OBSERVATIONS

ON

RECENT IMPROVEMENTS IN THE MODE
OF REMOVING UTERINE TUMOURS.

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In two valuable articles on "Abdominal Surgery" in the *Boston Medical and Surgical Journal* of March [and April last, the removal of uterine tumours is spoken of as "a direct outgrowth from ovariectomy", and the history of the operation is sketched from my first case in 1861 to the present time. In 1863, my experience of four cases led me to the conclusion that "it would only be under most unusual circumstances that I would again remove an interstitial fibrous tumour of the uterus; a peritoneal outgrowth, or an ingrowth towards the uterine cavity and vagina, offering, in my opinion, far more probability of successful removal than an interstitial tumour". Ten years later, in 1873, further experience had brought me to the opinion quoted by the Boston reviewer, that "when a uterine tumour is pedunculate, or can be separated from the principal part of the uterus, or when the whole of the fundus and body of the uterus, with or without the ovaries, can be removed, leaving the cervix and its vaginal attachments uninjured, the operative question is a different one, and recent experience is leading to a more encouraging view of the surgical treatment in such cases".

After five years' additional work, I brought the surgical treatment of uterine tumours before the College of Surgeons in the Hunterian Lectures, giving the result up to that date of all my operations through the abdominal wall, amounting to forty-five cases. Tables of these cases may be seen in the *BRITISH MEDICAL JOURNAL* of July 27th, 1878. In the two years which followed this lecture, I adopted two important modifications in the operative procedure—first, the more complete use of antiseptic precautions; and secondly, the union by suture of the peritoneal edges of the divided uterine wall. I also contrived better pressure-forceps for securing divided blood-vessels before tying. In the paper read at the Cambridge meeting of our Association in August 1880, and published in the *BRITISH MEDICAL JOURNAL*, September 4th, 1880, I said, "Whatever doubt some may entertain as to the value of my experiments on animals, and practice on women, in leading most operators in the present day to bring divided edges of peritoneum together whenever they have been separated by wound or by operation, I myself have no doubt whatever about it; and just as strongly as I assert that it is, and must be, better, when the abdominal wall is divided, to bring the peritoneal edges and surfaces of the opening together, restoring the complete closure of the peritoneal cavity, than to leave the cavity free to the admission of fluids oozing from wounded muscle, fat, and cellular tissue, and to allow contact of intestine and omentum with anything more than peritoneum; so strongly—more strongly if I could—would I insist that the peritoneal edges of the divided uterine wall, or of the connecting part of the outgrowth with the uterine wall, should also be carefully brought together..... by many sutures, or by uninterrupted suture along the whole extent of the gap". In concluding that paper, I alluded to a case then under observation, which I brought forward partly to illustrate the advantage of completely uniting by suture the divided edges of the peritoneal wall, and partly to argue that when the uterine cavity has been opened, it is better not to close the mucous surfaces also by sutures, after the method of Schröder, as the opening left for some oozing of blood through the vagina may sometimes be useful. A few more details of this case may be now given.

On June 9th, 1880, I saw a married lady, aged 62, in consultation with Dr. Richard Smith, of Haverstock Hill, who had been called in about a fortnight before, on account of uterine hæmorrhage. This, after twelve years' absence, had come on at the end of 1879, and had recurred since every three weeks, lasting one week. She had consulted an obstetric physician four years before, who said that there was "ovarian enlargement". She had been married twice, had one child by her first husband, twenty-nine years ago, and had never been pregnant since. With the return of the uterine hæmorrhage, there occurred enlargement of the abdomen, which increased rapidly, loss of flesh, shortness of breath, and very obstinate constipation. The girth of the abdomen at the most prominent part was 42 inches. The uterine

cavity only measured $2\frac{3}{4}$ inches, but the cervix moved in all directions with a large semi-solid tumour, which filled the whole abdomen quite up to the ensiform cartilage. I removed the tumour on the 21st of July, 1880, cutting away nearly all the supravaginal portion of the uterus, and after tying all bleeding vessels carefully, sewing together the peritoneal edges of the divided uterine wall. For about three days afterwards, a little bleeding went on through the vagina, but the patient recovered without any febrile elevation of temperature, and is now in excellent health. The doubt as to the tumour being ovarian was accounted for by the fact that a large cyst-like cavity in the centre of the tumour contained thirteen pints of bloody fluid, while the solid portion weighed only a little more than two pounds. I am much indebted to Dr. R. Smith for his assistance at this operation, and for his care of the patient afterwards, as she remained in his charge during my absence from London.

