	Oct.	41	Married	None	Clamp	15	4	Recovered.
281	Hospital	Oct.	47	Widow	Parietal and omental	Clamp	31	5	Recovered.
282	Hospital	Oct.	16	Single	Parietal and omental	Clamp	26	8	Recovered.
283	Dr. Morris	Oct.	39	Single	Parietal and omental	Clamp	19	5	Recovered.
284	Hospital	Oct.	35	Single	Parietal	Ligature	9	4	Died, 42 hours.
285	Dr. Grenser, Dresden	Oct.	28	Single	None	Cautery	55	4	Recovered.
286	Dr. Roberts, Manchester	Oct.	36	Married	Omental	Clamp	15	4	Recovered.
287	Hospital	Oct.	53	Married	Parietal, omental, and intestinal	Ligatures—both ovaries removed	23	5	Died, 23 hours.
288	Hospital	Oct.	45	Widow	Parietal and omental	Clamp	33	6	Died, 30 hours.
289	Dr. West	Nov.	31	Married	Parietal and omental	Clamp and ligatures—both ovaries removed	58	6	Died, 29 hours.
290	Hospital	Nov.	25	Single	None	Clamp	22	4	Died, 6th day.
291	Mr. Oldham, Brighton	Nov.	39	Married	Parietal and omental	Clamp	33	6	Died, 45 hours.
292	Mr. Keele, Southampton	Nov.	43	Single	None	Clamp	36	5	Died, 34 hours.
293	Dr. Ransom, Nottingham	Nov.	42	Married	None	Ligatures	30	4	Died, 40 hours.
294	Dr. Davies, Holywell	Nov.	41	Married	None	Clamp	13	4	Recovered.
295	Hospital	Dec.	43	Single	Parietal	Clamp	23	8	Recovered.
296	Hospital	Dec.	46	Married	Parietal	Ligature	7	5	Died, 56 hours.
297	Dr. A. Farre	Dec.	22	Single	None	Clamp	18	4	Died, 57 hours.
298	Dr. Attenburrow, Jersey	Dec.	46	Single	Parietal	Clamp	22	6	Died, 54 hours.
299	Hospital	1869.	25	Single	None	Cautery	23	5	Recovered.
300	Sir T. Watson, Bart.	Jan.	28	Single	Parietal and omental	Clamp and ligatures.	28	7	Recovered.

SERIES II.—CASES IN WHICH OVARIOTOMY WAS COMMENCED BUT NOT COMPLETED.

No.	Medical attendant.	Date.	Age.	Condition.	History, &c.	Results.
1	Dr. Perkins, Exeter	1867. April	48	Single	Incision made, and ovarian cyst emptied, but no attempt to remove the cyst was made, on account of extensive adhesions in pelvis and to cæcum.	Recovered as from a simple tapping. Feb. 1st, 1869, Dr. Perkins writes: "Her general health is tolerably good. I have tapped her 23 times in the last 21 months. Average, 11 pints."
2	Hospital	April	26	Single	Ovarian tumour exposed and tapped, and one cyst emptied. Bleeding vessels in cyst were tied, and the ligatures were cut off short and returned with the cyst.	Died on the 19th day, after suppuration of the cyst. P.M. examination proved that the tumour could not have been removed.
3	Hospital	May	43	Married	Cyst opened; some adhesions to parietes and intestines separated. Two vessels tied and ligatures returned.	Died 52 hours. The uterus, rectum, and both ovaries were so united that they could only be separated after death by careful dissection.
4	Chester Infirmary	1868. May	25	Single	Ovarian cyst exposed and emptied; no attempt made to remove it, owing to extensive pelvic adhesions.	Relieved; left the Hospital; but died a few weeks afterwards.
5	Hospital	June	47	Married	Part of an adhering cyst removed; the remainder fixed to opening in abdominal wall, in the hope of a cure by suppuration and drainage.	Died, 4th day.
6	Mr. O'Connor, March ...	Aug.	33	Married	Ruptured cyst; peritoneal cavity cleansed from ovarian fluid; no attempt made to remove adherent dendritic tumour.	Recovered; went to March a fortnight after the operation; tapped by Mr. O'Connor in September and October; no collection of fluid after October, but some drainage of pus. January, 1869: "Has gained flesh, and is improving in health."
7	Dr. Worms, Paris	Oct.	38	Married	Adhering cyst emptied, fixed to abdominal wall, and drained.	Suppuration and recovery without dangerous symptoms; in February, 1869, in good health, though a few drops of pus still escaped daily.

SERIES III.—CASES WHERE AN EXPLORATORY INCISION WAS MADE.

