

Genito-Urinary Fistula - A Review on 45 Cases

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Abstract : *In this prospective study of 45 cases, all the fistulas occurred outside our institution; 86.66% of them resulted from obstetric cause and the rest from gynaecological. 37.77% subjects were aged below 20 and 26.66% between 21-25 years. As high as in 48.88%, it followed first childbirth. Most of them having little or no education came from rural areas with poor socioeconomic background, 14 out of 39 obstetric fistulas had history of prolonged labour, 11 had eclampsia and 21 needed instrumental delivery. This reflects the poor obstetric care they received. We repaired the fistulas through vaginal route in 43 cases and abdominally in two women. Some cases needed repeat surgery. The overall success rate was 75.55%.*

INTRODUCTION

The subjects with genitor-urinary fistulas suffer from constant discomfort from leakage of urine, mental agony, depression, marital disharmony and social isolation. In developing countries, most of them are young, illiterate and come from rural areas with a poor socioeconomic background.

The communication between the genital and urinary tract may be uterocervical, vesicovaginal and urethrovaginal and sometimes ureterovaginal, ureterocervical and ureterouterine. Of all these, vesicovaginal fistula is the commonest type in developing countries including ours. At the inaugural session of the XVIIth World Congress of FIGO on 02-11-2003 at Santiago, Chile, the President of FIGO, Prof. Sirish Seth, mentioned that 80,000 of genitourinary fistulas are being added every year in our planet. Such dismal picture deserves utmost attention of our fraternity. Mitigating their suffering is our moral and social obligation.

MATERIALS AND METHODS

This prospective study was carried out in the Department of Obstetrics & Gynaecology, N.R.S. Medical College and Hospital, Kolkatta, from July 1992 to January 1998. During this period, we have treated 45 cases of genitourinary fistula. The duration of incontinence varied from one month to six years. Four cases came from Bangladesh.

RESULTS

Of 45 cases 39 (86.66%) were obstetric in origin and 6 (13.33%) were gynaecological. Moreover 11 (28.2%) out of 39 obstetric fistulas suffered from eclampsia. Most of them having minimum or no education came from rural areas and received poor obstetric care.

Age and Parity : Of 45 cases, 17 (37.77%) were below the age of 20 years, 12 (26.66%) between 21-25 years, 7 (15.55%) 26-30 years, 4 (8.88%) 31-40 years and 5 cases (11.11%) above 40 years. The youngest patient in this series was aged only 12 years and the oldest 57 years. The young girl sustained street accident while moving on a bicycle and presented two years after the accident. She had fracture shaft of right femur and a spoke caused vulvo-

urethral injury. There was total avulsion of urethra (Fig.1). The bladder was full of brittle stones, which had to be evacuated thrice before operation. The urethra was reconstituted with vaginal flap. Table 1 shows that 22 cases (48.88%) were para 1 + 0 and seven of them lost their babies due to difficult delivery. One can imagine their mental and physical morbidity. Of 12 cases above para 3 + 0, only 5 had gynaecological fistula.

Table - 1 : Parity Distribution (N+45)

Parity	Number	Percentage
Unmarried	1	2.22
Para 1 + 0	22	48.88
Para 2 + 0	5	11.11
Para 3 + 0	5	11.11
Above 3	12*	26.66

* Includes 5 gynaecological fistula

Etiological Factors : Out of 39 obstetric fistula, prolonged labour was responsible in 14 and instrumental delivery in 21 cases. There too was history of either prolonged or obstructed labour. Caesarean hysterectomy was responsible in 3 cases. Of gynaecological fistulas 4 resulted from abdominal and one from vaginal hysterectomy.

