

A REVIEW OF 100 CASES OF VESICO-VAGINAL FISTULAE

BY

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Vesico-vaginal fistula is one of the most distressing conditions affecting women, as these women have to lead a secluded and miserable life due to the constant dribbling of urine, which not only wets their clothes but also emits an offensive urinous odour. Many of them also suffer from pain because of the ulcerations and excoriations on the vulva caused by the irritation of urine and phosphatic deposit. They are often deserted by their husbands.

Pressure necrosis, as a result of obstructed labour in cases of disproportion or malpresentation, which are neglected, is the most common cause of bladder fistula in our country. Occasionally these fistulae are caused by injury during instrumental delivery. In some cases of rupture of the uterus the tear may extend into the bladder and cause fistula. In the western countries, because of the improved obstetric care, hardly any fistulae are now caused as a result of labour; in England it has become almost a surgical curiosity. (Moir 1940). Mahfouz in 1938 wrote that when he started his practice in Egypt in 1902 there were no maternity hospitals in the country and the training of midwives was extremely defective, and therefore he had to

operate on 400 cases of urinary and 75 cases of rectal fistulae in 30 years, but when he wrote in 1938, as a result of the steps taken by the Faculty of Medicine and the Ministry of Public Health, Egypt could compare favourably with many European countries. It cannot be said the same of Bihar even today as in the last nine and a half years (January 1943 to June 1952) 100 cases of vesico-vaginal fistulae were admitted under my care. The great majority of our women, particularly in the villages, are even today attended by illiterate and untrained women known as "Chamains" during labour. These women are unable to detect obstructed labour in time and, even if detected, are unable to deal with it. Lack of education, superstitious beliefs, scarcity of doctors and trained midwives, lack of hospital facilities, poor means of communication, all contribute to this state of affairs.

Other causes of vesical fistulae are pelvic operations, carcinoma of the cervix, radium burn, stone in the bladder, neglected pessary, injury like falling astride on a sharp object or due to attempt at criminal abortion. In the western countries the large majority of fistulae reported

these days are due to pelvic operations particularly hysterectomy.

The size of the fistula varies from pin point to complete destruction of the whole vesico-vaginal septum and urethra. In some cases the vagina is completely scarred leaving only a small opening in the scar tissue through which urine and menstrual fluid are discharged. Closing this opening closes the vagina and then menstrual fluid is discharged through the urethra.

The site of the fistula caused by obstructed labour varies according to the plane of impaction. A fairly large number of them are situated under the symphysis pubis and in these the bladder neck alone or bladder neck and inner part of the urethra are destroyed, or as described by Mahfouz there is annular sloughing off of the bladder neck so that the opening at the inner end of the urethra is separated from the fistula in the bladder by a variable space of scar tissue. Even when the bladder neck is completely destroyed, if care is taken in closing the fistula, good sphincter control is possible. Some fistulae are situated about the centre of the vagina, these, even when of large size, are fairly easy to close. Fistulae situated high up in one or other lateral fornix close to the descending pubic ramus are extremely difficult to repair even when of small size, because of the difficulty in exposing the fistula and also in inserting the stitches, due to the high situation and the narrowness of the space. Sometimes the fistula is situated close to the cervix, in these the cervix is usually fixed and cannot be pulled down and therefore one has to work

in the depth of the vagina; besides when dissecting close to the cervix there is often fairly profuse bleeding. Vesico-cervico-vaginal and uretero-vaginal fistulae also can be produced by obstructed labour.

Diagnosis is usually easy as the fistula can be seen on speculum examination. Pin point fistulae can be identified by introducing coloured solution into the bladder, and ureteral fistulae by injecting 5% indigocarmine intravenously or by cystoscopic examination.

Treatment is operative. The operation is one of the most difficult of plastic procedures; it is a very delicate operation and it calls for great patience on the part of the surgeon. Careful attention to detail is necessary and technique has to be varied to meet the requirement of the individual case.

