CASE
OF
EXCISION OF A GRAVID UTERUS
WITH
EPITHELIOMA OF THE CERVIX,
WITH REMARKS ON THE OPERATIONS OF BLUNDELL,
FREUND, AND PORRO.

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THE case which I have the honour of bringing before the Society this evening is, I believe, the first in which a gravid uterus has been completely excised in Great Britain. And it may serve to direct the attention of the profession to two important operations which of late years have been frequently performed in Germany and Italy—the one, complete excision of the cancerous uterus; the other, a substitute for the Cæsarean section, or rather an addition to the Cæsarean section of amputation of the supra-vaginal portion of the uterus.

In the following case both these objects were attained.

A uterus affected with malignant disease of the cervix, and containing a foetus about the sixth month of intra-uterine development having been removed through the divided abdominal wall.

On the 5th of October, 1881, Dr. R. Goldsworthy Tucker, of Farningham, met at my house a farmer's wife, thirty-seven years of age, pregnant, and suffering from epithelioma of the cervix uteri.

She was married in 1872, and had five children, the youngest being sixteen months old. She had nursed this child for three months. Then she became too weak to continue nursing, and began to suffer from vaginal discharge. But she became pregnant again, and aborted after about six weeks on the 1st December, 1880.

Hæmorrhage and discharge continued after this abortion until February, 1881.

She had two regular menstrual periods in March and April, and another about the middle of May. Then she thought she became pregnant again, but was doubtful, as for one day, on the 29th May, she had some bleeding.

It was uncertain, therefore, if the beginning of pregnancy should be calculated from the middle or end of May, but she was quite conscious of the movements of the foetus at the first visit to me. Ballottement was distinct, and I heard the foetal heart sounds. The cervix uteri was long and enlarged, the os admitting one finger easily for a full inch, and the cervical canal was surrounded by a mass of epithelioma which everted the lips of the os and projected downwards into the vagina.

Dr. Tucker told me that Dr. Playfair had seen the patient a week before, and had discussed with him the propriety of inducing premature labour or of removing the diseased cervix. It seemed to me that the disease was so distinctly limited to the cervix that, if the diseased structure were scraped away and chloride of zinc applied to the denuded surface, pregnancy might go on to the full term. And it was settled that this should be done. But, after a few days there was so much increase of dis-

charge, and the patient suffered so much more from pain and greater weakness, that Dr. Gramshaw, of Gravesend, and Dr. Graily Hewitt were consulted; and Dr. Hewitt carefully discussed with me the various objections to, and advantages of, the different courses open to us.

The result of this consultation was the advice that I should remove the entire uterus.

The patient accordingly came to London on the 18th October.

Dr. Hewitt and I saw her together on the 19th and on the 21st I performed the operation in the presence of Dr. Hewitt, Mr. Cadge, of Norwich, and Dr. Tucker, of Farningham. Bichloride of methylene was administered by Dr. W. Webb, and I was assisted by Mr. Thornton, Mr. Meredith, and Mr. Doran.

The patient was arranged precisely as for ovariectomy under phenol spray, but an opening was made in the waterproof covering for the passage of an elastic catheter, which was kept in the bladder, and the vagina was then plugged with thymol cotton wetted with warm water containing about 1 per cent. of phenol.

The abdominal wall was then divided in the middle line for an extent of about eight inches—from two inches above to six inches below the umbilicus.

The uterus was then turned out and was about the size of a very large adult head. Four sutures were introduced to temporarily close the upper part of the opening in the abdominal wall over a large flat sponge and thus prevent escape of intestines or cooling of the abdomen by the spray. The ovaries were seen nearer the level of the fundus than I expected to find them, and it was quite easy to secure the spermatic artery, first on the left and then on the right side, by transfixing the broad ligaments below each ovary and tying with strong silk. Then, using the catheter as a guide, I began to dissect the bladder from the anterior surface of the uterus. The uterine wall was very thin like a tense cyst, and soon gave way accidentally, the bag of membranes protruding.

I punctured the membranes and several pints of liquor amnii escaped. Then I drew out the foetus, secured and divided the funis, but did not interfere with the placenta. I then separated the attachments between uterus and vagina all round, securing by pressure-forceps all bleeding vessels as they were divided, and removed the uterus.

Then the forceps were taken off one after another, all bleeding vessels tied with carbolised silk, the vaginal plugs removed, and the opening into the vagina and the edges of the divided broad ligaments were brought together by silk sutures. The pelvis was carefully cleansed by sponging, the opening in the abdominal wall closed by silk sutures, and phenolised cotton pads, strapping, and flannel bandage applied just as after ovariectomy.

