Cases of ovariotomy : with a table of sixty-five cases / by Thomas Keith.

CASES

OF

OVARIOTOMY.

WITH TABLE OF SIXTY-FIVE CASES

BY

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CASES OF OVARIOTOMY.

SINCE the last series of operations for ovarian disease reported in the December number of this Journal for last year, I have performed ovariotomy nineteen times. These cases are now narrated, in accordance with the practice hitherto followed, of giving to the profession an account of every operation, whether successful or not.

Of these, seventeen recovered and two died. In most of them the operations were severe, and in several the convalescence was tedious, giving rise to no little anxiety as to the result. In one of the fatal cases, much local difficulty from pelvic adhesion was known to exist; and the operation was commenced on the understanding that it might be completed or not according to circumstances. I have little doubt that the excessive vomiting from chloroform gave rise to accidents which were the cause, in a great measure, of the fatal result. The other unsuccessful case was one of semi-solid tumour, surrounded by viscid fluid, the product of chronic peritonitis. It was complicated with double pleuritic effusion; and nearly half-a-gallon of fluid had been removed from the left pleura a fortnight before. So much relief was thus obtained, that ovariotomy seemed warrantable; and it was hoped that by the removal of the tumour, the drain upon the system arising from the ascitic fluid would be checked. A sudden increase of the pleuritic effusion on the fifth day rapidly proved fatal. The circumstances under which this operation was performed, I need hardly say, were not favourable for success.

Besides these, there is given a case in which, after emptying the cyst, there was found to exist such an intimate connexion of its posterior surface with the small intestine, mesentery, aorta, and common iliac vessels, that I made no attempt to do more. The wound was closed, a free opening being left in the cyst communicating with the cavity of the peritoneum. No bad consequences followed; and when this patient was seen a few days ago, she was going about in excellent health, and as yet there was no appearance of the cyst refilling.

CASE XLVII.—*Multilocular Ovarian Tumour, upwards of forty pounds. Once tapped. Ovariotomy. Recovery.*

A widow lady from Southport, sixty-five years of age, extremely fat, with a feeble heart, but of a tolerably healthy aspect, consulted me in July 1866 as to the propriety, at her time of life, of having a large ovarian tumour removed. Its nature had been recognised about a year before by Dr Millington of Wolverhampton, and of late its increase had been decided. Fluctuation was uniform over the abdomen, which measured forty-seven inches at the umbilicus. The uterus was central, low down, and movable. The impression left by a single examination was, that the tumour was composed of nearly a single cyst, and that, notwithstanding her age, and the extreme thickness of the abdominal wall, the case was one in which ovariotomy might be performed without more than the ordinary risk. She went home to advise with her family, and returned in September. Meanwhile a correspondence had taken place with Dr Millington. He informed me that many of the patient's blood-relations suffered from feeble fatty hearts, and that some years ago, when reduced by long confinement, in consequence of an injury, this lady had shown symptoms of becoming similarly affected. He had not seen her since he detected the tumour; but he then thought that the base of it was solid.

On her return, her general condition was not so good as before. She was pale, the pulse generally about ninety, and somewhat feeble. The girth had increased to fifty inches and a half; and as the wall below the umbilicus was œdematous, it appeared more prudent to have a preliminary tapping. After eighteen pounds of thick bloody fluid had flowed, the canula became choked with pieces of fibrine. She was somewhat relieved by this, though her size was not much reduced. The semi-solid that remained was large, and in the left iliac region the tumour felt as hard as a fibroid. Much to my surprise, the slightest movement of this solid portion was communicated at once to the uterus, which, previous to the tapping, was quite movable, though now it seemed that the connexion between the uterus and tumour was close. The uterus lay low and far back in the pelvis; and taking into account the unusual thickness of the abdominal wall—afterwards found to exceed three inches—there did not appear much hope that it would be possible to secure the pedicle externally. It seemed to me that the case was one in which success after operation would very much depend upon whether this would be possible or not, for the general condition of the patient was not good; and the impression left upon me was, that should it be necessary to return the pedicle with the ligatures, the chances would be that red serum would be thrown out in place of healthy lymph, and that she would probably die of low abdominal inflammation.

Under these circumstances, and considering the amount of semi-

solid, such a favourable prognosis could not now be given as formerly. The chances of success and failure seemed about equal, while at sixty-five the gain was not great. The proper course was to leave the decision to the patient and her family. The result was, that ovariotomy was agreed on, and performed on the 4th of October. The incision extended from the umbilicus downwards, being made larger than usual, on account of the thickness of the parietes. The peritoneum was so firmly adherent to the cyst that a careful dissection was for some time necessary. The tumour was freely cut into, and a great quantity of fibrinous matter removed. The semi-solid portion was then broken up, and the cavity carefully sponged before separating the adhesions, which were extremely firm, and extended over nearly the whole anterior surface of the cyst. The base was adenoid, and a very short pedicle was transfixed and tied about an inch from what felt to be the uterus, for from the size of the semi-solid portion it was impossible to see the exact state of the parts. On cutting away the tumour, what appeared at first to be the uterus was found to be a thin, tense, round cyst in the broad ligament, the size of the fist. It arose close to the uterus; and on emptying it of its clear watery contents, a very fair pedicle was obtained, which was secured by a clamp. The position of this cyst explained most satisfactorily the apparent close connexion which seemed to exist after the tapping between the uterus and tumour. The broken down cysts and fibrinous contents weighed twenty-four pounds, and eighteen pounds of fluid had been removed by tapping ten days before.

The chloroform vomiting was severe, and continued till next morning. There were, however, no unfavourable symptoms. The stitches were removed on the fifth day, when the wound was quite united. The clamp was removed on the eighth day. After this she had for some days a troublesome cough with some expectoration. In consequence of this, irritation was set up in the wound, and there followed suppuration in the sheath of the rectus muscle. Towards the end of the second week there was troublesome irritation of the bladder, which was relieved after free discharge from the side of the pedicle. This most probably came from suppuration of the cyst in the broad ligament. Though her convalescence was slow, she was able to leave her lodgings six weeks after operation, to pay a visit to some friends previous to her return to Southport in the end of November.