1	Dr. Churchill, Dublin ...	1867. Aug.	48	Married	Large uterine fibroid exposed; punctured; bleeding vessels stopped by cautery and perchloride of iron.	Suppuration went on for several months, a drainage tube being fixed in the lower angle of the wound. The tumour gradually disappeared, and the patient is now well.
2	Dr. Evans, Birmingham	Oct.	43	Single	A fatty tumour of mesentery, exposed by incision, and wound closed.	Recovered from the incision. The tumour was afterwards removed. (See 'Pathological Transactions,' vol. xix, p. 243.)
3	Dr. Symonds, Clifton.....	Nov.	50	Single	A fibro-cystic tumour of the uterus; 7½ solid, 16½ fluid removed.	Died, 3rd day.
4	Mr. Keyser	1868. Feb.	30	Married	A renal or splenic cyst exposed, tapped, and drained.	Recovered, and remains well.
5	Dr. Garrod	Feb.	58	Married	Eight pints of sero-purulent fluid removed from a fibro-cystic uterine tumour, after exposing the tumour by incision.	Recovered, and remains well.
6	Hospital	Aug.	51	Widow	Incision made to examine a tumour surrounded by ascitic fluid; the fluid removed, but no attempt was made to remove a tumour, apparently cancerous, involving uterus and both ovaries.	Died, 10th day.
7	Dr. Williams, Sudbury ...	Nov.	32	Single	Renal cyst exposed, tapped, and drained.	Recovered; in January, 1869, "improving in health and strength every day."

The incomplete and exploratory operations recorded with the 200 completed cases in the previous papers amounted to eighteen, or about 9 per cent., and the fact that so many as fourteen accompany the present series of 100 cases, calls for some reply to what was formerly urged as one of the gravest objections to the principle of the operation. It was said, "Diagnosis is so uncertain that you can never tell before you begin an operation whether you will be able to finish it." The reply might be considered sufficient if I were to say that although these tables show a proportion of 7 incomplete to 100 completed operations, yet in only 2 of the 7 was death accelerated by the operation; 2 were as much relieved as by a tapping, and in 3 the prospects of complete recovery are very good. But I can give a far more complete reply, and I can assure the Society that when the details of the cases are studied, they show that in every patient, without exception, the unusual difficulty of the case had been foreseen, carefully considered in consultation, explained to the patient and her friends, and provided for before commencing the operation.

In the series of seven cases where an exploratory incision was made, there are two where I was much surprised to find the tumour was not ovarian. Even now, I do not think it would have been possible to avoid error, or to arrive at a correct diagnosis, without any exploratory incision. But in the other five cases of this series I was fully prepared for something unusual, and had arranged that the operation should be begun as an exploration. I think, therefore, it may be fairly argued that, as in 114 operations only 2 errors in diagnosis were made, and as these did not lead to any injury to the patient, the argument of any unavoidable imperfection in diagnosis as against the principle of the operation must be considered as completely refuted.

It is also satisfactory to find that with increasing experience the mortality has diminished.

Of the first 100 cases, 34 died and 66 recovered; of the second 100, 28 died and 72 recovered; of the third 100, 23 died and 77 recovered.

And a glance at the table will show that this mortality

would have been considerably less in the third hundred, had not ten fatal cases occurred in rapid succession towards the end of last year. I know that other London surgeons found that season remarkably unfavorable—that many patients died after trifling operations and after natural labours—and that unhealthy suppurative inflammation followed many injuries both severe and trifling. As soon as I became aware of this condition I refused to operate on any but the most urgent cases. Notwithstanding this exceptional drawback, the mortality has been less than in either of the previous series of 100 cases.

As experience has increased and the mortality after ovariectomy has diminished, professional opinion has been unsettled as to the use or propriety of tapping ovarian cysts. Some writers have gone so far as to assert that it is an operation which ought to be completely abandoned. Stilling, for example, in his work on the 'Extra-peritoneal Method of Ovariectomy,' says, page 161, that "*no surgeon should ever puncture an ovarian cyst. Tapping is a crime.*" He adds, "*Never tap.* Ovariectomy becomes more difficult the oftener a patient has been tapped before it, and the patient is made worse by every tapping."

Few surgeons here would go so far as this, but there are many who object to tapping on two grounds—first, that it is dangerous in itself and can only be of temporary utility; and secondly that it is likely to be followed by adhesions or other conditions which add greatly to the danger of subsequent ovariectomy.

In order to weigh the value of these objections to tapping, I have gone over the records of the 300 cases of completed ovariectomy, and have arranged in the following table the cases where tapping had never been practised, and where it had been performed from one to sixteen times.

