

TREATMENT OF UROGENITAL FISTULAE

by

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The following is a review of 40 cases of urogenital fistulae seen at the gynaecological clinic of Government Lady Goschen Hospital, Mangalore, during a four-year period, between 1963 to 1966. Majority of the cases (27 out of 40) were aged between 20-30 years and most of them (26 out of 40) were primiparae.

Out of these forty cases, only 3 were of primary surgical origin, one following a difficult forceps delivery, another post-hysterectomy ureterovaginal, and the third post-caesarean hysterectomy (juxta-cervical). Secondary fistulae due to obstetrical necrosis accounted for 36 cases, while pathological fistula following radiation accounted for the remaining one case. In our country, therefore, obstetric trauma is still the dominant cause of urogenital fistulae.

Thirty-four of the 40 cases were referred from elsewhere with history of prolonged, obstructed or traumatic labour, often extending to over 48-72 hours. One of them lingered with the fistula for as long as ten years before seeking relief. Out of

the 5 cases, wherein fistula developed in the hospital, 2 had been badly handled elsewhere, the obstetric misadventure being responsible, whereas the remaining 3 belonged to the primary surgical group mentioned earlier.

During these four years, 1375 gynaecological and 1059 obstetric major operations were carried out at the hospital. Thus there were 3 post-operative fistulae amongst the total number of 2434 major operations.

The results of repair of urogenital fistulae are set out in Table I.

The management of vesicovaginal fistula following obstetric trauma continues to be a vexing problem in our country. Most of these patients are physically feeble, anaemic, worm infested and sometimes syphilitic. Technically, the size and site of these fistulae sometimes make apposition of edges practically impossible. Many of them are long-standing and with history of previous failed attempts. These so-called irreparable fistulae form one of the common indications for uretero-intestinal transplantation. Although gynaecologists and urologists have tried to improve the methods of urinary diversion, the advantage claimed for any particular procedure is often overshadowed by other disadvantages. Common among them are ureteral obstruction, faecal regurgitation and infection, and avul-

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TABLE I
Results of Repair in Urogenital Fistulae

Type of Fistula	No. of cases	Cured	Failed
A. Vesico vaginal			
1. Low-vaginal			
Urethral	1	1	1
Bladder neck	5	4	1. (awaiting another repair).
2. Mid-vaginal	25	24	1
3. Vault			
Juxta-cervical	2	1	1
Post-hysterectomy	1	1	
		Latzko	
4. Uretero-vaginal	1	1	
		Uretero-vesical trans-plantation.	
5. Complicated difficult cases circumferential fistula-hard ring.	3	1	2
			Uretero-colic trans-plantatoin.
Long standing big adherent fistula with bladder stone.	1	1	
Post-radiation fistula	1	Colpocleisis.	
		1	
		Colpocleisis	

sion of implantation site. The biochemical change of hyperchloraemic acidosis has also been widely emphasized. In a long standing fistula with some renal impairment, therefore, ureteral implantation is likely to impair health and endanger life, which is undesirable when treating a benign condition like vesicovaginal fistula. Mahfouz (1957) maintained that very few such patients lived more than 3 years. Jacob (1952) reported 18% mortality, while Wade (1938) reported 43% mortality for malignant and 10% for benign conditions requiring ureteral transplantation. Occasional good results have been reported by Laplace and Upadhyay. Jacobs and Stirling (1952), in a survey of 1673 cases of ureteral transplantation, found that this operation done for vesico-vaginal fistulae had lowest mortality, next only to that done for congenital anomalies. Even so, uretero-sigmoid implantation

may cause combined urinary and faecal incontinence; the vaginal stenosis and the sensitive protruding bladder mucosa continue to torment the patient by causing dyspareunia. Whereas according to Moir 2% is the maximum incidence for ureteral transplantation for irreparable vesicovaginal fistula in England, in a backward country like India it may be 10% or higher. Most authorities opine that ureteral implantation, for a benign condition like vesico-vaginal fistula, is safer than for a malignant condition. Still, in general, it has a mortality rate of 8-10% and so it is desirable to avoid this procedure if possible.

The newer modifications like ileal bladder result in greater surgical trauma and facility for collecting urine from abdominal stoma is not easily available; nor is proper care possible in the underprivileged classes suffering from vesicovaginal fis-

tula owing to religious considerations requiring prostration, squatting and bending attitude. Continued efforts were made in the past to master these difficult, extensive and immobile fistulae. Thus Freund (1895), devised a method where the body of the uterus is sutured into the defect in extensive fistulae. Kelly (1896), closed the fistula by detaching the bladder posteriorly and suturing it to the denuded vaginal wall anteriorly in large inoperable fistulae. Martin of Berlin (Kelly 1896), devised a method of closure, by turning up a vaginal flap to form the base of the bladder. Dudley (1886), Vulliet (1887), and McGill of Leeds (1890), also devised methods to overcome the extensive fistulae.