In this and previous cases, I had been content with the pressure-forceps described and figured in the *BRITISH MEDICAL JOURNAL*, vol. i, 1879, p. 928; but, feeling the want of more effectual means of securing bleeding vessels before dividing them, I had forceps made similar in form, but with longer handles, and a compressing surface more than an inch in length. With several pairs of such forceps, applied before any tissues are cut through, large tumours may be cut away with only very small loss of blood. They were used, with excellent effect, in the following case.

On September 27th, 1880, assisted by Mr. Thornton and Mr. A. Doran, I removed a large solid uterine fibro-myoma from a single lady, aged 41. By an incision eight inches long, the tumour was exposed, or rather the omentum, containing very large veins, which covered the tumour and adhered to it. Two ligatures were applied to the omentum, which was then divided between them. Some adhesions to the abdominal wall were then separated, and the tumour turned out entire. It was an outgrowth from the left side of the fundus uteri. The band of connection between the uterus and the outgrowth was between two and three inches in length, and about one inch in breadth. This was first compressed and held by two of the large forceps just described, and the tumour was cut away. Then a large needle and double thread was pushed through the uterine tissue behind the forceps, and each thread was tied as the forceps were taken off. Lastly, the peritoneal edges of the divided uterine wall were brought together by an uninterrupted suture of fine carbolised silk. After the removal of the tumour, the rest of the uterus appeared to be quite normal in size and consistence. Both ovaries were healthy. Recovery went on without fever—the highest temperature was 100.2° . There was unusual nervous irritability during convalescence, perhaps explained by the facts that her father and an uncle had both been insane, and attempted suicide; but she went away thirty days after operation, in a very good state of health, and has since been quite well. Mr. Doran described the tumour as a solid uterine fibro-myoma, weighing between seven and eight pounds.

The tumour in the following case was very much larger, and the patient in a state of the utmost distress from its weight and pressure. It was a solid fibro-myoma, which weighed twenty-five pounds, after all blood and serum had drained from it. I removed it on the 7th of October, 1880, assisted by Mr. Thornton, Mr. Ververs of Hereford, and Mr. Orton of Foleshill, near Coventry. The incision was eight inches long. Three to four pints of clear fluid escaped on dividing the peritoneum. A nodular solid tumour was covered by vascular adherent omentum. This was tied and divided. There was no pedicle. The growth was a prolongation, or irregular enlargement, of the fundus uteri. After fixing each end of the narrowest part of the neck of the growth by pressure-forceps, I amputated the fundus just beyond the forceps, opening the uterine cavity at the posterior part of the growth. Six portions of uterine tissue were tied, after three transfixions, with double silk ligatures, as the forceps were removed, and several large vessels were also tied separately. The peritoneal coat of the uterus was then united by a line of uninterrupted suture, so as to cover up the divided uterine tissue. The line of union measured between three and four inches. More than a pint of blood was lost. I made no note of the state of the ovaries. The patient was extremely weak for a fortnight after the operation; but she went to Coventry at the end of a month, and she called on me in May 1881, in excellent health. I could detect nothing by abdominal or pelvic examination, except the linear cicatrix in the abdominal wall, to show that any operation had been performed. The catamenia are quite regular, and had only been excessive for the two or three periods just after the operation.

I had seen this patient several times during the six years from the discovery of the tumour till the operation, and had at first dissuaded her from any interference, on account of a strong vascular thrill always felt in the left side of the vaginal wall. It was not till ascitic fluid

formed, and the tumour became more mobile, that I agreed to operate. The vascular thrill was explained by omentum adherent to the lower part of the tumour, and containing very large blood vessels.