Case XLVIII.—*Semi-solid Ovarian Tumour. Ovariotomy. Recovery.*

In September 1866, I saw, with Dr Buchanan of Dumbarton, a married lady, forty-two years of age, with a large semi-solid tumour. The abdomen was very hard, and there was a good deal of general tenderness. The circumference at the umbilicus

was forty-one and a half inches. To the left side there was, at one spot, obscure fluctuation and coarse crepitus over a small extent. The uterus was central, far back, and, though movable, felt as if closely connected with the tumour. She remained in town for some days, and, after several examinations, the diagnosis given was "semi-solid ovarian tumour of left side—no evidence of adhesion—pedicle probably short." The prognosis given was favourable. It was evident that nothing was to be gained by tapping, and Dr Buchanan and I, therefore, felt justified in recommending ovariotomy as long as her general condition was fairly good.

The tumour was removed on the 25th of October, at the patient's home in Dumbartonshire, through an incision not much larger than sufficient to admit the hand; had it been removed entire, an opening to the sternum would have been required. It was cut into and broken up by the hand, not without some difficulty on account of the small cysts and firm texture of which it was composed. The pedicle was scarcely an inch in length, and as the cyst walls were dragged out, free bleeding was seen to be going on from a large transverse rent in the pedicle close to the uterus. It was necessary or transfix and tie in everything behind this. A clamp was put on, bringing the fundus of the uterus into the wound. The right ovary was quite healthy, and after sponging the pelvis from all blood, the wound was closed as usual by silk sutures. The broken-down cysts and cyst walls weighed twenty-eight pounds.

There was severe chloroform vomiting for the first thirty hours. The pulse remained rather high for the first ten days, ranging between 104 and 118, but there was little rise of temperature. There was more than usual depression of the clamp, and some red discharge came from the uterus from the fourth till the seventh day. The wound healed by the first intention, and when I saw her three weeks after operation, she was up and dressed. In the fifth week she had some pelvic pain, and Dr Buchanan wrote me to say that an abscess was forming and pointing in the vagina. After a few days some matter escaped from the abscess, and since then she has been in excellent health.

Case XLIX.—*Multilocular Ovarian Tumour. Ovariotomy. Recovery.*

Miss S., aged sixty-three, from Broughty Ferry, was sent to me for ovariotomy on the 26th November 1866, by Dr Gibson of Dundee. Fifteen years ago she became aware of the existence of a small movable tumour in the left side. Its increase was very gradual, and she was able to go about for some years after it had attained a very great size. At length, however, the œdema of the limbs became excessive, and her general health began to give way. In June last, Dr Gibson removed nearly six gallons of fluid from

the cyst, to her great relief. It soon began to fill, and when she came to town her girth was forty-two inches at the umbilicus.

Ovariotomy was performed on the 28th of November. One very large cyst and a smaller one were emptied, and a very thick cyst, with some semi-solid, weighing five pounds, was easily removed through a small incision. The pedicle was thick and extremely short; the uterus would not rise from the pelvis, so that when the clamp was applied it was depressed to near the sacrum.

There were no unfavourable symptoms, though there was more depression of the clamp than I had previously witnessed, and to quiet an unusual amount of restlessness and nervousness, more opium than usual was necessary. She returned to Dundee quite well twenty-five days after operation.

Case L.—*Multilocular Ovarian Tumour. Twice Spontaneous Rupture. Ovariotomy. Recovery.*

In October 1865, Dr Guthrie of Brechin sent me an unmarried lady, forty-seven years of age, with a small unattached tumour of the right ovary, not much larger than a child's head. The uterus was central and normal; the family history was fairly good; she was sallow, very thin, and habitually chilly.

She returned for operation in the following October. The tumour extended as high as the ribs on the right side, midway between the umbilicus and false ribs on the left. To the right there was an extremely tense prominent cyst about the size of an adult head; the rest of the tumour was semi-solid. The uterus was now drawn upwards to the right, and Douglas's space was filled by a portion of the tumour. It was, however, quite free in the pelvis: the girth was thirty-four inches. The general health was still good; the tongue was furred and red at the edges. She suffered much from flatulent distention, and pain was sometimes troublesome, while the pressure of the tumour in the pelvis gave rise to obstinate constipation.

On the 11th of October—three days after she came to town—she had passed a bad night from acute abdominal pain. The appearance of the abdomen was quite changed—the tense prominent cyst had become flaccid, and the upper part of the abdomen tympanitic. The girth was only thirty-one inches: by evening the outline of the cyst had quite disappeared, and the measurement at the umbilicus was only twenty-nine inches.

She was kept quiet in bed, and fomentations applied. Next morning the whole body was covered by an intensely bright eruption, which remained for four or five days. There was no increase of kidney secretion, but the skin acted very freely. In a week she was out of bed, and the physical signs of free fluid in the abdominal cavity had quite disappeared.

The cyst gradually refilled, and on the 24th—the day before

operation was fixed upon—it again gave way. The symptoms were more severe than on the former occasion: there was more pain, and, if possible, a more copious eruption. In ten days the fluid had again become absorbed, and she was able to be out of bed. She was now extremely reduced.

Ovariotomy was performed on the 11th of December, the cyst having already partially filled. The large cyst was emptied, and as it was carefully drawn forward, it gave way at its upper part, where the ruptures had taken place. There were two small openings covered over with a thick layer of recent lymph, and some very slight intestinal adhesion. The surface of the cyst was intensely vascular; the omentum and intestines of a bright rose colour, showing signs of recent inflammation. The cyst was freely opened. It contained some thick albuminous fluid. The hand was then passed through it, and the semi-solid portion, which weighed seven pounds, was broken up. The part which occupied Douglas's space was easily turned out; it was nowhere adherent in the pelvis. The pedicle was so short that there was just room to apply the clamp, the angle of the uterus being brought into the wound.

The symptoms for some days after the operation were the same as after the ruptures, without the eruption. Some distention, with hardness of the abdomen and a rather high temperature, caused some apprehension for a few days that the chronic peritonitis, which existed at the time of the operation, was going on. These symptoms soon disappeared, and she went home to Montrose four weeks after operation.

