

MENSTRUAL FISTULAE FOLLOWING CAESAREAN SECTION

by

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Obstetric complications after caesarean section are well known. Rarely, gynaecological and urologic conditions are seen following this operation. Amongst these may be mentioned relative sterility, scar endometriosis (Nara et al, 1956; Martins, 1959), uteroparietal fistulae, vesical fistulae and recurrent bladder calculi (Rao, 1957). Menstrual diversion following abdominal delivery is an interesting but rare phenomenon.

Case 1.

Mrs. M., 20 years old, was admitted on 28-1-1958 with a history of periodic bleeding through an abdominal opening since her last delivery 8 months earlier. Till then, her periods used to be regular and painless. Even after the delivery she had 2 normal periods after which she noticed a painful swelling about the middle of the abdominal scar. As it failed to respond to antibiotics it was incised and blood-stained fluid and a few nylon sutures were let out. Since then she has been getting her periods mostly through this abdominal sinus. The periods now last longer, 8 to 10 days, but the vaginal bleeding is very slight and that too on first two days only. At the time of admission she was in the second day of her period.

Obstetric History. Her first delivery was

by classical caesarean section for transverse lie in 1955. In April 1957 classical caesarean with sterilisation was performed for recurrence of transverse lie. She had fever for the first 5 days of the operation. The wound had healed by the tenth day; but, as stated earlier, after lapse of three months she developed a painful swelling which required incision and drainage.

On Examination. She was slightly anaemic. Heart and lungs were normal.

Abdominal examination showed a median subumbilical scar with a small opening in it, about 6 cms. above the symphysis pubis discharging dark blood. This opening was surrounded by induration and a globular intra-abdominal swelling, about 8 cms. diameter, was felt closely adherent to the scar in the region of the cutaneous opening. A probe could be passed to a depth of 3.5 cms. through this fistula. Vaginal examination showed the cervix to be normal and closed; uterus was anteverted, normal in size but was pulled up and fixed to the abdominal wall. Slight blood-stained discharge was present on examining finger.

A provisional diagnosis of utero-parietal fistula was made and the following investigations were done:

(1) Methylene blue solution was injected into the cervix. It came out immediately through the abdominal fistula.

(2) Uterine sound passed through the cervix could be felt by means of a probe introduced simultaneously through the abdominal opening.

(3) A fine catheter was passed through the abdominal opening into the uterus and lipiodol was injected through it. The fistulous tract, uterus and the upper vagina could be visualised (Fig. 1).

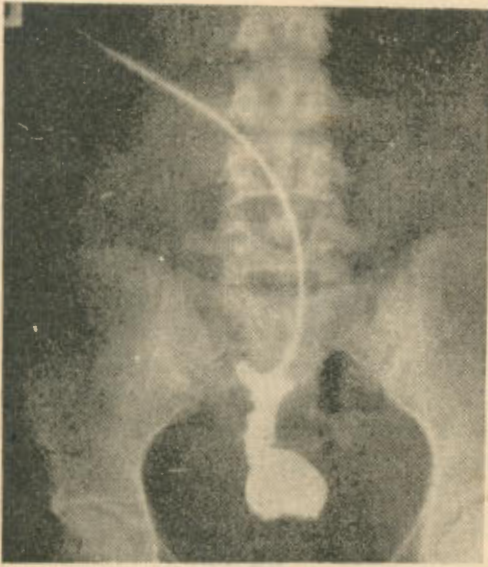


Fig. 1
Skiagram after instillation of lipiodol showing the uteropareital fistula (with a catheter in situ) and outline of the uterus.

Bleeding through the fistula persisted for 10 days. A week after it ceased, excision of the fistulous tract was decided upon.

Operation Notes. An elliptical incision enclosing the previous scar and the fistula was made. The tract was found leading into the uterus which was adherent to the anterior abdominal wall. The bladder too was pulled up and found adherent to the opened uterine cavity. The uterus was freed from its adhesions to bladder and omentum. The fistulous tract, along with unhealthy edge of the classical caesarean scar in the uterus, was excised together with the nylon sutures which were still persisting. The fresh edges of the uterine wound were then approximated in layers with interrupted No. 1 chromic catgut. The tubes showed evidence of sterilisation operation done previously. The abdominal wall was then repaired carefully.

The post-operative period was smooth

and the abdominal wound healed well. Pathological report on the fistulous tract: "Only granulation tissue seen. There is no evidence of endometrosis." Subsequent to the operation her periods have been normal.

Case 2.

Mrs. E., 25 years, was admitted on 7-3-1958 with a history of ten years' amenorrhoea and cyclic haematuria for the past nine years. She had attained puberty at 12th year and her periods were painless, regular and each time lasted for a week. After last delivery she did not have periods for an year following which she noticed haematuria which is recurring every month and lasts for 3 days. She was married 11 years ago and had one full-term delivery by classical caesarean section for contracted pelvis. The child died in infancy.

The post-operative period was uneventful. An year later, frank haematuria was first noticed.

On examination her general condition was good. Heart and lungs were normal. Per abdomen, except for the scar of the last operation, no abnormality was noticed. On vaginal examination there was no stress incontinence or vaginal bleeding. On catheterisation 2 ozs. of urine mixed with blood was obtained. Cervix was eroded, uterus retroverted, normal in size and fornices were free. Twenty-four hour specimen of urine was collected, centrifuged and the deposits showed endometrial tissue and red blood cells (Fig. 2). Three days later, she was examined under anaesthesia. The vaginal findings were same as before. The uterine sound passed into the cervix went in easily to a normal length. About 40 ml. of methylene blue solution was injected into the uterus and it came out through the catheter which was placed in the bladder earlier. On distending the bladder forcibly, dribbling was noticed through the external os. Hystero-graphy showed the dye passing from the uterus into the bladder easily. The 24 hour picture showed some dye in the uterus with a thin outline of the track. No leakage was present into the vagina through the cervix. A diagnosis of vesico-



Fig. 2

Urinary deposits from a case of menouria showing endometrial stroma, glands and red blood cells (H.E. x 56).

cervical fistula was made. But she refused operative treatment and was discharged 15 days later.