Mr. Cadge kindly gave me the following notes which he made of the time occupied by the different steps of the operation :

- 2.35. Began to inhale methylene.
- 2.41. Catheter and plugging vagina.
- 2.50. Incision in abdominal wall.
- 2.53. Uterus drawn out.
- 2.56. Sutures in abdominal wall dividing broad ligament and vagina.
- 3.10. Uterus removed.
- 3.40. Ligature of vessels, and sutures of vagina and broad ligaments.
- 3.50. Suture of abdominal wall and dressing.
- 3.55. Patient in bed.

Thus the patient was about an hour and a quarter under the influence of the anæsthetic, but the operation from beginning the incision to closing the wound was completed within the hour.

The uterus has been preserved in the Museum of the Royal College of Surgeons, and I have been permitted to bring it to the meeting for inspection by the Fellows of the Society.

The following report on the preparation is by Mr. Alban Doran and Mr. Eve :

" Around the entire circumference of the os externum projects a very exuberant cauliflower mass, covered with a mucoid secretion, and at no point showing any signs of ulceration. The growth was most advanced on the right side, and on examining the deeper tissues, which it here covered, slight but marked induration was observed, extending into the cellular tissue on the right side of the uterus, close to the base of the broad ligament. The growth likewise extended, but to a very slight extent, beyond the inner border of the os uteri into the uterine cavity.

" On microscopical examination, the epithelium on the surface of the outgrowths was found to have proliferated to a marked extent, but not deeply ; no " nests " could be discovered. In the indurated tissue to the right of the uterus, abundant infiltration of leucocytes was observed, without any trace of invasion of epithelial elements.

" The growth must be considered as of a kind midway between papilloma and epithelioma, a papillary growth slowly and surely becoming malignant yet not likely to recur if thoroughly removed, as in this case. The cause of irritation being removed, the leucocytes infiltrated in the cellular tissue will probably disappear, and there is little fear of recurrence.

" In fact, the *exuberance* of the growth and freedom from ulceration struck us as singular.

" The uterus and its appendages, when removed, weighed twenty-five ounces, exclusive of the fœtus, and measured six inches in length. The upper part of the uterus presented no abnormal appearance ; anteriorly, immediately below the line of reflexion of the peritoneum on to the bladder, was a perfectly horizontal lacerated wound, about two inches in width, opening into the uterine cavity. The cut ends of the uterine artery could be seen on each side entering the uterus at its lateral and inferior part, between the anterior and posterior peritoneal coverings.

The right ovary contained a large corpus luteum of pregnancy, the left showed two corpore lutea in process of atrophy; the stroma of both was normal and free from dilated follicles.

"The foetus weighed twenty-two ounces and a half, two and a half ounces lighter than the uterus and its appendages. It measured eleven inches, and was ill-nourished, its body covered with a fine down, its eyelids gummed together, and its nails not extending to the tips of its fingers; the cord was nine and a half inches in length.

"The conclusion would be that it was about a week over the sixth month after conception."

I am now permitted to add to the preceding account of the patient a short report of her progress after operation, and I need say little more than that it was very much like that after ovariectomy. There was more pain and sickness than in a simple case, but less than I have often seen in complicated cases.

Three small opiates were given within six hours after the operation.

Sickness was troublesome during the first week, and injections of beef-tea and port wine, with a little laudanum occasionally, were given every three hours. The highest temperature was 101.2° and the most rapid pulse 128. The urine was high coloured and scanty.

During the night between the 28th and 29th, eight days after the operation, she vomited frequently and there were several liquid motions; and Mr. Thornton, who saw her for me on the morning of the 29th, found that all the lower stitches had cut through, that the wound was open, and some coils of intestine visible and adherent. As I was in the country, Mr. Meredith administered methylene and Mr. Thornton replaced the stitches and separated the coils of intestine which adhered to the abdominal wall. The temperature rose to 102° in the afternoon, but the sickness ceased. After this there is very little to remark

upon, except that the second set of stitches cut their way through after six or seven days, and union was very slow. A small raw surface on one leg following a scald by a hot water cushion used during the operation was also very slow in healing.

For several days there was rather a free discharge of serum from the vagina, which afterwards became purulent and ceased within the third week.

When asked in what respect this confinement differed from those of her five children, she said she had always suffered from vomiting, but more this time than ever before; but that the chief difference was that she had no trouble this time with her breasts, and that the most pain was from the scald on her leg.

Twenty-eight days after the operation she was moved into another room. The pulse and temperature had been quite normal for several days before, the bowels acting regularly, and the urine passing freely. Appetite was good, there was neither pain nor sickness, and she slept well.

The case may, therefore, be accepted as a proof that a gravid cancerous uterus with both ovaries may be excised, and that the patient may survive the operation.

