II.

**A Case of Hydatid Cysts Complicating Pregnancy.
Porro-Cæsarean Section. Extrusion of Suppurating Cysts through Abdominal Wound. Recovery.**

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S.A.G., 31 years of age, was admitted into University College Hospital on April 8th, 1896, 8½ months pregnant, and complaining of a tumour in the abdomen.

She gave a history that in the year 1887 she was seized with an attack of abdominal pain, nausea and vomiting. She consulted a doctor, who told her that she had a tumour in the abdomen, which was inflamed. On this occasion she was confined to bed for one week. About one year later (1888) she had a similar attack, on account of which she was compelled to remain in bed for three weeks. At this time the late Dr. William Playfair, who was called in consultation to see her, told her friends that she was suffering from an inflamed fibroid tumour of the womb, which was not likely to cause her any serious trouble unless she married and became pregnant. Since 1888 her general health had remained good, except that she had occasional attacks of abdominal pain from time to time; her periods were regular and not excessive, and she had never suffered from any vaginal discharge.

On her admission to the ward 38 weeks had elapsed since the last day of the last menstrual period, which ended on July 22nd, 1905. Abdominal examination showed the presence of the uterus enlarged to the size of an 8½ months pregnancy. The foetus was in the first vertex position, and the head, well flexed, was lying above the pelvic brim. The child was alive and the foetal heart sounds could be well heard, as could also a funic souffle. On vaginal examination the cervix was found to be pushed forwards to within a finger's breadth of the back of the symphysis pubis and to be situated three inches from the vulva. The vaginal portion of the posterior lip was somewhat flattened out, and the external os just admitted the tip of the finger. Occupying the pouch of Douglas was a rounded, softish tumour, almost filling the posterior half of the pelvis, reaching below the level of the cervix and apparently attached to the posterior wall of the supravaginal portion. The tumour could not be pushed

up out of the pelvis and the distance between its anterior surface and the lower border of the symphysis pubis measured $2\frac{1}{2}$ in.

On rectal examination it was found impossible to reach the upper limit of the tumour with the finger, but it felt softer than it did by vaginal examination. The patient's general appearance was that of a healthy, well-nourished woman. Physical examination revealed no disease of the heart, lungs, or other organs. There was nothing of note in the family history, and the patient stated that she had never resided out of England. The urine had a specific gravity of 1015 and contained neither albumen or sugar.

After consultation with my colleague Dr. Herbert Spencer, it was decided that as the pelvic tumour was almost fixed, and therefore was not likely to become drawn up out of the pelvis during labour, it would be best to perform Cæsarean section.

The tumour was thought to be a fibroid growing in the cellular tissue from the supravaginal portion of the cervix.

On April 16th an abdominal examination showed the child to be lying in the first breech position, and the fœtal heart sounds were well heard just above and to the left of the umbilicus.

On April 17th, 1896, Porro-Cæsarean section was performed. The operation was carried out in the manner usually adopted at that date (1896), and the lower part of the uterus was encircled by the wire of a serre noeud, amputated above this level, transfixed with pins, and fixed by sutures in the lower angle of the abdominal wound. The wire was placed beneath the level of the right ovary, which was partly cystic and was completely removed, and across the left ovary a portion of which was left attached to the stump of the uterus. Some adhesions between the omentum, the back of the uterus, and the upper surface of the tumour were divided and ligatured. No attempt was made to remove the tumour, which was situated in the pouch of Douglas and appeared to be firmly attached to the surrounding structures. The stump was dusted over with iodoform and tannic acid powder and dressed with carbolic gauze.

The child, a healthy female, measured $19\frac{1}{2}$ in. in length, and weighed 5 lb. 3 oz.

The patient's condition at the end of the operation was good, and there was practically no shock. For the first three days the progress was uneventful. On the fourth day the temperature rose to 100.4, and she complained of pain in the right iliac fossa. On the following day the evening temperature was 103.4, and the wound was accordingly dressed. It looked healthy, and there was no sign of any inflammation round it. The pain in the iliac fossæ continued for the next few days, and the temperature ran a somewhat irregular course.

On the ninth day a good deal of the stump was cut away, and when the *serre noeud*, which had been tightened each day, was removed, some pus was found to be welling up from the wound just above the stump. On the following day, the 11th after the operation, after a good deal more of the stump had been cut away, a bladder-like swelling appeared at the upper part of the wound, just above the stump, and on cutting this open a piece of membrane, like the wall of a hydatid cyst, came away, followed by several small cysts, evidently hydatid cysts.