Discussion

Complete or partial diversion of menstrual fluid may be produced when abnormal channels are established between the uterus and abdominal wall or any adjacent viscus which communicates with the outside. The degree of such a diversion depends on the size and location of the tract in relation to the uterus and whether the natural passage for menstrual discharge is patent or not. The first case of uteroparietal fistula was reported by Bircher (1910) and it followed ventrifixation of the uterus. In 1951 Poddar reviewed 36 cases of uterocutaneous fistulae published by different authors and pointed out that in 95 per cent of such cases the complication followed classical caesarean

section and in almost all cases it was either due to post-operative infection or use of unabsorbable sutures.

Case (1958) has reported such a fistula following myomectomy and ventrifixation. Recently, Kirkland (1959) collected 100 cases of abdominal menstrual fistulae from the literature but found that only in 33 sufficient data were available for analysis. In 15 cases there was preceding history of pelvic inflammation involving removal of the tube and in the remainder it followed classical caesarean section. In the former group of patients, the menstrual diversion occurred indirectly via the tubal stump or its fimbrial end which was adherent to the anterior abdominal wall. In the case reported by us, the nylon sutures used for closure of the caesarean incision and slight postoperative infection along with the delayed wound sepsis favoured the establishment of this abnormal menstrual pathway. In all these cases the uterus is attached to anterior abdominal wall and the opening in the uterus may be small (in cases following ventrifixation) or large as in our case where almost the whole caesarean scar had yielded.

Menstrual diversion via the bladder is comparatively rare. Laffont and Ezes (1947) were the first to report this interesting abnormality following lower segment caesarean section. Falk and Tancer (1956) reported 9 cases (including 3 of their own) of vesical fistulae following caesarean section. In 5 of these they found amenorrhoea of 3 to 8 months' duration following surgery before the cyclic haematuria was established. They pointed out that urinary incontinence is extremely rare in this type

of fistula. In all the cases reported so far, this complication followed lower segment caesarean except in a case reported by Ingleman-Sundberg (1948) where it resulted from vaginal caesarean section. In our case, however, classical caesarean section was the cause.

The reason why in the presence of a patent cervix, menstruation should be diverted via the fistula into the bladder and yet prevent urinary leakage was not obvious till recently. Laffont and Ezes thought that a valve like mechanism prevented escape of urine via the cervix. But Youssef (1957) who coined the term menouria for this kind of vesical menstruation gives a fairly convincing explanation. According to him, normally the menstrual fluid first gets collected in the uterus giving rise to uterine contractions which open the sphincter at the internal os to let out the menstrual blood through the cervix. If however, a fistula is present above the level of this sphincter, no menstrual fluid accumulates in utero as it can easily find its way into the bladder. In all cases of menouria, the fistula is situated above the level of internal os. If it is located below this level there will be only urinary incontinence but no menstrual diversion. It is extremely rare for any one to make a lower segment transverse incision so high (above the level of internal os) and yet injure the bladder. This may account for the rarity of this type of fistula. On the other hand, a lower segment vertical incision or classical section wound may extend low down to involve the bladder. Fortunately, the practice of making vertical lower segment incision has been given up

in most clinics. During a lower segment operation, by reflecting the bladder well and carefully protecting it during incision as well as repair of the uterus, this complication can be prevented. Probably, the paucity of classical type of caesarean sections, the use of chromic catgut to close the wound in layers and the control of post-operative infection with antibiotics have reduced the incidence of uteroparietal fistulae.

The symptoms in endometriosis of the scar and vesical endometriosis may very closely resemble those noted in the two varieties of menstrual fistulae described here. In scar endometriosis there is no demonstrable fistulous communication and evidence of endometrial spread to abdominal skin could be confirmed only by histologic examination after resection of the involved scar and adjacent tissues. In endometriosis of the bladder there is pain accompanying cyclic haematuria and cystoscopy will be of valuable diagnostic aid.

The treatment consists of restoring the menstrual pathway to normal. In uteroparietal fistula, the whole fistulous tract has to be excised, the uterine opening repaired and finally the abdominal wall should be closed in layers. If, however, in view of her age, parity or associated lesions it is not necessary to conserve the uterus, hysterectomy along with fistulectomy is done. In tuboparietal fistula the tube is mostly damaged and requires removal. In cases of menouria every patient may not agree to surgical restoration of the defect. In fact, our patient felt vesical menstruation, 'more convenient and more sanitary' than the normal one. In this type of

vesico-cervical fistula, vaginal repair is not possible and transperitoneal approach is the best. The bladder is pushed well down from the cervix and the openings in both these organs are repaired carefully before the bladder peritoneum is sutured back to the uterus. If the uterus be diseased, a hysterectomy is done and the defect in the bladder is repaired simultaneously.

Summary

1. Two cases of menstrual diversion, one due to uteroparietal fistula and another due to vesico-cervical fistula, have been described. Both cases followed classical caesarean section.

2. The etiology and management of menstrual fistulae following caesarean section has been briefly discussed.

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