Case LI.—*Multilocular Ovarian Tumour. Ichthyosis. Both Ovaries removed. Recovery.*

Mrs H., aged forty, came to me for ovariotomy in the end of December 1866, at the recommendation of Professor Dyce of Aberdeen. The tumour was detected in September 1863. She was first tapped in July 1864, when four months advanced in her second pregnancy. Three gallons and a quarter of fluid were then removed. She went on to the full time, and for thirteen months no perceptible increase took place, till she gave up nursing. She was a second time tapped by Dr Dyce in October 1865, when three gallons and a half were removed, and the solid portion of the tumour was found to have increased. Two months afterwards, when she came to me, her girth was forty-four inches. The wall was still flaccid, and there was coarse crepitus almost all over the abdomen. The uterus was high, central, and movable, and there was no evidence of any local difficulty.

The general condition, however, did not seem to be a favourable one for ovariotomy. She had had ichthyosis from her childhood. She was thin, fragile-looking, and somewhat anæmic. She never perspired, and her hands and feet felt like horn. She was always

chilly; the pulse about 90, feeble and intermittent. One of her sisters had also ichthyosis, and another had died of phthisis.

The state of the skin having been somewhat improved by the daily use of the warm bath, ovariotomy was performed on the 2d January 1867. The cyst was exposed by an incision four inches in length, tapped, then opened to admit the hand, and the semi-solid portion—the size of a cocoa-nut—broken down and easily removed, after separating a piece of adhesion the size of the hand above the umbilicus, and a smaller and firmer portion in the right iliac fossa. Here the peritoneum was torn, and a ligature was required to a bleeding point. A rather thick pedicle was secured by the largest sized clamp, an inch from the right side of the uterus, and as the left ovary was enlarged and diseased, it was also removed, the end of its pedicle being secured to the clamp. The whole weighed thirty-five pounds.

There was some chloroform vomiting in the afternoon. The state of the skin, and the total absence of perspiration, gave rise to some anxiety for the first day or two; there were, however, no unfavourable symptoms. Metrostaxis came on two days after operation, and continued three days. She looked extremely anæmic during her convalescence, but left by the morning train for Aberdeen, quite alone, on the 2d of February, one month after operation. Dr Dyce wrote me some time afterwards that she continued quite well.

CASE LII.—*Dermoid Cyst. Twice Tapped. Very firm adhesions to Uterus, Bladder, Iliac vessels, and in Pelvis. Death six days after Ovariotomy.*

In May 1866, Mr Armstrong of Brampton took me to see a single lady, forty-two years of age, in whom he had detected an ovarian tumour towards the end of 1864. From childhood her health had been extremely delicate, and she was the only one of her family who survived. In February 1865, soon after the tumour was noticed, she had such a severe attack of peritonitis that, for a week, it was thought not possible she could live. As her girth was found to have diminished considerably after this illness, it seems most probable that some of the contents of the cyst had escaped into the cavity of the peritoneum. The pain was most acute low down in the left iliac region. An attack of phlebitis in the left leg followed, and for some months she was unable to walk. Since then the tumour steadily increased. She had rather a feeble heart, was pale, and very fat. The measurement at the umbilicus was forty-two inches. The cervix uteri was low down and far back in the pelvis. It seemed movable, but no very careful examination was then made, as it caused pain. The general condition was certainly not a good one, but there did not at that

time seem to me to be anything in the case to contra-indicate operation, and it was agreed that ovariotomy should be performed.

On more careful examination after a few days, the state of matters in the pelvis did not appear satisfactory. The cervix uteri was movable, but the body of the uterus felt lost in the cyst, which was pushed downwards into the pelvis. It was thought better, therefore, to have a preliminary tapping, and a small pailful of thick fatty matter was removed. The cyst was scarcely emptied, for some pieces of fat choked the instrument. For some days there was a good deal of feebleness and disturbance of system, but she returned to Cumberland a fortnight afterwards, not a little disappointed that an attempt had not been made to remove the tumour. Till August little or no increase took place, and she enjoyed a fair amount of health and comfort. In September, after some pain in the abdomen, the cyst filled rapidly, and she came to town in January, very anxious to have her burden removed.

The general condition was much improved. The state of plethora which existed the previous summer was now gone. The girth was forty-five inches, and the abdominal wall was much thinner. The cervix uteri lay far back and very low down; the body of the uterus was completely anteverted and fixed; the roof of the vagina much depressed, jammed downwards by the tumour. I wrote to Mr Armstrong that I had great doubts as to the connexions of the cyst in the pelvis, and that I could not see my way to ovariotomy, unless on the understanding that an exploratory incision should be made, and the operation gone on with or not according to circumstances. My brother now saw her with me, and thought that there were very extensive adhesions to the uterus and in the pelvis. The patient readily gave her consent to the exploratory incision, as she was exceedingly averse to another tapping. A restless night delayed the operation, and on examining once more the following day, before making the proposed incision, the vagina was found to be so swollen, and the pressure in the pelvis so great, that operation was declined altogether; and to her great disappointment, and that of the friend who accompanied her, tapping was again performed, in hopes that some information might be got as to the extent of pelvic adhesion. Thirty-five pounds of thick fatty matter, mixed with long hairs, were removed. On the right side, the cyst did not descend more than an inch below the margins of the ribs; on the left side, there was clear sound as low as the anterior superior spine of the ilium. Below, the cyst walls were thin, for the hand could be pushed from above into the pelvis. Three days after the tapping she was out of bed, immensely relieved, feeling smaller and lighter than she had done for two years. The uterus occupied the same position as before the tapping, and seemed adherent, but the roof of the vagina was now high and felt soft. It was hoped that too unfavourable a view had been taken of the case before the tapping, and that the adhesions would not turn out

to be either so formidable or extensive as was anticipated. It was proposed, however, to the patient that she should wait till the cyst refilled. She said she knew that she would never again be in such a favourable condition for operation, and that she would rather have the attempt made now. So it was agreed to make the incision, and, if possible, to get information as to the extent and degree of pelvic adhesion without going too far. At the same time it was explained to her that such information might not be got without circumstances arising which might render the attempt extremely hazardous.

