

OMENTAL FLAP INTERPOSITION IN ABDOMINAL REPAIR OF COMPLEX GENITO-URINARY FISTULAE

R.N. BASU • J. MITRA • D. LAHIRI

SUMMARY

Genito-urinary fistula (GUF), particularly VVF of difficult obstetric origin, is still quite common in our country. Success in repair of such fistulae depends, apart from others, on adequate mobilisation of bladder so as to repair without tension and excision of avascular scarred margins of the fistulous opening. Most of such fistulae are low and simple enough to repair vaginally with reasonable success. But some such fistulae are big enough with extensive tissue destruction and scarring or high up for a satisfactory vaginal approach. Not to speak of vesico-uterine fistulae, such complex VVF are best repaired abdominally using both transvesical and extravesical approach and omental flap interposition. While extravesical approach ensures satisfactory mobilisation of bladder, additional intra vesical visualisation helps identification of scarred bladder mucosa which is often retracted and also direct visualisation of ureteric orifices to avoid ureteric injury. Omental flap not only acts as a tissue support but serves as a vascular graft to local tissue. 7 cases of GUF have been successfully repaired in first attempt with this technique.

Introduction

Vesico-vaginal fistula, following difficult obstetrics, is still very common in our country. Occasionally it follows gynaecological surgery or other adversities. Other forms of genito-urinary fistulae are less common. Majority of VVF are simple enough for layer-closure vaginally. Some-

times, complex VVF are encountered - very big fistulae with extensive local tissue loss and scarring or high-up fistulae where such simple layer-closure is difficult or is not adequate. Trans-abdominal omental flap interposition repair has been reliably utilised in such complex reconstructions of the urinary tract (Kiricuta and Goldstein, 1972; Turner-Warwick, 1976). Vesico-cervical and vesico-uterine fistulae are also best repaired with this technique.

*Institute of Post-Graduate Medical Education
& Research, Calcutta.*

Accepted for Publication on 23-1-90.

Advantages of abdominal repair

(both extravescical & intravesical approach):

Transabdominal, both extra and intravesical approach, as we practise, has the following advantages:

- 1) Extravesical approach helps adequate mobilisation of bladder in complex VVF so that tension-free suture is possible.

Adequate dissection helps access to the avascular scarred edge of the fistula (both bladder and vaginal wall)-extremely difficult vaginally in a fixed scarred fistula deep in the vagina. A satisfactory fistulectomy is thus possible.

- 2) Simultaneous intravesical approach, practised by us, helps detection of any ureteric involvement and thereby precautions to avoid such inclusion in the repair. It may be necessary to reimplant ureters.

The approach also helps to identify bladder mucosa which is often retracted and a perfect layer closure of the healthy edge of the mucosa transvesically.

- 3) Transposition of omentum is possible.

Role of omentum

The success of a simple layer closure of a fistula falls due to scarring with its relative avascularity and infection. Some form of viable tissue interposition improves the situation. The omentum is the ideal body tissue for resolution of local inflammation - from a combination of vascularity and abundant lymphatic drainage - which help removal of cellular debris and inflammatory exudate from the repaired tissue spaces. It also works as a supple tissue support to a weak reconstruction site further allowing urodynamic mobility (Turner-Warwick, 1976).

Procedure

The technique involved wide mobilization of bladder extraperitoneally following a paramedian subumbilical incision (such an incision can be extended upwards for mobilisation of omentum, if short). The mobilisation is done all round upto the edges of the fistula with fingers, aided if necessary with snips of fine scissors. The bladder is opened anteriorly in midline, margins held with stay-sutures and a self-retaining bladder retractor placed. The internal urethral orifice, ureteric orifices and the fistula are identified. A transurethral Foley catheter is kept. Ureteric catheters kept in place. Next, the peritoneal cavity is opened up, utero-vesical pouch of peritoneum is cut open and the bladder is gently pushed down with scissors-snips and gauze pressure from the cervix and anterior vaginal wall to reach beyond the fistula, as far as necessary to ensure good opposition without tension.