The next case is also one of almost unexpected, but complete, recovery. In May 1876, a married lady, aged 38, called on me with a letter from Dr. Birch of Hazaribagh, in India, under whose care she had been since May 1875. She was married in 1871, went to India in the same year, had never been pregnant, but remained in good health until she suffered from fever in September 1874. In February 1875, Dr. Ewart of Calcutta discovered an abdominal swelling which he thought might possibly be early pregnancy, although there had been no irregularity in menstruation. The swelling increased rapidly in 1875, and, when I saw her in May 1876, the uterus was evidently enlarged to the size in the fifth or sixth month of pregnancy. As there were no urgent symptoms, she returned to India, and I did not see her again until May 1877. There had been some slight increase in the size of the uterus, and menstruation was becoming rather profuse; but she remained in fairly good health till July 1878, when her general health suffered after much anxiety and over-exertion; but she got over this, and went through 1879 pretty well. In June 1880, the tumour having considerably increased in size, Sir W. Jenner saw her with me in consultation as to the question of operation, and it was decided that there should be further delay, but that the tumour should be removed as soon as it became intolerable. Menstruation became still more profuse, size increased, she lost flesh, became unable to take any but very short walks, the feet swelled, and purpuric spots appeared on the legs. In December 1880, at another consultation with Sir W. Jenner, we found a large solid tumour, reaching quite up to the ensiform cartilage, and an ovary could be felt and moved in each iliac region. The uterine cavity was slightly elongated, but I thought the tumour and part of the fundus uteri might probably be removed without opening this cavity. It was agreed that I should attempt to remove the tumour; but that, if the difficulty proved to be greater than I expected, I should then remove both ovaries in the hope of thus leading to atrophic change in the tumour. We waited until after the cessation of another menstrual period, and I then went into Gloucestershire, and operated on February 12th, 1881, assisted by Dr. Forty and Mr. Simmons of Wotton-under-Edge, Mr. Wickham of Tetbury, and Mr. A. Grace of Sodbury. Dr. Day administered methylene. After making an incision from two inches above to six inches below the umbilicus in the median line, the enlarged solid uterus was exposed, free from adhesions, but covered by very large veins, and there was no distinct neck to the tumour or fundus. The left ovary was large, and both were easily separable from the tumour. My first intention, accordingly, was to be satisfied with removal of both ovaries, and leave the uterus alone. On drawing up the left ovary, a cyst, or corpus rubrum, in it burst, and much black clot was pressed out. I then transfixed, tied the connecting tissues between the ovary and the enlarged uterus, and cut the ovary away. Very free bleeding followed, and successive ligatures cut through a soft venous plexus. I, therefore, felt compelled to remove the tumour, and, after applying on each side, before and behind, four pairs of large pressure-forceps, I amputated the tumour, cutting through the fundus uteri diagonally from the right Fallopian tube, downwards and to the left of the bleeding surface, where the left ovary had been attached. The uterine cavity was not opened. Part of the fundus and the body left with the cervix were normal in size and consistence. The left Fallopian tube was removed with the tumour. The right remained; and the right ovary, although rather large, was not disturbed. Theoretically, it would have been better to remove it; but I was very unwilling to prolong a serious operation by anything not absolutely necessary. Several very large arteries and veins were secured, some by ordinary ligature of carbolised silk, some by ligature after transfixing the uterine tissue; and then the peritoneal edges of the divided fundus were brought together by suture. Although a great deal of blood was lost, the lips never lost their colour, and there was no vomiting. The patient was exactly an hour under the influence of the anæsthetic, and Dr. Day told me that he had never given so much methylene before at any of my operations. Nearly two ounces were used. I did not make any provision for drainage, as I had carefully sponged away all blood and clot; and the wound was united in the usual way by silk sutures. Phenolised spray was used, phenolised sponges, ligatures, and instruments, and dry dressing. The tumour was a solid fibroma, with several projections or outgrowths from the peritoneal surface. It weighed 11½ lbs.