On the 29th of January the cyst was exposed by an incision four inches in length. The wall was thick, unusually vascular, and the peritoneum was so firmly adherent that it required careful dissection to separate it from the cyst. After clearing a space the size of the hand, no information could be got, the adhesion being equally firm in all directions; and just as I was about to abandon the operation altogether, the adhesion was broken through at the left side, close to the iliac vessels. The hand was then passed into the pelvis; the left sacro-iliac synchondrosis space, and part of left side of pelvis were free; everywhere else the hand met with firmly adherent cyst. As it now seemed as dangerous to stop as to go on, the incision was extended to near the umbilicus, very firm parietal adhesion separated, the cyst opened and emptied of masses of hair and fat, and then partly drawn out. After much labour the cyst was freed by careful dissection from the right iliac fossa, iliac vessels, side and floor of pelvis, bladder, and uterus. The pedicle was also firmly attached to the cyst; and in separating it several large veins were torn. A wire rope was adjusted with Koeberle's serre-nœud within two inches of the uterus. After tying a number of bleeding points, the pelvis was carefully freed from all blood, and just as I was about to close the wound, the chloroform vomiting, which had hitherto been moderate, became very severe, and free bleeding was set up in all directions from a number of points—at least eight additional ligatures were used, several being applied laterally to wounded or torn veins. After waiting some time, and again sponging away all blood, the parts were left entirely to my satisfaction, considering the amount of injury that had necessarily been inflicted by such a dissection; the pedicle was retained outside, the wound closed by silk sutures, and the patient put in a warm bed; the operation, which was extremely fatiguing, having lasted two hours.

An opiate enema was given, but there was little or no pain. The chloroform sickness was exceedingly severe, and continued all afternoon and evening, the attacks of vomiting coming on about every half-hour. By evening she was extremely exhausted from this, and the pulse had risen to 120.

First day after operation.—Vomiting continued very severe during the night—coming on for some hours every quarter of an

hour. The vomited matter is simply a little clear mucus. It subsided somewhat towards morning, but recurred again, and continued all day. Brandy and soup enemata had been given during the day, and sometimes a little brandy by the mouth. Felt much exhausted by the vomiting. Expression good. Pulse 120; temperature 100·5°. Skin sometimes perspiring—generally hot. Urine clear and copious. Abdomen flat; wound quite dry.

Second day.—Fairly quiet night; little vomiting. Sickness returned in the forenoon. Skin extremely hot; got feverish towards afternoon, but was relieved by perspiration. Pulse 130; temperature 102·5°. Tongue large, soft, white. Urine clear and copious. Wound quite dry; abdomen flaccid,—flatus passing freely downwards.

Third day.—Quiet night; no vomiting. It recurred severely during the day, exhausting her very much. Some fæces washed out from the rectum. Douglas's space quite empty. Day passed much as yesterday, but is weaker. Pulse 135. Face hot and flushed; no perspiration, but urine is very plentiful, and quite clear. Wound quite dry; abdomen flaccid.

Fourth day.—Fairly quiet night. Wound looking quite dry and united; abdomen flaccid. Carefully examined the pelvis, but could not detect anywhere the presence of fluid. Douglas's space quite empty. Flushing of face and fever still continues, but says she feels quite comfortable, and her expression is pretty good. She is, however, much more feeble. Pulse 140–145. The respiration is somewhat sighing. Urine very clear and copious. Towards evening she was much disturbed by flatulence. Feeling sure that there was a collection of fluid somewhere in the pelvis, the lower stitch was removed and the adhesions slightly broken up. Only a little red serum flowed. A female catheter was then passed down several inches along the pedicle. It became filled with bloody purulent matter. The opening was then enlarged to admit the finger, and the cavity washed freely out, first with warm water, and then with Condy's fluid. This was repeated several times during the night, and some drainage tubes left in. The pelvis was also carefully explored by the catheter, with the finger in the vagina, but no other collection of fluid could be detected, and the utero-vesical pouch, which at the time of the operation was observed to be very deep and large, contained no fluid. On allowing the washings that had been injected to settle, about ten ounces of purulent matter were obtained. The matter which drained off at first was of a very dark red colour, containing a large quantity of blood.

Fifth day.—In the morning looked much relieved, and continued so till mid-day, when a very violent access of fever came on. Condy's fluid injected as before, but little or no discharge, and the cavity only contained little more than two ounces. No other collection of fluid could be felt anywhere. By evening she was much exhausted, and became very restless. The pulse had risen to 150;

temperature 103·5°. Abdomen quite flaccid, and urine continued to be secreted in large quantity. She died quietly on the morning of the sixth day.

The body was somewhat emaciated. The abdomen not the least distended. Cavity of abscess small, empty, and healthy-looking. Douglas's space contained nearly an ounce of bloody serum, quite shut off by slight adhesion between folds of small intestine from the abscess above. In the right side of pelvis, over the iliac vessels, where the adhesion had been separated by the knife, was a second flattened circumscribed cavity containing about four ounces of red grumous blood. In the neighbourhood of both these abscesses the intestines were adherent, but there was not a trace of general peritonitis.

The intense chloroform sickness on the afternoon of the operation so completely prostrated this patient, that by the evening I felt that her chances of recovery were almost gone. It seems probable that, soon after she was placed in bed, some oozing of blood, such as was seen to happen during the operation, took place in the pelvis during the excessive and prolonged efforts at vomiting. The powers of repair were unable for the absorption of this blood, and it passed quickly into suppuration. There was no blood-poisoning in this case. Death took place from pure exhaustion. A woman with more constitutional vigour would readily have survived; for, with the exception of the second small collection of blood and pus which, though eagerly sought for before, I failed to reach, the after examination showed only traces of nature's healthy repair of a great injury. Had there been no chloroform vomiting, there would most likely have been no effusion.

Case LIII.—*Both Ovaries removed. Recovery.*

This patient, forty-two years of age, unmarried, was sent to me on the 9th of February 1867 by Dr Junor of Peebles. She had been aware of the existence of a tumour for about five years, but as it gave rise to no inconvenience beyond what arose from its bulk, she had not consulted anyone about it till three months before, when, on account of her failing health, Dr Junor saw her and explained the real nature of her complaint. She was very thin, but her general appearance was healthy. The circumference at the umbilicus was forty inches, and the cyst could be seen moving freely with the respiration. The uterus was low in the pelvis, but movable.

