

V.

Two Cases of "Intraligamentary" Bladder.

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ALTHOUGH the condition known as "intraligamentary" bladder must be rare, the notes of two cases, which have occurred in my practice, may be of interest, inasmuch as the one gave rise to operative difficulties and the other to unusual clinical manifestations.

CASE I. *Abdominal Hysterectomy for Carcinoma of the Cervix Uteri:*
"intraligamentary" bladder.

(For the notes of this case I am largely indebted to Dr. Leigh, formerly House-Surgeon to the Hospital.)

Mrs. C., aged 55, was admitted to the Northern Hospital, Manchester, complaining of pain in the right iliac region and bleeding from the vagina.

Her family history is good, both parents being alive and well, and of her nine brothers and sisters all are living.

Although she had never considered herself strong, she had had no special ailments except indigestion.

She was married at the age of 20, and had had 14 pregnancies, of which ten went to term and 4 ended in miscarriage. On one occasion she had had twins. Her first delivery took place 34 years ago; her last 17 years ago. Her menstruation used to be of the 21 days' type, and was unaccompanied with pain. There was no history of any troubles of micturition.

About nine months previously patient had lifted a bed, and thereafter had experienced some pain in the right iliac region; this was followed by bleeding from the vagina: since that time there had been intermittent attacks of hæmorrhage (vaginal).

On vaginal examination the cervix was found to present no abnormal appearance to the eye, but on passing the sound into the canal a "crater-like" erosion was felt, the cavity was widened, and its walls were irregular and friable, bleeding readily. The urine was examined and found to be acid and free from albumen. The diagnosis was carcinoma.

Abdominal hysterectomy was performed on May 22nd, 1906, the patient being in the Trendelenburg position. An abdominal mesial incision was made, and on opening the peritoneal cavity it was at once noticed that the usual uterovesical pouch of peritoneum was "conspicuous by its absence." The parietal peritoneum descended

behind and in contact with the pubic arch, and was reflected on to the bladder, forming a definite pubo vesical pouch: after coursing upwards along the anterior surface of the bladder, which was in close apposition with the uterus, it passed almost directly backwards on to the fundus of the uterus, with a slight dip, indicating where the uterovesical pouch is usually found.

The round ligaments and the infundibulo-pelvic ligaments were ligatured and divided separately and consecutively on each side; the broad ligaments were opened out so as to locate the uterus; they were normal in appearance, but it was noted that they were much higher up than usual, especially that of the right side.

The bladder, the greater portion of which lay within the folds of the right broad ligament, was separated from the uterus and upper part of the vagina, and the uterine arteries were exposed and ligatured internal to the ureters: much inconvenience was experienced at this stage owing to the bladder constantly slipping down upon the field of operation, the large Fritsch retractor failing to keep it out of the way. With considerable difficulty the vagina was opened and the uterus excised.

Following my usual practice, I brought the edges of the vaginal incision together, and the vaginal roof was carefully and completely closed: there was considerable oozing from the base of the bladder, necessitating the introduction of several buried sutures, this was done with much inconvenience, owing to the difficulty I experienced in keeping the parts in view, the body of the bladder blocking the way. Finally the peritoneal edges were co-apted and the abdominal incision was closed.

The operation, which was performed in the forenoon, was difficult and tedious owing to the stoutness of the patient, the thickness of the abdominal wall and the dislocation of the bladder.

At 10 p.m., 5 fluid ounces of clear urine were drawn from the bladder by catheter: the patient was fairly comfortable. Pulse 98; temperature 100.2° ; morphia was given hypodermically. On the following day (May 23rd) no urine was passed, nor did any escape when the catheter was introduced; the patient was fairly well and comfortable. Pulse 120, temperature varying between 99.2° and 100.8° .

On the day following, as no urine again escaped and the pulse was becoming more rapid (130), it was decided to re-open the abdomen. Both ureters were found to be distended, the left slightly, the right to about half an inch in diameter. With much difficulty the sutures in the pelvic floor and about the base of the bladder were cut through and the whole wound was re-opened. In doing this, the left ureter was divided. The patient's condition being such that it was not advisable to prolong the operation, the end of the divided ureter was simply implanted into the vaginal roof. The patient was much col-

lapsed, but urine passed freely into the bladder, it was very acid and there was a suspicion of albumen; in the evening the pulse was 146 and temperature 99.4°, but on the following day the temperature fell to subnormal while the pulse rate rose to 150; the patient lingered until May 29th, when she died, apparently from exhaustion.