The wound was washed out with weak carbolic lotion and dressed with iodoform powder and gauze. During the next ten days, at each dressing, a number of complete and broken-down cysts escaped, mingled with pus and granular *débris*. At the end of the third week, a good deal of redness appeared round the wound, and the skin became markedly irritated, while the patient's general condition was far from satisfactory. She complained of griping pains in the abdomen, an erythematous rash covered the whole of the lower part of the abdominal wall, the pulse was 100 and poor in quality, and the temperature 100°F.

The next day, the 22nd after the operation, her condition was still more alarming, her pulse was 132 and very feeble, the temperature 103°, and she was a little delirious. The *feces* and urine were passed involuntarily into the bed, and the patient appeared to be extremely feeble. She was very drowsy, could be roused only with great difficulty, and was quite oblivious to her surroundings. The anterior surface of the abdomen, the flanks, and a large part of the back, were now covered with numerous small, multilocular vesicles, the skin between them presenting an angry red appearance. On the 25th day the patient was somewhat better, her pulse had fallen to 112, and her temperature to 98·9°. Dr. Radcliffe Crocker saw her and pronounced the rash and general condition to be due probably to iodoform poisoning. Both iodoform powder and iodoform gauze had been used to a considerable extent in the dressing of the stump. After this date the patient's condition continued to improve slowly, and the cavity in the pelvis gradually closed up. At each dressing small complete or broken hydatid cysts, with a large amount of *débris*, came away in the irrigating fluid. At the end of the fourth week the condition was greatly improved and the amount of discharge markedly less. Extensive desquamation of the epidermis over the trunk and chest was now taking place.

On the 32nd day, on attempting to remove some of the contents of the cavity with a pair of polypus forceps, some pieces of calcareous material was brought away from the wall of the cavity.

On the 33rd day large bullæ formed on some of the phalanges of the fingers, and these were followed by similar bullæ, which came

out on the dorsum of the toes and the borders of the feet. After a few days these burst and quickly dried up.

The amount of discharge rapidly lessened, the cavity closed up almost completely, and on the 59th day after the operation the patient was discharged to a convalescent home. Some three weeks later she was re-admitted to the hospital with a temperature which was said on one occasion to have reached 105°. The sinus in the abdominal wall was dilated up and a large tube inserted. In my absence the patient was seen by Dr. Spencer, who found a large fluctuating swelling in the left posterior quarter of the pelvis, which, on being opened through the vagina, gave exit to a considerable quantity of sweet pus. A large piece of hydatid membrane was removed. The tumour was evidently a suppurating hydatid cyst. The cavity was irrigated and packed with iodoform gauze. A large drainage tube was placed in the abdominal wound and one in the vagina, through which free drainage was established. The opening in the posterior vaginal fornix rapidly closed up and the sinus in the abdomen contracted until on the patient's dismissal from the hospital on October 16th there was only a small opening left admitting a fine probe for $2\frac{1}{8}$ in.

The patient came up to the hospital in January 1897, feeling and looking very well, with the sinus soundly healed. The baby was at that time a fine healthy child. The mother was seen again by me last year (1907) in perfect health, and she said that her little girl, now 11 years of age, was quite strong and healthy.

This uncommon case presents several features of interest. The possible source of the infection we could not trace; the patient had never been out of this country, and had not kept any pet dog. The long duration of the case since it is probable that the tumour was already present in 1887 when the first attack of inflammation occurred, is quite in keeping with the usual clinical history of these tumours. It is remarkable how often hydatid cysts exist without producing any symptoms, and not infrequently they are discovered by accident. The error in diagnosis was, I think, in the circumstances, excusable; the patient had been told many years before, when she was not pregnant and therefore examination was much easier, that she had a fibroid tumour, and the feel of the tumour when she was first seen very much resembled that of a softish fibroid. The elasticity noted when she was admitted to the ward was thought to be due to the softening effect of the pregnancy on the tumour. The condition most likely to be mistaken for a hydatid cyst in the pelvis is a soft fibroid, and a number of instances of such a mistake in diagnosis are recorded in the literature of this subject. The cyst was probably situated in the subserous tissue near the rectum, and its subsequent extrusion through an opening by the side of the stump

was no doubt favoured by the opening up of the subserous plane when the cervix was cut across in the removal of the uterus.

The choice of the operation, namely Porro's, is to be explained by the date at which it was performed, namely 1896; had the case occurred at the present time of course a subtotal hysterectomy would no doubt have been the procedure chosen. In the circumstances, the Porro's operation no doubt facilitated the escape of the suppurating cysts through the abdominal wound. Had a correct diagnosis been made, the cyst could have been opened readily and safely through the posterior vaginal fornix, and any necessity for the removal of the uterus obviated. At the time of the operation it was judged to be safer to remove the uterus than to make any attempt to remove the tumour.