A very favourable prognosis was given, and ovariotomy was performed on the 12th of February. The cyst was emptied and removed through a small incision. It was then found that there was no proper pedicle; both broad ligaments seemed to be involved in the cyst, and a very broad expansion went off both towards the cæcum and rectum; so that when this thick base was secured in a

very large clamp, there was a good deal of pull on both sides of the pelvis. The left ovary, enlarged and corrugated, was then found close below the clamp. It was transfixed, tied, and secured outside, causing, however, some prolapsus of the pedicle. Only one suture above the clamp was necessary; for the pedicle was nearly the thickness of the wrist, and almost filled the wound. The parts were left in by no means a satisfactory state, owing to the strain upon the pelvic tissues. I could not, however, make anything better of it, and was not, in consequence, surprised at the suppuration which followed.

For some days this patient did very well. There was no pain, no vomiting, and no opium was required. It was observed, however, that the respirations were never under thirty—sometimes as high as thirty-six. Metrostaxis came on on the second day, and lasted four days. After five or six days, the tongue got red and dry, there was pain from flatulence, some distention, and a tendency to diarrhœa. The pulse ranged from 105 to 120 for the first three or four weeks. The temperature varied from 101° to 103°. The urine was scanty, and perspirations were profuse. On three different occasions, on the twelfth, fourteenth, and twenty-first days, I evacuated by a long trocar collections of pus in different parts of the pelvis. She became extremely emaciated, and, from first to last, had much suffering, which was very cheerfully borne. She returned to Peebles on the forty-third day after operation. I saw her lately looking the picture of health.

In this case, in hopes of arresting the chloroform vomiting, which proved so distressing in the previous case, anæsthesia was produced by a mixture of three parts of sulphuric ether, one part of alcohol, and one of chloroform. Insensibility came on quite as rapidly as with chloroform alone. Since then I have used sulphuric ether by itself, or with one-fourth or one-fifth of chloroform, in twelve cases of ovariotomy (of which eleven recovered), as well as in every surgical operation which I have since performed. In none of these instances has there been the troublesome vomiting which, in my practice at least, has so frequently followed the use of chloroform, especially after ovariotomy. On three occasions during the operation, a mouthful or two of frothy mucus was vomited, but in none was there any sickness after the patient was placed in bed. Generally speaking, little harm, sometimes perhaps good, is done by a patient being well vomited by chloroform after most operations. No one can deny, however, that after the removal of a very adherent ovarian cyst, where there is the risk of bleeding into a shut cavity, vomiting must be a great evil.

Case LIV.—*Dermoid Cyst. Ovariotomy. Recovery.*

In August 1866, a medical man from Cheshire asked me to see his wife on account of an ovarian tumour, to which his attention

had been first directed three months before. She was forty-two years of age, dark, thin, but healthy-looking. She had been married seventeen years, and was childless. Soon after marriage, a tumour was detected in the pelvis, which was supposed to be an enlarged retroverted uterus. Till three years ago her health was good. She then began to suffer from severe pain in the sacrum when lying down, and was unable to turn in bed or sit up without assistance. There was general irritation in the pelvis, which was aggravated during the periods. Latterly, there had also been irritability of the bladder.

The tumour reached to a little above the umbilicus; it was tense and unusually prominent. It was movable, distinctly fluctuating, and seemed to consist of one cyst, except to the right of the umbilicus, where there was a small solid portion in the wall. Stretching from this, in a sort of depression, was a round tense band. This terminated in the corner of the uterus, which was completely drawn into the abdomen. The uterus was small, could be grasped between the fingers, and was movable on the tumour. The pelvis was occupied by a smooth, firm, fluctuating tumour in the position of the fœtal head before it reaches the floor of the pelvis. The vagina was elongated; its anterior wall very much on the stretch, and the cervix uteri could just be felt a little to the left of the pubic arch. The diagnosis given was—"Tumour of right ovary, filling the pelvis—no parietal adhesion, and either non-adherent in the pelvis, or fixed merely by bands; from elevation of uterus no difficulty expected in securing the pedicle externally."

This simple view of what had hitherto been looked upon as a complicated case, was confirmed by my brother and Dr Matthews Duncan. As the tumour was small, it was thought right not to advise any immediate interference with it, and she returned home for a time. She increased at the rate of an inch and a quarter a month; by November, there was aggravation of all the former symptoms, and she came to town for operation towards the end of February 1867.

Ovariotomy was performed on the 28th of February. Dr Peddie, Dr Duncan, and Dr Stevenson were present. Anæsthesia was produced by a mixture of three parts of ether and one of chloroform. There was no parietal adhesion. The cyst was extremely thin, and the contents would not flow through a large canula. It was opened and emptied of masses of hair and fat. There were some bands of adhesion in the pelvis. These all gave way, except one, which came from the bottom of Douglas's space. It was tied, the ends of the ligatures being cut short. The pedicle was secured by a small clamp, the pelvis sponged from a quantity of red serum, and the wound closed by five deep silk sutures.

Recovery was almost uninterrupted, and she returned home four weeks after operation.

CASE LV.—*Multilocular Ovarian Tumour. Ovariotomy. Recovery.*

Mrs M——, aged 35, came to me on the 15th of March 1867, on account of an ovarian tumour which had been observed after her first confinement, six months before. During her pregnancy she had suffered very much from distention. The cyst was multilocular, and there was general coarse crepitus over the right side. The measurement at the umbilicus was 40 inches. The uterus was central, normal, and movable. She was very thin, but her general health was fairly good.

A favourable prognosis was given, and ovariotomy was performed on the 18th of March. One large cyst was tapped, and the rest of the tumour broken up. There was only one patch of parietal adhesion over the edges of the ribs on the left side. It was extremely firm, and in separating it, the serous covering of the cyst was torn off and remained. It felt hard and rough, as if containing some bony or earthy matter. The hæmorrhage from this was so free that, after tying several bleeding points, it was necessary to pass a needle under it, and include in three portions the whole of the bleeding surface, cutting the ligatures off short. The pedicle was secured by a clamp two inches from the right side of the uterus.

