

A Review of urinary fistulae

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Summary : Fourteen cases of urinary fistulae were followed prospectively. Ten cases were due to obstetric trauma, while four followed abdominal hysterectomy, for gynecological conditions.

Successful repair was achieved in all cases but one. The possible reasons for failure in this case have been discussed. The various techniques employed for repair have been mentioned.

Stress has been laid on detailed pre-operative examination. Importance of patient rehabilitation has also been emphasized.

Introduction

Of vesico-vaginal fistulae, Marion Sims: wrote (Sims 1852)

“Whatever maybe the cause of this distressing affliction, it is a matter of serious importance to both surgeon and patient that it be rendered susceptible of cure.”

Almost one hundred and fifty years later, we still have to find the perfect cure for this condition, or even the means to prevent it so that it does not occur.

In developing countries, including India, the main cause of urinary fistulae remains pressure necrosis following obstructed labour.

Cure rates of upto 90 % at primary closure have been reported by Moir (1973) in a series of 431 cases. Comparison between the results of different series is difficult, because success varies with the general condition of the patient, the number of previous attempts at repair and the experience and expertise of the surgeon.

Material and Methods

During the 18 month period from January'96 through June'97, 14 cases of urinary fistulae admitted in one gynaecological unit of Patna Medical College Hospital, Patna, were prospectively followed. There were 4 cases following abdominal hysterectomy and 10 were due to obstetric causes.

EUA, the three swab test and cystoscopy were done to confirm the diagnosis, and to plan the repair. Urine culture and sensitivity was also done preoperatively. All cases were taken up 10 to 12 weeks after the original trauma. Bladder was sutured with 3-0 vicryl in two layers. Post operatively, bladder was drained through suprapubic and urethral catheters. The urethral catheter was removed on the seventh postoperative day, while the suprapubic cath-

eter on the fourteenth day postoperatively. Fluid balance was meticulously maintained postoperatively.

Discussion

The first attempt is usually the best and this adage holds true for repair of urinary fistulae. The prospects for a successful repair decline with each operation, due to scar formation and loss of healthy tissue.

Our encouraging results could be attributed to proper selection of operation for each patient, adequate mobilization of tissue planes, achievement of approximation without tension, maintenance of haemostasis, continuous bladder drainage and control of infection.

Low lesions were closed by the vaginal route using the flapsplitting method (Lawson 1972). For high lesions the transperitoneal, vesical bivalve approach of Javadpour et al (1973) was employed. During ureteric implantation, the submucous tunnel method to prevent reflux, was adopted, along with the psoas hitch, which prevented tension at the anastomotic site. The bladder was mobilized freely and fixed to the fascial sheath of the psoas muscle. Patients with abdominal pain, distension, paralytic ileus haematuria or severe irritability of the bladder after hysterectomy should be suspected of having urinary tract injury and require investigation early for the same, as suggested by Kursh et al (1988), to avoid development of urinary fistulae.

Early closure following a ten day course of steroids has been advocated by Collins et al (1971), while Lee et al (1988) recommend waiting for two to three months before attempting repair.

In the one failure among our patients, the fistula had developed after a difficult forceps extraction following obstructed labour, and the patient had been referred to us

Observation

Sl. No.	Age (Yrs)	Site of fistula	Prev history	Start of symptom	Operation done	Outcome
1.	30	midvaginal (Small)	Vaginal del. following prolonged labour	10 th day post partum	flap-splitting method (Vaginal route)	Cured
2.	35	Juxtacervical (large, bladder mucosa exposed)	difficult forceps extraction	7 th day post-operatively	layered vaginal closure	Cured
3.	22	Bladder neck, proximal urethra	forceps extraction	5 th day post-partum	Reconstruction using martius fat pad flap	Failed
4.	28	upper anterior vaginal wall (small)	Caesarean Hysterectomy for Rupture uterus	7 th post-operative day	Flap splitting method (Vaginal route)	Cured
5.	36	supratrigonal (close to left ureteric orifice)	Abdominal Hysterectomy	8 th post-operative day	Ureter reimplanted by submucous tunnel; Bladder elevation by psoas hitch	Cured
6.	24	midvaginal (small)	LSCS for obstructed labour	7 th day post-operatively	Flap splitting method (vaginal route)	Cured
7.	40	near vault in anterior vaginal wall	Abdominal hysterectomy	10 th post-operative day	transperitoneal transvesical repair	Cured
8.	30	midvaginal (large)	Craniotomy for obstructed labour	5 th post-operative day	flap splitting method (vaginal route)	Cured
9.	50	ureterovaginal (high in the vault)	Abdominal hysterectomy	11 th post-operative day	Reimplantation of ureter, using submucous tunnel	Cured
10.	35	anterior vaginal wall (highup)	Caesarean hysterectomy for rupture uterus	7 th post-operative day	layered vaginal closure	Cured
11.	27	near vaginal vault	Repair of rupture uterus	6 th post-operative day	transperitoneal transvesical layered closure	Cured
12.	20	mid vaginal (small)	Difficult vaginal delivery	8 th day post-partum	Flap splitting method (vaginal closure)	Cured
13.	33	small juxta cervical (Cx torn)	Home delivery after prolonged labour	7 th day post-operative	layered vaginal closure	Cured
14.	41	at vaginal vault	Abdominal hysterectomy	14 th day post-operative	transperitoneal transvesical (bladder bisected)	Cured

after 4 failed attempts. The bladder neck was involved along with loss of the proximal urethra. Though the Martius fat flap technique was employed, the patient continued to dribble and was ultimately lost to follow-up. Perhaps the omental pedicle graft technique of Turner-Warwick (1976) would have given a gratifying result.

Suggestions

1. A clear explanation should be given to the patient that the waiting period is an essential part of treatment.
2. Easier repairs should be encouraged at the first or second referral units. Only complex cases be referred to the teaching hospitals.
3. Urinary fistula repair should be an integral part of the residents training programme.
4. There should not be hesitation in asking for skilled assistance of a urologist in difficult repair procedures.
5. Social rehabilitation of the patient is as important as fistula therapy.

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References

1. Collins C G, Collins J H, Harrison B R : Am J Obst Gyn 111:524; 1971.
2. Javadpour N, John T, Wilson M R, Bush I M : Obstet Gyn. 41: 469, 1973
3. Kursh E C, Morse R M, Resnick M I, Persky L : Surg Gynae Obstet 166 : 490, 1988.
4. Lawson J : Brit J Urol 44 : 623; 1972
5. Lee R A, Symmonds R E, Willians T J: Obstet Gynae 72 : 313;1988
6. Moir J C : J Obst Gyn Brit C'wlth 80 : 598; 1973
7. Sims J M : Am J Med. Sci 23: 59; 1852
8. Turner Warwick R: J Urol 116: 341; 1976