The question as to a return of the cancerous growth must remain for future observation; but inspection of the specimen affords ground for hope that the diseased part has been as completely removed as it often is in cases of epithelioma of the lip or anus, where many years often elapse without return.

If I were to repeat this operation I should modify the proceeding in several particulars.

1. The *position of the patient* facing the light as in ovariectomy proved inconvenient as daylight faded.

The opposite position, as adopted by Freund, is also in some respects inconvenient; and I think I should adhere to the position to which I am accustomed in ovariectomy unless I were to perform a combined abdominal and vaginal operation, when it would be convenient to separate

the thighs and flex the legs, keeping them well protected from chill. In any case a strong reflecting lamp might be of great service. Collin's lamp is too small for the purpose. Probably Faure's storage battery and an electric light may prove very serviceable. Until this is obtained a policeman's "bull's-eye" or a good carriage lamp should certainly be ready for use if daylight fails.

2. I expected much more assistance from the vaginal plug than I obtained. Although I pressed the cotton wool firmly all round the cervix, it was too soft to serve as a guide in separating the uterus from the vagina and bladder. An elastic ring pessary supported on a stem, or a slight modification of Zwancke's pessary, would probably be of much greater assistance as a guide both in the dissection and in passing the sutures.

3. A shorter incision in the abdominal wall would be sufficient if the liquor amnii were evacuated before commencing the incision through the os uteri and vagina, or, as soon as the uterus was exposed, by introducing a trocar as in ovariectomy.

I should certainly adopt one or other of these details in any case where the viability of the foetus was unimportant. Even if important, a little care would protect it from injury.

4. After securing the spermatic arteries and upper border of the broad ligaments on either side, as I did by ligature, I do not think any further preliminary ligatures as practised by Freund and others can be necessary or useful, while they are very likely to endanger the ureters; and any bleeding may be at once arrested by the use of pressure forceps, as the separation of the uterus from the bladder and vagina is carried on. An elastic ligature might be very useful in any case where excision of the cervix was unnecessary.

5. By the aid of a catheter in the bladder there cannot be much danger of wounding its coats, provided the edge of the knife or points of scissors are turned towards the uterus. A hard pessary in the vagina would give

additional assistance, but I do not see how we can with certainty avoid the ureters. This seems to me to be the least satisfactory part of the operation. The surgeon cannot see or feel the ureters, and is always doubtful how near they may be to his incisions, ligatures, or sutures. It has been proposed to pass bougies through a urethral speculum into each ureter, but I have great doubt as to the ease or utility of such a proceeding. The fact that one or both ureters have been divided or tied by experienced operators will make the surgeon extremely careful to avoid the course of these ducts ; but I fear that with all possible care a mistake may occasionally prove unavoidable.

6. In some of the most successful of these operations drainage has been carefully effected ; and it may be necessary if antiseptic precautions cannot be effectually carried out. If they can be, I do not see that drainage can be more necessary than after the removal of uterine or ovarian tumours. And it appears to me much more important to close completely the opening from the vagina into the peritoneal cavity by sutures than to maintain an opening by a drainage tube.

7. In closing the opening between the peritoneal cavity and the vagina, it has been proposed to insert two rows of sutures, one uniting the peritoneum the other the vaginal mucous membrane. Further experience is wanted to determine which is the safer practice. My own feeling is that vaginal sutures are unnecessary, and might be injurious by preventing the escape of any blood or serum from the pelvic cellular tissue into the vagina. And they would lead to a combined vaginal and abdominal operation which otherwise may be well accomplished by the abdominal section alone.

8. Provided a combined abdominal and vaginal operation prove advantageous, a suture passed on either side of the cervix from the vagina into the abdomen, or *vice versâ*, before dividing the connections between vagina and uterus, might prove of great assistance in afterwards bringing

the edges of the opening together. A piece of strong silver wire passed well behind the ureters on either side up beside the cervix, and brought down again into the vagina near the middle line from the bottom of Douglas's pouch, would probably save much time in the latter part of the operation. I should use wire as less likely to be accidentally cut than silk.