Pre-operative treatment is important. In almost all the cases there is urinary infection and the introduction of sulphonamides has been a great boon as the administration of the drug for a few days before the operation helps to clear up the infection rapidly. The ulcerations on the vulva heal if any bland ointment or just sterile vaseline is applied on the vulva as this prevents the urine from coming into contact with the skin. Acidifying the urine by giving ammonium chloride or acid sodium phosphate helps to clear up the phosphatic encrustations on the vulva and vagina. The patient must of course be in good general health and the usual routine preparation for any vaginal operation should be carried out.

The operation can be performed by the vaginal or abdominal (extra or intraperitoneal) route. Mahfouz (1938), Moir (1945) and other authors are of opinion that if the fistula cannot be closed by the vaginal route, the abdominal route seldom succeeds. Besides, the vaginal route is safer, there is minimum amount of shock and less chance of complications. There are a few cases in which it is impossible to close the fistula by any route; in these, vesical exclusion by transplanting the ureters into the colon becomes necessary. In an occasional case even this is not possible because of associated irreparable recto-vaginal fistula involving more or less the whole of the recto-vaginal septum.

For the vaginal operation a good exposure is important. In most of the cases the fistula can be exposed in the lithotomy position but a few are better exposed in the knee-chest position. A head light or a stand light which can be raised or lowered and tilted into any angle is necessary. The method used may be one of flap-splitting or of paring the edges. The bladder mucous membrane at the edge of the fistula should not be pared because this not only makes the fistula much bigger but also produces profuse bleeding, making the operation more difficult. Besides, the oozing continues even after the operation, filling the bladder with blood clots and putting tension on the stitches. The catheter becomes frequently blocked by the clot and thus prevents the free drainage of urine. Great care should be taken not to traumatise the tissue. *Mobilisation of the fistula and suturing without*

tension are also important. The suture material used should be durable such as chromicised catgut, silver wire or rustless alloy steel wire. Marion Sims used silver wire originally in 1849 and he succeeded in closing the fistula in a woman on whom he had previously operated 29 times without success.

The anaesthesia used may be gas oxygen and ether, open ether, spinal or pudendal block. Spinal anaesthesia gives very good relaxation making the exposure of the fistula easy, while in pudendal block the relaxation is poor.

The most important part of the post-operative care is to keep the bladder constantly empty by free drainage through an indwelling catheter. Bunsen apparatus, as advised by Moir, is ideal for this purpose, but it requires a good deal of care and constant attention which is not possible in the hospitals in this country because of over-crowding and lack of nurses. An ordinary rubber catheter stitched to the labium on one side and connected by a rubber tubing to a bottle by the side of the bed will serve the purpose. The catheter should be left in for at least 7 days. It is important to see that the catheter does not get blocked. Sulphonamides should be continued for 4 to 5 days after operation.

Number of cases reviewed	100
Cases not operated ..	5
Ureterosigmoidostomy done	7
Operated by vaginal route	88
Fistula closed	70
Of the above 70 cases, no sphincter control ..	2

Therefore actual number of cases cured	68
Failed to close the fistula . .	13
Result not recorded and hence counted as failure	5
Therefore number not cured	20

Of the 68 cases cured 51 were cured after the first operation, in one case the fistula closed with the first operation but she had stress incontinence and she had another operation three months later for this, after which she had full control; 14 were cured after the second operation, one after the third and one after the fifth operation. The patient who was cured at the third attempt had been operated on five times before she came to me and she was advised ureterosigmoidostomy as she had a very large fistula.

Cases not operated:-

1. Fistula was due to stone in the bladder ulcerating through the bladder wall. She had urethral stricture, and she died of uremia a few days after the stricture was dilated.

2. A case of vesico-vaginal and recto-vaginal fistula, only the rectal fistula was attempted at the first operation and patient did not return.

3. Patient had vesico-vaginal fistula involving the whole bladder base, bladder neck and urethra and recto-vaginal fistula extending from about $\frac{3}{4}$ inch beyond the introitus to the vault of the vagina and from one lateral pelvic wall to the other lateral pelvic wall. It was not possible to do any operation in this case.

4. This case had a fistula high up laterally under the right descending

pubic ramus and was impossible to expose. Ureterosigmoidostomy was advised but patient did not agree to this.

5. In this case the fistula was the result of abdominal hysterectomy done in another hospital two months previous to her admission in April 1952. As the vaginal wound had not healed properly and catgut was still present this was removed and patient was asked to return later for operation but she did not return.