She vomited some frothy mucus during etherization, but there was no after vomiting. She had a red dry tongue, a good deal of flatulent distention and highly concentrated urine for the first three days. On the fourth evening after operation, the pulse was only 66. She had, however, a restless night, and in the morning the pulse had risen to 100. By the sixth day, the pulse was 120, respirations 32; temperature 102·1; and there was some fulness of Douglas's space. This state of matters continued for some days. I thought of puncturing behind the uterus, but as the tension did not increase, and the pulse began to fall, I waited. On the eleventh day, several ounces of matter were discharged from the bowel; the swelling in Douglas's space disappeared; she recovered rapidly, and went home twenty-eight days after operation.

CASE LVI.—*Nearly Unilocular Cyst. Ovariotomy. Recovery.*

In October 1865, I saw a lady fifty-eight years of age with a single unattached cyst of the right ovary filling the abdomen. She was of a nervo-bilious temperament, thin, but fairly healthy-looking. Some time before, there had been great œdema of the lower limbs, which still continued to a certain extent. She had for long suffered from headache and various neuralgic pains, with general irritation of the mucous surfaces. A very favourable prognosis was given, but no interference was then recommended, as the tumour had been of slow growth, and had hitherto given rise to little discomfort.

She was seen again a few weeks afterwards on account of acute abdominal inflammation with severe vomiting. There was general tenderness, with fine crepitation, over the upper part of the cyst. In a few days this gave way to a considerable amount of ascitic fluid, which in its turn disappeared in a fortnight. For the next two months, however, there remained a fixed pain in the region of the gall-bladder, accompanied by irritability of the stomach, dark grumous vomiting, and rapid loss of flesh.

These symptoms entirely disappeared after tapping in January 1866. Thirty pints of dark bloody fluid were removed, and the cyst was found to be still free. For some months, her health was excellent, but with the refilling of the cyst came a return of the former symptoms, and I removed the tumour on the 9th of April 1867, fifteen months after the tapping. There was no proper pedicle, so that the largest sized clamp was placed around the neck of a thick cyst—the branches being separated fully an inch.

Sulphuric ether was given instead of chloroform. There was no after vomiting, little pain, and no opium was required, though on account of the slow cicatrization of the thick pedicle, convalescence was somewhat slower than usual.

Case LVII.—*Very adherent Multilocular Tumour. Ovariotomy. Recovery.*

In April 1865, I saw, with Dr James Sidey, a married lady, twenty-five years of age, soon after her second confinement, with an acutely inflamed ovarian tumour reaching to a little above the umbilicus. It had been detected the year before, and in the previous August she had an attack of acute abdominal inflammation. At that time there was so much tenderness of the cyst that scarcely any examination could be made. After some weeks' confinement to bed, the pain and distention disappeared, and it was agreed, in the absence of any urgent symptoms, to delay interference. Her health continued good, and, notwithstanding the gradual increase of the tumour, her third child was born in December 1866, and was nursed for six months.

She was seen again on the 17th June 1867. The measurement at the umbilicus was then fifty inches, and from the ensiform cartilage to the pubes twenty-five inches and a half. She was thin, and suffered very much from pain, distention, and sleeplessness. Ovariotomy was agreed on, and performed the following afternoon. Anæsthesia was produced by a mixture of three parts of ether and one of chloroform. There was no vomiting during nor after the operation. It lasted an hour and a half, and only once before have I met with such intimate adhesion. From the umbilicus to the pubes, over the left iliac region and iliac fossa, the adhesion was so close, and the matting together of the tissues so confusing, that after a long dissection, I was almost on the point of abandoning

the operation. The omentum came in between the cyst and wall, firmly adherent to both. It was cut away, tied in three portions, and secured in the wound at the umbilicus. The cyst was also connected to the left side of the pelvis by a very broad attachment, thicker than the pedicle. This was divided, and secured by a clamp. The pedicle was on the left side, and was of fair length. There was more blood lost than usual, and a number of vessels and oozing points required ligatures. The ends of all these were brought outside. The wound when closed gave exit to the pedicle, the broad pelvic attachment, the stump of the omentum, and to at least twenty ligatures. On examining the cyst afterwards, it was found that a part of its thickened peritoneal covering was missing. Part of this I had cut away before closing the wound, thinking that it was a piece of peritoneum that had been separated. I think that a piece the size of the hand must have been left adhering to the wall. The weight of the cysts and cyst contents was upwards of fifty pounds.

For the first three days the pulse ranged from 115 to 130. Much opium was necessary to allay pain and quiet restlessness. She then did fairly well till the seventh day, when, after a restless night, there was found on the dressings some fœtid red serum. I had watched for some days the signs of a collection of fluid forming above the umbilicus. This was punctured, but only gave exit to a quantity of clear yellow serum—not the least fœtid. The upper part of the wound was then broken up by the finger, and a collection of very putrid sero-purulent matter opened into. The cavity was washed out with a strong solution of sulphite of soda, and a drainage tube was put in. After this her convalescence was rapid, and she drove to Lasswade twenty-five days after operation, though two of the ligatures did not separate for nearly two months.

Case LVIII.—*Multilocular Ovarian Tumour. Ovariotomy. Recovery.*

In February 1867, I saw, with Dr Peddie, Mrs W., aged forty-three, from Berwick, with a very large ovarian tumour. She had œdema of the lower limbs, abdominal wall, and loins. The uterus was pushed to the right, and I could not satisfy myself that it was possible to isolate it from the tumour, a large portion of which was felt in the pelvis. A gallon and a half of very thick fluid was removed by tapping at the umbilicus. The rest of the tumour was semi-solid. The general condition of the patient, and the state of parts in the pelvis, did not then lead me to be very sanguine about this case, and the chances of success and failure after operation were looked upon as equal—not more.

She came back in April. The tumour was nearly as large as before, and the condition of parts in the pelvis still unsatisfactory. I was then unable to do ovariotomy for her, and she was advised

to go home and delay tapping as long as possible, in hopes that, as the tumour enlarged and grew upwards, the connexion between the tumour and uterus would become elongated. She returned in two months, having very much increased in size. Her general condition had improved, though the œdema of the abdominal wall and limbs was excessive. The girth at the umbilicus was fifty-three inches, and from the ensiform cartilage to the pubes thirty-two inches. The uterus was now distinctly movable, and none of the tumour was felt in the pelvis.