The patient was left in charge of Dr. Forty of Wotton-under-Edge, and recovery was uninterrupted by any bad symptom. The temperature reached 101°, and the pulse 104, on the third day; but the convalescence may be said to have been without fever. I saw the lady in London on April 28th, quite well, and with nothing but the linear

scar in the abdominal wall to be detected as showing that there had ever been any disease of the uterus. The cervix was mobile, and nothing abnormal could be discovered anywhere. The catamenia appeared quite as usual the first week in May, after an interval of three months, and passed off quite normally.

These are all the cases in which I have removed uterine tumours entirely since August 1880, and all have recovered in the most satisfactory manner. In three other cases, I made simple exploratory incisions; doing nothing more, as the difficulties of removal appeared very great. One patient died a week after the incision, of peritonitis. The other two were neither better nor worse for the incision. In another case, a patient of Dr. Andrews of Hampstead, a single lady, aged 60, I was only able to remove part of a fibroma, after emptying a large cyst-like cavity. The patient died on the third day. And, in one other case, a patient of Dr. Monro of Newtown, Montgomeryshire, where I could only remove a projecting outgrowth from the main part of the tumour, the patient, who was in an extremely feeble condition before operation, died on the eighth day.

I feel very hopeful that, by the use of the improved pressure-forceps, the arrest of hæmorrhage will be effected much more easily and completely than before; that suture of the uterine wall will obviate more than one source of danger; and that, by careful attention to all needful antiseptic precautions, the removal of uterine tumours may now be undertaken with a far more confident expectation of a successful result than could have been reasonably entertained a very few years ago.

CLINICAL LECTURE

ON A

CASE OF CÆSAREAN HYSTERO-OÖPHORECTOMY, OR PORRO'S OPERATION; WITH REMARKS.*

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MRS. B., aged 24, quintipara, had suffered from rickets in childhood. Her height is 4 ft. 8 in. The measurements of the pelvis are: interspinous, 9½ inches, or 24 centimetres; intercristal, 9½, or 24; external conjugate, 5½, or 14; diagonal conjugate, 3¾, or 8; internal conjugate, 2¼, or 5.7; transverse at brim, 4¼, or 10.8; between the tubera ischii, 4¾, or 11.5. At her first confinement, she had twins before the full time, and both still-born. At the second, the foetal head was perforated. At the third, she came under Dr. Hart's care, who, finding a conjugate diameter about two inches and a half, and a small child, turned, hoping that the transverse diameter might be long enough to allow the head to pass. But the head could not be brought past the sacral promontory, and he had to perforate. At her fourth confinement, I delivered her by trephining the base of the skull through an opening in the vault, and crushing the head with Guyon's apparatus.

She menstruated last on May 20th, 1880, and, according to her calculation, was within a week of her confinement, when I again undertook her delivery. She was very anxious to have a living child, and I proposed to give her the chance offered by the Cæsaean section, supplemented by Porro's utero-ovarian amputation. On examination before the operation, the foetus was found to be lying with the dorsum to the right side, and the head resting above the brim of the pelvis. There were occasional uterine contractions, but no true labour-pains, and no dilatation of the uterine orifice was found on vaginal examination. From the distinctness with which the outline of the foetus could be made out through the abdominal parietes, it was judged that the placenta was not attached to the anterior wall of the uterus.

The operation was performed, in a lodging to which the patient had been removed, on February 21st, with the assistance of Dr. Halliday Croom, Dr. Berry Hart, and Dr. A. H. Barbour. Dr. F. M. Caird administered chloroform, and Messrs. Hewetson and Huxtable took charge of the instruments and sponges. Surgeon-Major Johnston was also present. The operation was done under the carbolic spray, and all antiseptic precautions were carefully carried out. An incision, fourteen centimetres in length, was made in the abdominal wall, in the middle line, ending about three centimetres above the symphysis pubis. It was observed that vigorous foetal movements occurred when the skin was being divided. On cutting through the abdominal walls, bleeding occurred from a considerable number of vessels, which were tempora-

* Communicated to the Edinburgh Obstetrical Society.