In 7 of 100 cases the fistulae could not be closed; in 6 because the fistula involved more or less the whole anterior vaginal wall so that the edges of the fistula were too far apart and there was hardly any vaginal wall left for doing operation, and in one because the fistula was high in one lateral fornix and as the bladder neck and part of the urethra had sloughed away leaving such a gap of scar tissue between the inner end of the urethra and the opening into the bladder it would not have been possible to appose them. Ureterosigmoidostomy was done in these 7 cases.

Of the 68 cases cured 5 had complete scarring of the vagina leaving only a small opening in the scar tissue so that when this opening was closed the vagina was closed. As I was afraid that the outflow of menstrual fluid through the urethra might cause severe pain, in the first of these cases I did a hysterectomy after closing the vagina, three other cases were allowed to go home and asked to report during the menstrual period. None of them complained of any pain during menstruation. The fifth case had haematometra and

haematosalpinx and had hysterectomy done before the opening in the scar tissue was closed. This case is given in more detail later.

Cause of fistula:—

Neglected labour	..	97
pressure necrosis	..	93
ruptured uterus	..	3
instrumental injury	..	1
Other causes	..	3
stone in bladder	..	1
abdominal hysterectomy	..	1
vomiting and diarrhoea	..	1

The patient who gave vomiting and diarrhoea as the cause of vesical fistula was an interesting case. Kunthy, aged 42, complained of dribbling of urine and amenorrhoea of 5 years' duration and attacks of severe abdominal pain at monthly intervals of 3 years' duration. The dribbling of urine started after a severe attack of vomiting and diarrhoea; previous to this she had no urinary trouble. She had 7 pregnancies all ending in normal delivery at term, the last being 3 years previous to the above attack. On examination a fairly firm mass was felt in the suprapubic region up to two fingers above symphysis pubis. The vagina was completely closed by scar tissue except for a small opening on the right side through which urine was dribbling. Rectal examination showed a firm mass in the pouch of Douglas and a diagnosis of haematometra was made.

Patient had an attack of pain while in hospital. It was so severe that she had to be kept under the effect of morphia for two days. On

opening the abdomen after she recovered from the attack, haematometra and bilateral haematosalpinx were found and hysterectomy with bilateral salpingectomy was done. The opening in the scar tissue was closed 40 days later. She was passing urine normally when she left the hospital.

Size of the fistula in the cases reported:

Admitting a probe	..	3
Admitting up to size 8 uterine dilator	..	20
Admitting one finger	..	24
Admitting two fingers	..	15
Admitting more than two fingers	..	26
Longitudinal slit	..	2
Vagina completely closed except for a small opening	..	5
No note on the size	..	5

Site:—

Bladder neck	..	32
Mid vaginal	..	19
High lateral	..	9
Close to the cervix	..	11
Greater part of vesico-vaginal septum	..	18
Slit from bladder neck to cervix	..	2
Site not made out due to scarred vagina	..	5
Two fistulae	..	3
Three fistulae, 2 vesical & 1 ureteral	..	1

Of the 32 bladder neck fistulae 9 had annular sloughing of the bladder neck and in one almost the whole of the anterior wall of the urethra was also involved so that urethra had

to be reconstructed. In 9 of the 100 cases rectal fistula was also present. Ten patients had scar tissue of cartilaginous consistency stretching across the vagina posteriorly at variable distance above the introitus making the exposure of the fistula difficult.

Size of pelvis:—

Markedly contracted osteomalacic pelvis 9
 Rickety pelvis 1

Anaesthesia:—

Spinal in 18 operations
 Pudendal block anaesthesia in 2 operations
 Rest under open ether anaesthesia

Position:—

Knee chest position 5 times
 All others lithotomy position

Suture material:—

Chromicised catgut was used in all

cases except two where steel wire was used.

Age:—

16-20, 21-28, 26-30, 31-35, 36-40,
 18 29 21 9 8

41-45, 41-50, no note.

4 2 9

Parity at which fistula was caused:—

1st.	2nd.	3rd.	4th.	5th.	6th.
36	14	15	10	6	6

7th.	8th.	9th.	13th.	no note.
1	2	1	1	8

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