

Vesico vaginal Fistula: Prevention is possible

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A prospective study was conducted at Lady Willingdon hospital Lahore from Jan,2002 to Dec, 2004. During the mentioned period 22 patients were admitted with the diagnosis of urinary tract fistula. Among these most of the patients (i.e, 45%) were young belonging to age group 20-30 years. According to the causes 72 % were due to obstetrical causes, 23% due to surgical causes and 5 % were due to malignant. Regarding to the location of the fistula 14% were juxtaurethral,28% low vaginal, 35% mid vaginal,09% high vaginal and 14% were vault fistulae.Out of 22 patients first surgical repair failure occurred in four patients.

Key words: Vesico vaginal Fistula : Risk factors & prevention.

A fistula may be defined as the abnormal communication between two or more epithelial surfaces. Fistula may be between the genital tract (vagina, cervix, uterus or perineum) and either the urinary tract (bladder, urethra or ureter) or the gastrointestinal tract. The first mention of fistula is found in Al-kanoon written by Ibn-e-Seena. In 1597 Plater described the condition for the first time in European literature. A number of surgeons reported successfully repair of vesico vaginal fistula in 1830. In 1852, Sims of Albama described a reproduceable method of repair by vaginal approach after performing 42 operative procedures over a period of 4 years¹. Lawson has contributed significantly regarding the recent procedures of fistula repair². Professor Derry in 1935 discovered a genitourinary fistula in Egyptian mummy³.

Multiple or complex fistulae are common, particularly after attempts of surgical repair. In third world countries over 90% of fistula are of obstetrical etiology, whereas in U.K. over 70% follow pelvic surgery⁴. Vesico vaginal fistula (VVF), the commonest type of genitourinary fistula is still a great challenge for the women in developing countries.

Pakistan is a developing country, 80% of its population lives in villages. It has literacy rate of 19% in females & 40% in males. The additional aggravating factors for the high incidence includes malnutrition, poor hygiene and untreated infections in child hood resulting in stunted growth and contracted pelvis. In developing countries obstructed labor is still a problem. The lack of skilled obstetrical care, inadequate transport system & late referrals and late arrival in hospital eventually lead to an obstructed labour. It may last for 2-3 days resulting in fetomaternal morbidity. In most of the cases of obstructed labour, here may be dead fetus and severe pressure necrosis to bladder base ultimately ending up in to fistula formation. A study was conducted in Lady Willingdon Hospital Lahore to evaluate the etiology and the results of repair with aim of improving the strategies for their prevention and for better treatment outcome.

Patients & methods:

The study was conducted over a period of three years from January 2002 to December 2004 at Lady Willingdon

hospital Lahore. During the mentioned period patient's evaluation was done on a designed performa. The performa included patients personal profile, social status, obstetrical history, associated factors for the fistulae formation, detail history regarding the urinary incontinence, amenorrhoea or previous attempts of repair was taken. In cases of obstetrical etiology details of labour, place of delivery, mode of delivery, instrumentation and baby birth weight was noted. Detailed physical examination was done. Local examination for excoriation, site, size & number of fistula was done. Methylene blue dye test was done. In addition to routine investigations urine analysis, renal function tests, intravenous urography and cystoscopy were performed. After evaluation the time and route of surgery was planned.

At the time of surgery examination under anesthesia was done to assess the site and size of fistulae, mobility of tissues, accessibility and to decide about the route and position of the patient for the operation. Out of 22 patients 18 patients were operated by vaginal route, 2 patients by abdominal route and 2 patients with combined abdominovaginal route. Vaginal repair was done by flap splitting technique. Absorbable synthetic suture was used for repair. In addition to routine postoperative care continuous bladder drainage was stressed. Appropriate antibiotic cover was given. Postoperative complications & patients prognosis was documented.

Results:

During the mentioned period 22 patients were admitted with the diagnosis of fistulae. Most of the patients were anaemic & belong to low socioeconomic group. The age distribution of the patients is shown in Table 1 Most patients (45%) were in the age group of 20-30 years, 32% were in the age group 31-40 years while 14% patients were in the age group more than 41 years. These were patients who had fistulae due to non obstetrical causes. Table 2 shows the parity of the patients. It was more common among the multipara. Regarding the etiology of the fistula formation 16 patients had obstetrical reasons, five patients had gynaecological causes (post hysterectomy) while one patient had fistula formation after the radiotherapy for the

carcinoma of cervix (Table 3). Among the obstetrical reasons obstructed labor was the commonest cause for the fistula formation. In 10 patients instrumental delivery was practiced while three patients had cesarean section (Table 4). The site was classified according to Lawsons classification³⁻⁶.

Out of 22 patients three patients had juxtaurethral vesico vaginal fistula, six patients had low vaginal fistula, eight patients had mid vaginal fistula, two patients had high vaginal fistula and three patient had vault fistula. