the particular pabulum in the body suited for its growth may be very rapidly used up, and so spore-formation ensue.

It has been endeavoured thus to find out, by a long course of careful investigations, embodying the results of several thousands of cultivations, the specific cause of scarlet fever, and these, the records of such, are now placed before the medical fraternity.

NOTES OF A CASE OF PORRO'S OPERATION.

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So far as I have been able to ascertain, the case I now publish is the third in the United Kingdom where mother and child have both been saved by Porro's operation. The first was Dr. Godson's, the second Dr. Galabin's. In both these cases the impediment to parturition was deformity of the pelvic bones, the uterus not being diseased. In my case there was no pelvic deformity; but the presence of a large, solid, immovable uterine tumour rendered delivery by the natural passage impossible.

On May 7th, 1887, I saw a lady who had arrived in London that morning from Leeds. She was 37 years of age, and was married in April, 1880. She gave me a letter written the day before by Mr. Scattergood, of Leeds, containing the following history of her case:

"On Wednesday last I was sent for to see her at her residence four miles from Leeds, and met in consultation Dr. Glaister, her old medical attendant, who was leaving the village that day, and Dr. Stevenson, his successor in practice, who had only been in residence about a week. Having known the lady before her marriage, I had seen her in consultation about a year ago, and knew her to be the subject of extra-mural fibroids. In the beginning of November last, I saw her again, the question which had then arisen being a possible pregnancy dating from August 8th, 1886. Dr. Glaister and I then came to the conclusion that in all probability she was not then pregnant. The pelvis contained a large, hard tumour almost filling its brim, projecting low into the vagina, and making it almost impossible to feel the os uteri high up behind the pubic bone. I heard nothing more of the patient until a few days ago, when her husband called upon me and said that his wife was believed to be near her confinement. An immediate inquiry into her condition seemed imperative, and accordingly we met on Wednesday, May 4th. On examining her, the fibroids apparent on uncovering the body showed a movement which appeared to be the result of intermittent and almost rhythmical contractions of an enlarged uterus. We could not detect a foetal heart-beat, nor feel active movements; but the lady asserted that she regularly felt the latter, and Dr. Glaister is confident of having heard the foetal heart about a fortnight ago. It seemed to us that, as delivery *per vias naturales* could not take place, owing to the firm blocking of the pelvic brim, the probable alternative is Porro's operation."

The patient arrived in London in great discomfort, but not having suffered much from the railway journey; and I found, as Mr. Scattergood described, the pelvis completely blocked up by a solid tumour, the os uteri quite out of reach, the abdomen filled by a solid tumour, on the surface of which were several separate and movable masses, apparently outgrowths from the main tumour. To the right of the umbilicus was a solid mass, *balloting* freely, and capable of being pushed downwards and to the middle line. This, I felt confident, was the foetal head. I could not clearly detect foetal heart-sounds, but the placental murmur was very distinct to the left of the umbilicus and in the left iliac region.

By my desire Dr. Matthews Duncan made a careful examination of the patient on the following day (May 8th), and we saw her together on the 9th, both agreeing that Porro's operation offered the best prospect of life both to mother and child; and Dr. Duncan saying very distinctly that he believed delivery by the vagina (by craniotomy, evisceration, or any obstetric operation) was impossible. The chief point for consideration was whether, the full period of pregnancy expiring on the 13th, we should wait for that time, or for signs of commencing labour, or operate without delay. We decided upon the latter course, mainly on account of the very natural anxiety of the patient and her husband.