In 1913, Latzko advocated a partial colpocleisis, which is a modification of the original Simon's technique, reported in 1855. This consisted of denuding a ring of vaginal mucosa near the fistula, and the wound surface was sutured with sagittally applied stitches. Simon (1855) reported 12 cures for 12 obstetrical fistulae.

Colpocleisis is an old abandoned method, because it was mainly done for combined vesicovaginal and rectovaginal fistula. Here the vagina and rectum acted as receptacle and outlet for stagnant urine into which the uterus and cervix also emptied their contents, producing complications which were worse than the original disease. Figure 1.

The operation described overcomes these drawbacks and is therefore eminently suited for long standing, so called irreparable vesicovaginal fistula in older group of patients. To

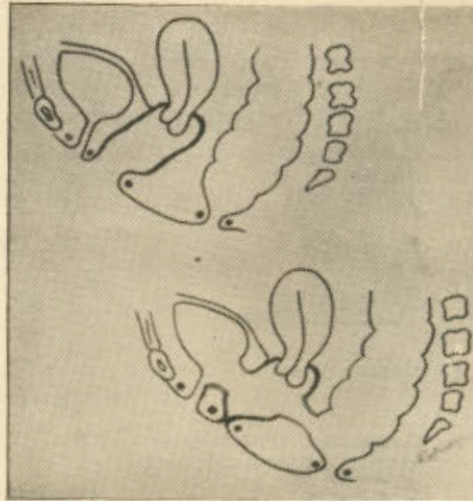


Fig. 1

Colpocleisis done for combined vesico and rectovaginal fistula.

date, I have performed two operations, both successful at the very first attempt, and are reported below.

Case 1

Patient aged 35 years, married, but separated, developed dribbling of urine 10 years ago after a difficult labour resulting in a still-birth. For the past six months she also noticed a hard mass protruding at the vaginal introitus producing intense, burning sensation.

The introitus was narrow, 1 cm. in diameter, and the vagina was filled with a calculus leading to the vesicovaginal fistula and the bladder was further filled with four smaller calculi; the calculi were removed revealing a vesicovaginal fistula 2" x 1½" with extensive destruction of soft tissue of base of bladder, bladder neck and anterior vaginal wall from the vault down to proximal third of the urethra. There was dense cicatrix around edges of the fistula and annular constriction at vaginal introitus (Fig. 2 on art paper).

At the first stage abdominal total hysterectomy was done, and anteriorly the uterus was excised by cutting flush with the upper edge of the bladder gap and

this edge was sutured to the posterior vaginal wall.

This prevented contamination of bladder urine with uterine contents, and thus avoided troublesome or recurrent urinary infection. (Fig. 3).

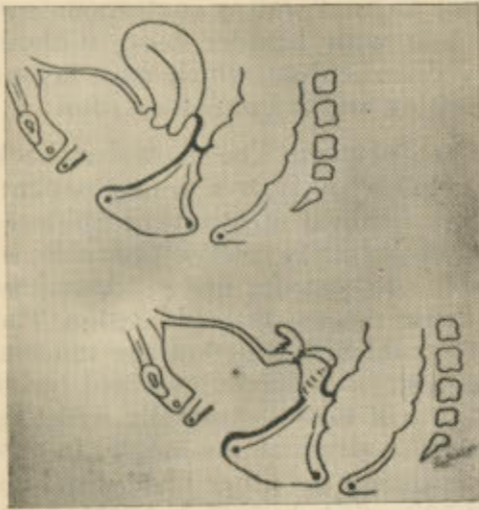


Fig. 3

Extensive vesico-vaginal fistula with destruction of anterior vaginal wall and adjoining bladder (above).

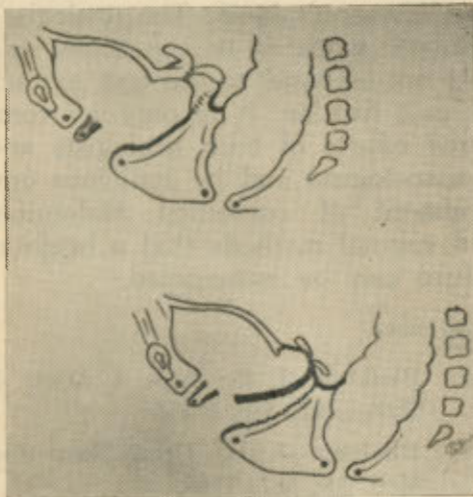


Fig. 4

Circumcision vagina followed by full thickness of vaginal cuff upto edges of fistula all round.