Transvesically, the avascular scarred edges of bladder are excised (taking care of the ureters) and mucosal layer is opposed with a continuous suture of 3-0 vicryl. The muscle layer of the bladder is apposed extravescically with a continuous suture of 2-0 vicryl. The anterior surface incisional opening in the bladder is closed as usual keeping a suprapubic bladder drain with a Malecot catheter. The scarred vaginal/cervical edges of the fistula are next excised and apposed. Finally an omental flap from its caudal portion is interposed in the tunnel between the vagina/cervix and the bladder/urethra and sutured to the distal limits of the space. In all our 7 cases, the omentum was long and a difficult omental mobilisation procedure was not required. Abdomen is closed keeping a

drain in the cave of Retzius. The patient received appropriate antibiotics depending on the urine culture and sensitivity report. The urethral Foley catheter (bulb inflated to 5 c.c. and fixed without traction) is removed on the 10th post-operative day and the suprapubic catheter is removed on the 20th day.

In case of utero-vesical fistula, bladder is separated from the uterus intraperitoneally and the repair is done as above from both intravesical and extravesical approach.

Case Results

7 cases have been operated with this

technique. All of them got cured. All the patients complained of continuous leakage of urine per vaginam except case no.5 who had meno-uria and case no.7 who had also leakage of stool vaginally. The table below illustrates the cases. Some of the abbreviations used are as follows:-

Omental flap interposition in transabdominal repair - OMFLAP

VUF - Vesico-uterine fistula

VCF - Vesico-cervical fistula

VVF - Vesico-vaginal fistula

VUVF - Vesico-urethro-vaginal fistula

RVF - Recto-vaginal fistula

ILLUSTRATION OF CASES

Case No.	Name, Age, Parity	Description of fistulae	Background factor	Nature of Surgery	Result
1.	Mrs. R.B., 40 yrs., Para 8+1	1) VUF - 2cm. diam - at corpus 2) VVF - 1cm diam -at mid-vagina	Induction of abortion with a stick 5 yrs. ago.	1) VUF-OMFLAP 2) VVF-Vaginal repair	Cured
2.	Mrs. R.S., 20 yrs., Para 1+0	Big. VVF (4 cm.x 2.5 cm.)-involving mid & upper vagina-gross scarring.	Prolonged labour - 2 yrs. ago.	OMFLAP	Cured.
3.	Mrs. A.D., 55 yrs.	VVF (1.5 cm. diam) at right angle of vault)	Abdominal hysterectomy at a rural hosp. one year ago.	OMFLAP	Cured.
4.	Mrs. L.D., 17 yrs., Para 1+0	VUVF (4 CM. x 2.5 cm.) margin cartilaginous, in part by pubic rami.	Prolonged labour & destructive opern. 3 months ago at a village clinic	OMFLAP	Cured. Gr. I Stress incontinence of urine,

5.	Mrs. C.P., 26 yrs., Para 1+0	VUVF(1.5 cm. diam)-just above is- thmus (Youseff's syndrome)	L.S.C.S. one yr. ago at a rural hosp.	OMFLAP	Cured.
6.	Mrs. M.D., 18 yrs., Para 1+0	VUVF (3 cm. x 2 cm.) - badly scarred margin)	Prolonged & difficult labour 6 mths. ago at village health centre	OMFLAP	Cured
7.	Mrs. B.G., 20 yrs., Para 1+0	1) VCVF(2cm.x 1.5 cm.)- scarred. 2) RVF (2cm.x 1.5 cm.) 3) VUVF(4 cm.x 2 cm.) with avulsed upper urethra.	Instrumen- tal deli- very of a dead baby 3 months ago at a village health clinic.	1) VCVF-OMFLAP 2) RVF-Colos- tomy & abd. repair 3) VUVF-local repair failed & repaired again after 6 weeks with cure. Colostomy closed.	Cured. Gr. I Stress inconti- nence of urine.

N.B.: VUVF repair with OMFLAP in case no.4 and 6 healed at first attempt whereas in case no.7 VUVF local repair required 2nd attempt for cure.

Comments

Local repair of VVF is an established procedure in majority of such repairs. But in complex VVF with extensive tissue loss and scarring — a very common finding in fistulae following difficult labour and unfortunately still very common in our country, results of such repairs are not encouraging. Sometimes several attempts are required to save the patient from her

distressing and depressing symptom. The authors have practised with advantage abdominal approach (both extra and intravesical) with omental flap interposition in such cases as also in vesico-uterine with success in all.

References

1. Kiricuta, I. and Goldstein, A.M.B.: *J. Urol.*, 108 : 724, 1972.
2. Turner-Warwick, R.: *J. Urol.*, 116: 341, 1976.