	Cases.	Recoveries.	Deaths.	Mortality per cent.
Never tapped	135	98	37	27·40
Once tapped ..	78	58	20	25·64
Twice tapped	36	24	12	33·33
Three times tapped	19	14	5	26·32
Four „	9	6	3	33·33
Five „	3	2	1	
Six „	5	2	3	
Seven „	2	2	...	
Eight „	4	3	1	
Nine „	3	2	1	
Ten „	2	2	...	
Eleven „	1	...	1	33·33
Fifteen „	1	1	...	
Sixteen „	2	1	1	
	300	215	85	

It may be seen that the general mortality of the 300 cases is 28·33 per cent.—and that 135 patients, or nearly one half, had never been tapped. In them the mortality is 27·40 per cent., not 1 per cent. less than the general mortality. In other words, the mere fact that a patient has or has not been tapped (so far as can be judged from 300 cases in the hands of the same operator) does not affect the result of the operation by so much as 1 per cent. Indeed the mortality of the patients not tapped, though less by about 5 per cent. than that of the patients who had been tapped twice, is greater than that of the patients who had been tapped once and three times. Thus 78—or rather more than a fourth—had been tapped once, and the mortality was 25·64 per cent. Of nineteen who were tapped three times, the mortality was 26·32

per cent. Of the 36 who were tapped twice, the mortality was exactly the same as that of the group of cases tapped from 4 to 16 times, namely 33·33 per cent.—or 1 in 3.

It may be taken then as almost certain that the mortality of ovariectomy 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. I have shown in a former paper that such adhesions as are apt to follow tapping have no appreciable effect upon the mortality after ovariectomy; and I can now add that 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.

In considering the objection to tapping on the ground of its danger, as compared with the danger of ovariectomy, some writers appear to me to have fallen into great error. They take a certain number of cases of ovarian disease, and say that so many patients died after one tapping, so many after five, six, or ten, and conclude that tapping is a very fatal operation. I have heard it gravely asserted that it is a more fatal operation than ovariectomy, because after ovariectomy, a third or more of the patients recover; while, after tapping, sooner or later, they all die. But the very important distinction is overlooked between an operation which either cures or kills, and one which only fails to save life, or kills only under most exceptional circumstances.

It is seldom that a surgeon is called upon to perform ovariectomy in order to save a patient from imminent death. But this does occasionally happen. Dr. Wiltshire and Dr. Watson have published a case, where a woman who was dying from bleeding into an ovarian cyst, was saved by immediate ovariectomy. I have been sent for twice to operate under similar circumstances, but both patients were dead before I arrived. In both, large veins had burst, and some pounds of blood were found inside ovarian cysts. If, in any of these cases, the death of the patient had followed ovariectomy, it could hardly be said that this operation had killed the patient; it had only failed to save life. So, if a patient

be near death, poisoned by an ovarian tumour in a state of gangrene from a twist in the pedicle, or by the fetid contents of a suppurating cyst, ovariectomy, if performed unsuccessfully, can only be said to fail in saving life. It cannot be said to kill. Yet I have operated successfully under such desperate circumstances; and more than once when rupture of a cyst into the peritoneal cavity had been followed by diffuse peritonitis. In any such case, ovariectomy must be compared with trephining, tracheotomy, herniotomy, or the ligature of some large artery in a case of wound or burst aneurism, or primary amputation of a limb in compound fracture. It is not the operation which is the cause of death, but the disease or accident from the effects of which the patient is not saved by the operation.

But such cases as those just alluded to must be very rare exceptions to the large majority in which ovariectomy becomes the subject of consultation. There is generally as much time for discussion as in the parallel case of lithotomy in the male adult. And in both cases, the responsibility of operating with the full knowledge that if the patient be not saved by the operation he or she is killed by it, must be fairly faced. It is true that death would almost always be caused by the stone or the ovarian tumour, but it might be at a distant period, and if death follow the operation in a few days, the operation must be almost always the cause of death.

Tapping stands on a totally different ground. As a rule, when a patient dies after tapping, it is not because tapping has hastened her death, but simply has not succeeded in saving her life. Her life may have been prolonged by repeated tapplings, but at last she dies worn out by the disease.

In a future paper I hope to bring before the Society the results of tapping in cases where ovariectomy has not been performed. At present I must limit these remarks to the relation which one operation bears to the other, and I think I have already brought forward a sufficient number of facts to warrant the acceptance of the following propositions.

1. That one or many tapplings do not increase considerably the mortality of ovariectomy.

2. That tapping may often be a useful prelude to ovariectomy, either as a means of gaining time for a patient's general health to recover, or of lessening shock by removing the fluid a few hours or days before removing the solid portion of an ovarian cyst; and

3. That when the syphon-trochar, which I brought before the Society in 1860, is carefully used, in such a manner as to prevent the escape of ovarian fluid into the peritoneal cavity, and the entrance of air into the cyst, the danger of tapping is extremely small.