Colpocleisis was done as follows.

(Figure 4) Episiotomy with the patient in lithotomy Trendlenburg position was followed by circumcision of vagina along posterior and lateral walls at the upper limit of episiotomy. Vaginal cuff was raised to full thickness up to the vault. Anteriorly vagina was incised at proximal end of urethra, and anterior vaginal wall was separated from floor of urethra. Figure 5.

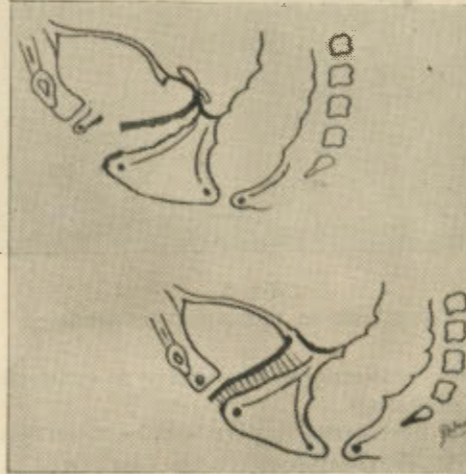


Fig. 5

Colpocleisis after hinge flap from posterior wall to bridge across bladder gap followed by approximation of underlying raw surfaces.

The posterior and lateral flaps were dissected up to the edge of the fistula laterally and up to the vaginal vault upwards so that the flaps could be hinged at 180° and the bladder gap bridged across without tension or laxity or pouching. Any excess of mucosa was trimmed and the edges sutured together and anteriorly along edges of vesicovaginal fistula and scarified edge of floor of urethra. The paraurethral fibromuscular tissue was brought together under bladder neck to provide sphincter mechanism. The raw areas of vaginal walls were approximated by circular tiers of catgut sutures from above downwards, taking care not to leave any dead space and to provide a solid foundation for the reflected flap of vaginal mucosa. Colpocleisis was completed by suturing together the inner edges of labia minora after denuding the

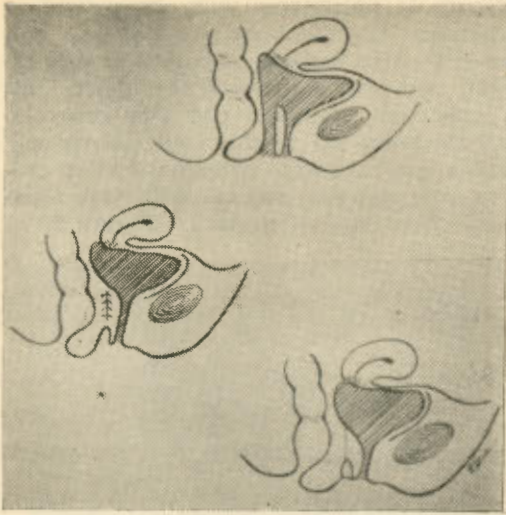


Fig. 6
Colpocleisis in post-radiation fistula.

vagina; episiotomy was sutured to complete the operation.

The postoperative care was as usual and course uneventful.

Case 2

Figure 6. The second case was a difficult fistula following irradiation for carcinoma of cervix. In this case the atrophic uterus and closed cervix precluded any menstrual loss or discharge, so hysterectomy was not necessary. During colpocleisis a good bite into the rigid subvaginal tissue was necessary for tight approximation without cutting through. Levatores ani were brought together in the midline and dead space avoided.

Everett and Mattingly (1956) report Latzko colpocleisis 58 times in 149 vesicovaginal fistulae, 48 of which were associated with carcinoma of cervix, some after radiotherapy. There was success at first attempt in 56 out of 58 attempts.

Advantages: Normal ureterovesical anatomy is preserved and thus the complications after uretero-colic

transplantation are avoided. In the technical perfection, there should be a flat bladder base without pouching. Foda advises cystoscopy following the operation to confirm that the posterior vaginal wall is continuous and in line with bladder base, without any diverticulum which may favour pouching and calculus formation.

Disadvantage: The main drawback of colpocleisis is in a young patient, where removal of uterus or obliteration of vagina is most undesirable, so one has to consider newer techniques of donor mucosa transplantation. The only problem is whether the mucous flap from a donor of identical blood group will take successfully with the avascular edges of the fistula. In colpocleisis, on the other hand, the hinged or pedicled graft is kept viable by vascularisation from the floor.

The problem of complex vesicovaginal fistulae is still unsolved. This is partly because female urology is like 'No man's land'. The urologist's primary work is in the male, and may not be equal to the task in such difficult fistulae. It is only by combined efforts of both urologists and gynaecologists and by judicious employment of combined abdominal and vaginal methods that a brighter future can be anticipated.

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Fig. on Art Paper I