She got cold on her way into town, and had a smart attack of pleuro-pneumonia of the right side. On the 7th of July there was so much pain and dyspnœa, with such a feeble, rapid pulse, that, to prevent her becoming asphyxiated, she was tapped late at night. Three gallons of fluid were removed with much relief, and ovariotomy was performed on the 16th July, the lower part of the right lung being still dull on percussion. Dr Kimball of Lowell, U.S., Dr Philipsen of Copenhagen, Dr Wilson of Berwick, Dr Peddie, etc., were present. A mixture of four parts of ether and one of chloroform was given by Dr Gamgee. The incision extended from two inches above the umbilicus to an inch and a half above the pubes. The œdema of the wall had quite disappeared since the tapping. The anterior cyst was held forwards, opened, and the tumour broken up. There was some parietal adhesion above the umbilicus, and some high up, near the liver. In this adhesion a vessel required a ligature. A firm thick band from the pelvis was transfixed and tied, the ends of the ligatures being cut short. The pedicle was longer than was expected, and was secured by a clamp two inches from the right side of the uterus. The left ovary was quite natural. The wound was closed by eight deep silk sutures.

There was no vomiting. She had little or no pain, and required no opium. The wound healed without discharging at any point a single drop of matter. The clamp was allowed to fall off, and the whole amount of pus from the small granulating surface left did not in all exceed a teaspoonful. She left town on the twenty-eighth day after operation.

CASE LIX.—*Semi-solid Tumour with Ascitic Fluid. Chronic Peritonitis. Double Chronic Pleurisy. Thoracentesis. Ovariotomy. Death five days after from Pleurisy.*

This case will form the subject of a separate communication, along with several other cases of chronic pleuritic effusion complicating ovarian disease.

CASE LX.—*Multilocular Ovarian Tumour. Adhesions in Pelvis. Ovariotomy. Recovery.*

In September 1867, an unmarried lady, twenty-three years of age, from Kincardineshire, came to me for operation by the recom-

mendation of Professor Dyce of Aberdeen. The tumour had been of rapid growth, for increase of size had been observed by the patient's friends only six months before. The measurement at the umbilicus was thirty-eight inches. The cyst was unattached above. The uterus was unusually low in the pelvis—the os uteri pointing backwards to the sacrum. Its position was exactly such as I have seen in cases of extensive pelvic adhesion. Here, however, the uterus was fairly movable, and though the roof of the vagina was depressed, and felt somewhat tense, there was no evidence of adhesion, though a short pedicle was looked for.

The general condition was excellent, and hitherto the tumour had given little inconvenience. The family history, however, was not good, several members having died of phthisis, and early operation was recommended. Ovariotomy was performed on the 30th of September. Sulphuric ether was given instead of chloroform. About two-thirds of the tumour consisted of one large anterior cyst, the rest was semi-solid. It was broken up, and its removal was extremely embarrassing, from adhesion of old standing low in the pelvis. One very thick short attachment was with some trouble transfixed and tied—the ends of the ligatures being cut short. There was almost no pedicle, and a large clamp was applied round the neck of a thick cyst about an inch from the left side of the uterus. The strain upon the pelvic tissues was considerable. After waiting till all bleeding had ceased, the wound was closed by seven silk sutures,—the operation having lasted nearly an hour and a half. The broken down cysts and contents weighed thirty-one pounds.

There were no unfavourable symptoms, and she returned home twenty-eight days after operation.

The history of the last five cases will be afterwards given. In four of these the tumours were semi-solid, and all were severe operations, with much adhesion. In one the bleeding was so profuse that at least thirty ligatures were left in the abdomen. In this case the supply of ether became exhausted, and chloroform alone was given during two-thirds of the operation, which lasted upwards of two hours; and it is remarkable that in no other case in which sulphuric ether was given alone, or with one-fourth or one-fifth of chloroform, was there the slightest vomiting after the patient was placed in bed.

The accompanying table exhibits the whole number of cases of ovariotomy which I have performed to this date—1st January 1868. The general result of sixty-five operations is fifty-two recoveries and thirteen deaths,—or exactly 80 per cent. of recoveries. It is satisfactory to find that experience in the operation continues to diminish the mortality attending it; for of the last thirty-six cases only four have died,—a mortality of little more than 10 per cent.

Table of Sixty-five Cases of Ovariotomy.