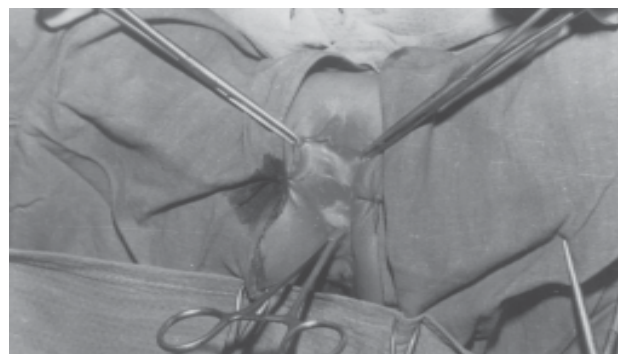


Fig.1 : Urethrovaginal fistula

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Table - 2 : Etiological Factors (N=45)

Obstetric Cause	Gynaecological Cause
Prolonged labour - 14	Street Accident - 1
Instrumental delivery - 21	Abdominal Hysterectomy - 4
Forceps - 17	Vaginal Hysterectomy - 1
Craniotomy - 4	
LUCS - 1	
C.S. hysterectomies - 3	
Obstetric - 39 (86.66%)	Gynaecological - 6 (13.33%)

Preparative Investigations : Besides routine investigations, urine culture and sensitivity was done in all the cases, EUA, swab and Dye test in 12 cases, cystoscopy in 6 and IVU in 2 cases.

Fistula Location : Table - 3 shows that in 17 cases (37.77%) the fistula was located in the lower third of vagina, midvaginal in 14 and in the upper third in another 14 cases. Table - 3 shows the other details as regards site, size, number and condition of surrounding tissues.

Surgery : The repair was done through vaginal route in 43 cases, by flap splitting technique in 42 and reconstruction of urethra in one. The oldest case, aged 57 years had Ward-Mayo's operation in a Sub-Divisional hospital and was referred to us in emergency situation with severe infection after one month. There was a rent of 2 fingers in anterior vaginal wall (Fig.2).

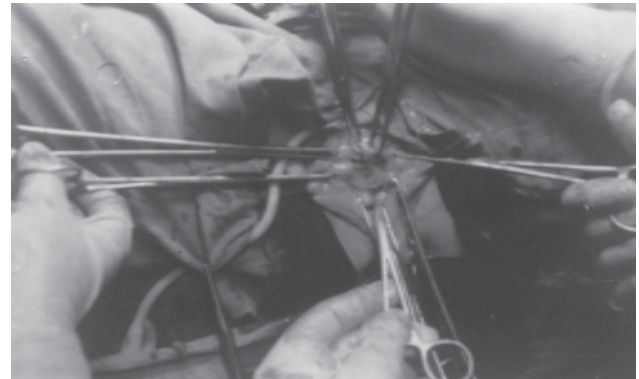
After 2 months and 9 days we had undertaken the repair which was successful. In two cases (vesicocervico-vaginal - 1, vault fistula - 1) the repair was done abdominally with the help of uro-surgeon. For bladder rent vicryl-000 was used and vicryl-00 for vagina.

Table - 3 : Details (location) of the Fistula

Site of Fistula	No.	Percent	Number of Fistula
Lower 1/3rd	17	37.77	Two in 5, three in 1
Juxtaurethral	15	33.33	and 4 in two cases size
Urethrovaginal	2		2 mm - 30 mm
Midvaginal	14	31.11	Bony margin 3 cases
Upper 1/3rd	14	31.11	Dense scarring - 8
Juxtacervical	6	13.33	Vaginal atresia - 2
Vesicocervico			
Vaginal	1		
Vault Fistula	7	15.55	

Martius graft (Bulbospongiosus) was used in 6 cases. As additional measure Kelly's operation was done in 4 cases for narrowing and to create angulation of vesico-urethral junction and trachelorrhaphy in one. Continuous bladder drainage was maintained for 2 weeks and intermittent clamping for 3 days.

Results of Surgery : Table - 4 shows results (success) of surgery. Eight cases needed repair for second time, three cases third time and one case for 4th time. The overall success rate was 75.55%.

**Fig.2 : Vesico-vaginal fistula****Table - 4 : Results of Surgery (N=45)**

No. of Attempts	n	Success Rate
First	45	28 (62.22%)
Second	8	4 (50%)
Third	3	1 (33.33%)
Fourth	1	1
Overall success		34 (75.55%)

DISCUSSION

Genitourinary fistula is a severely demoralizing and disabling injury among women⁷. Majority of obstetric fistulas are preventable⁶. In our study 86.66% were obstetric fistula. Its incidence is very high in some African countries like Ethiopia, Somalia, Sudan, Ghana, Tanzania and Zambia⁶. In Bangladesh, it leads to 3.8% postnatal morbidity in women².