NOTE.—Owing to the malposition of the bladder the operation was rendered more difficult than usual, and it is evident that the suturing of the vaginal roof and the use of ligatures to check the bleeding from the base of the bladder were the cause of the occlusion of the ureters, to which the abnormal course followed by them contributed. The fact that five fluid ounces of urine passed into the bladder in the ten hours immediately following the operation seems to indicate that the occlusion became complete some time subsequent to the operation.

CASE II. "*Intraligamentary*" Bladder forming a Cystic Tumour in the Pouch of Douglas and protruding through the vulvar orifice.

The patient, Mrs. C., aged 35, was seen by me in consultation with Dr. Fletcher Boycott, of Great Ancoats Street and Northenden. She was pregnant about 3 to 4 months, and had sent for Dr. Boycott because of retention of urine; on examination Dr. Boycott found a swelling protruding through the vulva and he asked me to see her with him.

On examination I found a tense cystic swelling protruding through the vulva, the part outside being about equal in size to a full-time child's head: it was hard, tense and shiny; its posterior surface could be traced and seen to be continuous with the posterior vaginal wall where it joined the perineum (*i.e.*, the posterior vaginal wall was everted); the anterior surface of the swelling lay behind the vestibule in contact with the anterior vaginal wall; owing to the swelling completely filling and distending the vaginal outlet, the finger could only, with difficulty, be introduced along the vaginal canal in front of the tumour.

The abdomen was somewhat distended, and one could make out a cystic swelling above the pubes.

I passed a catheter into the bladder and drew off about 20 fluid ounces of urine, and with the escape of this the abdominal tumour disappeared, but there was little or no apparent change in the swelling, which protruded through the vulva: the patient was now anæsthetized and, on trying to force the fingers into the vagina, considerable pressure was exercised upon the tumour, with the result that *urine was forcibly* and unexpectedly ejected through the urethra (completely saturating my shirt sleeve!). This was repeated and, by continuing the pressure on the vulvar swelling, about 50 additional fluid ounces of urine were expelled. As the swelling became more flaccid, it was possible to make out that it was a swelling in the

pouch of Douglas, which had pushed the posterior vaginal wall in front of it. At the same time the pregnant uterus was found to be retroflexed, lying above and independent of the large cystic swelling which communicated with the portion of the bladder above the uterus. As this swelling emptied it could be felt passing to the right of the pregnant uterus.

It appeared at the time that the retroflexed uterus had, as it were, divided the bladder into two parts, but, at the time, it was difficult to explain how, except on the supposition that there was some anatomical peculiarity of the bladder—some malformation.

NOTE.—Although the condition was not verified by operation, I am satisfied that the only explanation is that we had to deal here with an “intraligamentary” bladder, which occupied the right broad ligament; the retroflexed gravid uterus in its growth must have pushed the lower part of the bladder into the pouch of Douglas and driven it on further and further, until, carrying the posterior vaginal wall with it, the lower portion of the bladder protruded through the vulvar opening.

As this case occurred four years ago, I have, for the purposes of this paper, communicated with Dr. Fletcher Boycott, who has kindly given me the opportunity of examining his patient. Dr. Boycott informs me that, at the time, my diagnosis was a “malformed and misplaced bladder which had been cut into two by the retroflexed gravid uterus”; he further informs me that the same trouble recurred with the next pregnancy, but that he was able to put matters right by using the catheter.

On examination of the patient (November 14th, 1907) I find the uterus to be retroflexed, but there is no palpable indication of anything abnormal about the bladder; the catheter was not passed. At some future date I shall probably have an opportunity of examining this patient again under anæsthesia, when it will be of interest carefully to examine the bladder. The patient informs me that she has never had any trouble with her bladder except during the two pregnancies.

The points of special interest in these two cases are:—

1. That in neither case did the “intraligamentary” bladder give rise to inconvenience, and that in the second case it did not give rise to any symptoms whatever except during pregnancy.
2. That the uterus in both cases was normally developed, and that both women bore children.
3. That operative difficulties arose in the first case.
4. That in the second case a cystic tumour was found, consisting of the “intraligamentary” bladder, this tumour occupying the pouch of Douglas and protruding through the vulvar orifice.