On the 11th of May, at 9 A.M., Dr. Day administering bichloride of methylene, and, assisted by Mr. Meredith and Dr. Godson (who undertook the care of the child), Mr. Scattergood, of Leeds, and Mr. Bishop, of Manchester, being present, all the preparations were made precisely as for ovariectomy, with all the usual antiseptic precautions, including the use of spray. I divided the abdominal wall in the

median line, midway between the umbilicus and pubes, to an extent of about five inches. The uterus was free, but was covered by layers of broad ligament extending upwards from the bladder. Some of these were divided and pushed aside and downwards, and the uterine cavity was opened by careful puncture. As the liquor amnii escaped I tore an aperture in the thin uterine wall large enough to enable me to draw out the child's head. The body followed immediately on very slight traction. The funis was compressed by two pairs of forceps and divided between them. Dr. Godson took charge of the child, which cried loudly. I did not interfere with the placenta, and finding that the opening in the abdominal wall was not long enough to allow the uterine tumour to pass out, I enlarged it as high as the upper border of the umbilicus, so that the opening was about seven inches in length. I was then able to draw out the uterus with the main tumour which had filled the pelvis, and several sub-peritoneal outgrowths, with both ovaries. As just stated, the bladder was partially separated from the uterus before opening the cavity. I now completed this separation, carefully pressing the bladder forwards as Mr. Meredith passed a constricting wire around the base of the tumour, and gradually tightened it by the screw. I was naturally uncertain as to the exact position of the ureters, under such altered conditions, and therefore kept the wire more upon the base of the tumour than was perhaps quite necessary. But when it was tightened, and I had cut away the whole mass some two inches above the wire, the stump was not much larger than a five-shilling piece. I cut away as much of the solid tumour, after further tightening of the wire, as could be done safely, and passed a long pin through the remaining stump across from side to side just above the wire. On proceeding to sponge the peritoneal cavity I found a free tumour as large as a flattened orange, surrounded by and closely connected with the cæcum, the appendix cæci, and a piece of omentum. The separation of this tumour from its connections had to be effected with extreme care, and added considerably to the time occupied in the operation. Several ligatures were applied during the process, and parts of the separated omentum were cut away. The opening in the abdominal wall was then closed by silk sutures precisely as in ovariectomy. The stump was fixed at the lower angle of the wound, the lowest suture being passed not only through the parietal peritoneum and abdominal wall on each side, but also through the peritoneal coat of the stump just below the constricting wire. Salicylic wool was then pressed all round the stump under the pin, and the surface of the stump was saturated with perchloride of iron. The abdomen was then covered with pads of salicylic wool and supported by strips of adhesive plaster and a flannel belt.

No provision was made for drainage. The time occupied from the commencement of inhalation of the anæsthetic until the patient was in bed was fifty minutes. From three to four pints of liquor amnii are supposed to have escaped, but the quantity was not measured. The child weighed six pounds. The uterus with the tumour and placenta weighed nine pounds. It and the detached outgrowth were sent to the museum of the College of Surgeons on the day of operation. They may be seen there, and it may be observed that the placenta is partially detached, the uterine cavity nearly closed, and the cervical canal open. As the wire must have been constricted at least an inch below the spot where the cervix was divided, it is almost certain that the whole uterus must have been removed.

Nothing could have been more satisfactory than the progress of the patient after operation. The breasts gave no trouble, and there was no sign of milk. There was no vomiting, and no interference with bladder or bowels from the depressed stump—nor any flatulent distension of the abdomen, although there was a good deal of pain at times for several days, always relieved by the passage of flatus, and requiring rather more opium than usual. This was given by the rectum in doses of fifteen minims of laudanum. The highest temperature noted was about thirty-six hours after operation, 101.2° F. It remained about 99° until the fifth day, and then became about normal. The pulse was about 100 to 116 until the fifth day, when it gradually fell to about 80. The urine was for some days loaded with lithates, and after a week contained a good deal of mucus for a few days, but it was quite normal by the time the pin and wire came off on the fourteenth day. I had not touched the dressing until the seventh day. Then the wool was changed, the wire tightened, some shreds of the stump cut away. After this, dry cotton and iodoform in powder were applied fresh once a day, and the screw occasionally tightened. The sutures, except the lowest, were removed on the seventh day, union of the abdominal wall being perfect. Four weeks after operation—June 8th, 1887—both mother and child are, as they have been throughout, as well as after a natural labour. About half an inch remains unclosed at the lower end of the cicatrix, but the granulations are quite healthy.