As observed in this study, 37.77% of the sufferers were below 20 years and 26.66% between 21-25 years. In 48.88%, it followed first childbirth and 11.11% after second childbirth. Most of them coming from rural areas were either illiterate or with low education and poor socioeconomic background. Early child bearing, ignorance about proper antenatal care and inadequate access to quality intrapartum care are well-known contributory factors. This was also observed in Bangladesh among many other studies². In our series, this is also substantiated by the fact that out of 39 obstetric fistulas 14 had prolonged labour, 21 needed instrumental deliveries and 3 had Caesarean hysterectomy (Table - 2). In a study of 1443 cases in northern Nigeria¹⁰, 83% of the fistulas resulted from obstructed labour and 13% from Gishiri cutting (tribal practice of cutting anterior vaginal wall for obstructed labour). In our series 4 cases of fistula occurred following hysterectomy (3 abdominal and one vaginal). In abdominal hysterectomy bladder injury usually happens while separating the bladder from the anterior surface of isthmus and supravaginal cervix. A meta-analysis of 22 centers (Melbourne institute) shows ureteral injury to be 1.6/1000 (range 0 - 14.6) and bladder injury 2.6(0.2 - 19.5/1000)⁵. The key to success are careful dissection of bladder from vaginal wall, adequate haemostasis and proper repair in separate planes⁸. One has to ensure continuous bladder drainage in postoperative period⁹. In spite of all these, failure is not uncommon and repeat repair is



Fig.3 : Successfully repaired VVF

needed in a significant number of cases. In other words, repair of genitourinary fistula should be taken as a surgical challenge. In 43 cases out of 45 we adopted vaginal route. It is well-known that gynaecologists prefer vaginal approach⁴ but urologists usually prefer abdominal route^{3,9}. In 2 cases the repair was done transperitoneally. In several cases repeat surgery was needed (Table - 4). The overall success in our study was 75.55%. The condition of surrounding tissue was unfavourable in several cases. In a series of 132 patients¹, initial success rate was 45% and after repeated attempts it was 81%. In another study of 64 cases⁴, the success rate was 85.9%.

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REFERENCES

1. *Amr MF.* Vesicovaginal Fistula in Jordan. *Eur. J. Obstet. Gynecol. Reprod. Biol.* 1998 Oct, 80(2):201-203
2. *Aktar, S.* Urinary Fistula, frequent causes. Prevention, *International J. of Obstet. & Gynecol.* 2003,83(Supplement No.3):9
3. *Chakraborty, SC; Gupta, NP; Wadhwa, SN.* Ureterovaginal fistula following Obstetric and Gynaecological Surgery. *J. Obstet. Gynec. India,* 1993;43:285-288
4. *Frohmuller, H; Hofmocket, G.* Transvaginal closure of vesicovaginal fistula. *Urologe A,* 1998;Jan.37(1):102
5. *Gilmour, DT; Dwyer, PL; Carey, MP.* Lower urinary tract injury during Gynaecological surgery and its detection by intraoperative cystoscopy. *Obstet. Gynecol.* 1999 Nov;94(5 Pt.2):883-889
6. *Kelly, J.* International experiences - Urinary Fistulas. *Internation J. of Obstet. & Gynecol.* 2003;83 (supplement No. 3):9
7. *Ojanuga Onolembemhen, D; Ekwempu, CC.* Investigation of sociomedical risk factors associated with vaginal fistula in northern Nigeria, *Women Health,* 11999;28(3):103-106
8. *Sapre, S; Chhabra, JS; Sharma, N; et al.* Transperitoneal repair of vesicovaginal fistula, *J. Obstet. & Gynae India.* 1995;45:547-549
9. *Singh, M; Ambasta, SS.* Transperitoneal repair of vesicovaginal fistula. *J. Obstet. Gynec. India,* 1991, 41:816-819
10. *Tasib, F.* Epidemiological determinants of vesicovaginal fistulae. *Br. J. Obstet. Gynecol.* 1983;90:387

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