No.	Date.	Age.	Condition.	History, etc.	Result.
	1862.				
1	Sept.	49	Married,	Multilocular; 25 lb.; surrounded by ascitic fluid;	Recovered.
	1863.				
2	Jan.	55	Married,	Multilocular; 45 lb.;	Recovered.
3	Feb.	24	Married,	Multilocular; 63 lb.; tapped once;	Died 23 hours after.
4	March.	27	Married,	Multilocular; upw. of 120 lb.; tapped 4 times;	Recovered.
5	May.	22	Unmarried,	Multilocular; 33 lb.; tapped twice;	Recovered.
6	July.	52	Married,	Fibro-sarcomatous, and cystic; both removed;	Died 5th day.
7	Aug.	23	Married,	Multilocular; nearly 80 lb.; tapped 7 times;	Died 38 hours after.
8	Sept.	23	Unmarried,	Multilocular; 40 lb.; tapped twice;	Recovered.
9	Nov.	16	Unmarried,	Semi-solid; very large; tapped twice;	Recovered.
	1864.				
10	Jan.	55	Married,	Semi-solid; 23 lb.; tapped twice;	Recovered.
11	Feb.	40	Unmarried,	Multilocular; 37 lb.; tapped once;	Died 6th day.
12	March.	50	Married,	Large single cyst;	Recovered.
13	April.	68	Married,	Cystic and adenoid;	Recovered.
14	May.	23	Unmarried,	Semi-solid; 24 lb.;	Died 9th day.
15	May.	35	Unmarried,	Large single cyst;	Recovered.
16	May.	29	Married,	Multilocular; 65 lb.; tapped 4 times	Died 46 hours after.
17	May.	47	Unmarried,	Semi-solid; 35 lb.; tapped twice;	Recovered.
18	May.	27	Unmarried,	Multilocular; 35 lb.;	Recovered.
19	July.	30	Unmarried,	Semi-solid; 36 lb.; tapped once;	Recovered.
20	July.	33	Unmarried,	Very large single cyst, containing 55 lb. of fluid;	Recovered.
21	Sept.	34	Married,	Multilocular; 23 lb.; tapped twice;	Recovered.
22	Oct.	44	Unmarried,	Single cyst; tapped twice;	Recovered.
23	Nov.	52	Married,	Multilocular; 56 lb.; tapped 3 times;	Recovered.
24	Dec.	51	Married,	Multilocular; 57½ lb; tapped twice;	Recovered.
25	Dec.	44	Unmarried,	Multilocular; tapped once;	Died 3d day.
	1865.				
26	Jan.	36	Unmarried,	Multilocular; 30 lb.;	Recovered.
27	Jan.	54	Unmarried,	Multilocular; tapped once;	Recovered.
28	Feb.	34	Married,	Solid; 11 lb.; 60 lb. ascitic fluid; tapped 4 times;	Died 32 hours after.
29	March.	32	Married,	Nearly single cyst; tapped once;	Died 4th day.
30	May.	24	Unmarried,	Multilocular; 19½ lb.;	Recovered.
31	June.	48	Unmarried,	Single cyst; 26 lb.;	Recovered.
32	July.	32	Unmarried,	Multilocular; 12½ lb.;	Recovered.
33	Aug.	42	Married,	Both removed; 36 lb.;	Recovered.
34	Sept.	32	Married,	Multilocular; 16½ lb.;	Recovered.
35	Nov.	56	Unmarried,	Multilocular; 35 lb.;	Recovered.
36	Nov.	23	Unmarried,	Multilocular; 33 lb.; tapped once;	Recovered.
37	Dec.	21	Unmarried,	Semi-solid; 20 lb.;	Recovered.
38	Dec.	32	Unmarried,	Multilocular; both ovaries removed;	Recovered.
	1866.				
39	Jan.	18	Unmarried,	Unilocular; cont. 38 lb. of fluid; tapped once;	Recovered.
40	Jan.	32	Unmarried,	Multilocular; containing 42 lb. of fluid;	Recovered.
41	Feb.	55	Married,	Multilocular; 30 lb.; parietal adhesion;	Recovered.
42	March.	25	Unmarried,	Multilocular; 34 lb.; extensive adhesion; tapped 4 times;	Died 2d day.
43	April.	58	Married,	Multilocular; nearly 50 lb.; adhesion to uterus;	Recovered.
44	April.	42	Married,	Semi-solid; 55 lb.; in last stage of disease;	Died 9th day.
45	Aug.	17	Unmarried,	Dermoid cyst; 13½ lb.;	Recovered.
46	Aug.	27	Married,	Nearly unilocular cyst; extensive adhesion;	Recovered.
47	Oct.	65	Married,	Multilocular; 40 lb.; extensive adhesion;	Recovered.
48	Oct.	42	Married,	Semi-solid; 28 lb.;	Recovered.
49	Nov.	62	Unmarried,	Multilocular; 6 gallons fluid; tapped once;	Recovered.
50	Dec.	47	Unmarried,	Semi-solid; twice spontaneous rupture;	Recovered.
	1867.				
51	Jan.	40	Married,	Multilocular; 35 lb.; both ovaries removed;	Recovered.
52	Jan.	42	Unmarried,	Dermoid cyst; 42 lb.; adhesions universal in pelvis;	Died 6th day.
53	Feb.	42	Unmarried,	Both ovaries removed;	Recovered.
54	Feb.	42	Married,	Dermoid cyst;	Recovered.
55	March.	35	Married,	Nearly single cyst; very firm adhesion;	Recovered.
56	April.	60	Married,	Single unattched cyst; no pedicle;	Recovered.
57	June.	27	Married,	Multilocular; 50 lb.; adhesions extremely firm;	Recovered.
58	July.	43	Married,	Multilocular; 48 lb.;	Recovered.
59	Aug.	34	Unmarried,	Semi-solid; ascites; double pleurisy;	Died 5th day.
60	Sept.	23	Unmarried,	Multilocular; 30 lb.; pelvic adhesions;	Recovered.
61	Nov.	43	Married,	Semi-solid; ascites; adhesion to intestine, etc.;	Recovered.
62	Nov.	32	Unmarried,	Multilocular; 31 lb.; extensive adhesion;	Recovered.
63	Nov.	55	Married,	Semi-solid; adhesions in pelvis;	Recovered.
64	Dec.	32	Married,	Semi-solid; 16 lb.; adhesion;	Recovered.
65	Dec.	40	Unmarried,	Semi-solid; 13 lb.; universal adhesion;	Recovered.
66	Jan.	37	Married	Semi-solid - ascites, fluid - adherent to splenic n -	Recovered
67	Feb.	60	Married	Multilocular - no adhesions.	Recovered
68	Mar.	57	Married	Multilocular - no adhesions	Recovered

Case of incomplete Ovariotomy. Recovery.

Mrs M., aged forty, came to me from Professor Maclagan. Her general health had for long been indifferent on account of extensive callous ulcers of both legs. An ovarian tumour had been detected after her last confinement, three years ago. Its increase had been slow. The measurement at the umbilical level was forty-three inches. The cyst was single, and moved very freely with the respiration. The uterus was central, normal, and movable.

The case appeared the simplest possible for ovariotomy. On the morning of the 17th of August, the day fixed upon for operation, when noticing the unusual mobility of the cyst through the thin abdominal wall, it was observed that near the upper margin of the tumour a piece of intestine moved with it. The diagnosis, therefore, written down before operation was, "single cyst, free in front and in pelvis; some adhesion of intestine, and probably also of omentum, to upper part of cyst." There was no parietal adhesion, and after tapping the cyst, it was drawn out, when it was found that so extensive and intimate were its posterior attachments to the small intestine, mesentery, omentum, colon, aorta, and common iliac vessels, it would have been unwise to have attempted more. The adhesions had taken place early, when the tumour was small, probably during her last pregnancy, and had grown with the growth of the cyst. Therefore, most reluctantly, and for the first time of sixty-one operations, I felt it my duty to close the wound, leaving the large opening made by the trocar patent.

There was no more disturbance of system than after an ordinary tapping. The wound healed without discharging a drop of matter, and when this patient was seen two months and a half afterwards, it was impossible to tell whether a cyst existed or not, and she was in excellent health.

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