Extirpation of the entire uterus, although successfully accomplished in this country more than fifty years ago by Blundell, has hitherto been almost rejected by British surgeons. Blundell's most successful case proved fatal, a year after the recovery, from cancerous stricture of the rectum. And it was generally felt that however painful to the surgeon, if not discreditable to surgery, it may be to abandon poor women suffering from uterine cancer to their miserable fate, it was better practice to be content with palliative treatment, or at most with removal of the neck of the uterus, rather than expose a patient to the great peril of entire extirpation. Indeed, until Freund's method of total extirpation was made known here in 1878 the operation can scarcely be said to have been seriously considered by us. And then it was felt that the cases where the disease had extended sufficiently to justify such a serious operation, and yet had not extended so far as to make total removal impossible and recurrence of disease almost certain, must be so very few that Freund's operation could only be advised in very exceptional cases. Experience during the last three years in Germany and Italy has certainly supported this opinion. Of ninety-four cases collected up to the end of 1880, only twenty-four recovered. Some died from shock, some from loss of blood, some from septic peritonitis. In six patients one ureter was divided. In two others both ureters. The bladder has been wounded, and in four cases it was impossible to complete the operation. Then, of the small number who recovered, recurrence of the disease was observed in almost every case, and in some within a very

short time after the operation. All this has led in Germany to a decided preference for total extirpation rather by the vagina than by the abdomen; and of forty-one cases recently collected by Olshausen the result is given as twenty-nine recoveries to twelve deaths. Here, again, there were cases where the operation was not performed on account of cancer but for prolapse and for uncontrollable bleeding, and there were three cases of incompleted operation.

A combination of the vaginal and hypogastric operations, as recommended in 1830 by Delpech, may probably prove more successful than the hypogastric operation in cases where the vaginal operation alone cannot be effected. But the evidence, so far as it can be estimated up to this time, is in favour rather of the vaginal than of the hypogastric operation.

Porro's operation is not an excision of the entire uterus. It is a supra-vaginal amputation of the uterus performed after Cæsarean section. It was not proposed by Porro with any reference to uterine cancer, but simply to save the woman from many of the dangers which follow Cæsarean section as previously practised. And when I was first consulted upon the case which is the subject of this paper, indeed, not until after I had performed the operation, was I aware that Bischoff, of Basle, had, in December, 1879, removed a uterus, the cancerous cervix of which was an absolute hindrance to delivery. The patient was forty-one years of age, mother of seven children, in the thirty-fourth week of pregnancy. The long cervical canal was surrounded by bleeding carcinomatous masses, so that Porro's operation, like Cæsarean section, would have left the diseased mass behind. Cæsarean section, birth of a living child, and Freund's operation were followed by great loss of blood. Transfusion led to temporary rally, but the patient died suddenly eleven hours after operation. At the examination of the body it was found that the left ureter had been tied.

My case, therefore, is not the first in which total extirpation of a gravid cancerous uterus has been accomplished ; but, so far as I have been able to ascertain, it is the first which has been followed by the recovery of the patient. It is extremely improbable that operations under similar conditions can frequently become the subject even of consultation ; but total extirpation of a cancerous uterus, when pregnancy does not complicate the case, will doubtless have to be seriously considered hereafter very frequently. In some cases caustics, or the cautery, or amputation of the cervix, or scraping away of the diseased growth, or a combination of these methods, may be preferred to total extirpation. But cases will certainly present themselves where the more severe operation may prove to be the safer, and where it may become the painful duty of the surgeon to afford a dying woman such hope as may be alone gained by an almost desperate operation.

Note added 21st November, 1881.—I have received to-day a letter from Professor Billroth, of Vienna, dated 18th November, 1881, which I quote, as it shows that a gravid carcinomatous uterus has been extirpated by the vagina, successfully so far as regards the recovery of the patient, but is far from encouraging as to relapse or recurrence of the disease after recovery. The Professor writes as follows :

“Your Porro-Freund case has interested me very much, as a similar case occurred to me three months ago. A strong woman, about thirty-seven years of age, four months pregnant, had extensive carcinoma of the whole cervix and part of the vagina. The whole uterus was extirpated per vaginam. Bleeding was considerable but recovery rapid. Unfortunately it was necessary to cut away part of the bladder, leaving a hole in the bladder and a gigantic hole (*Riesenloch*) in the peritoneum. I stopped up both with plugs of iodoform gauze. These were left for eight days and were then removed. There was no sepsis but recovery. The vesical fistula remains

for treatment. In another case, similar except that the uterus was not gravid, one ureter was wounded. The large peritoneal opening was plugged with iodoform gauze and the patient recovered. But I cannot heal the ureter fistula. Still, the disinfecting power of iodoform is by these cases clearly established. By no other means could the decomposition of the wound secretions, and of the urine flowing through the fistula, have been prevented, and death would have been certain.

“Unfortunately, my very successful results of total extirpation of the carcinomatous uterus per vaginam are very disappointing as to recurrence of disease. Even in the two cases just described, where I extirpated up to the extreme limits of anatomical possibility, there is already recurrence. ‘*Was nutzt da all’ unsre Mühe und Kunst.*’ Of what use are all our pains and art? cries our German friend and teacher. May we not hopefully reply that, if not invoked too late, success may reward our pains and our art.”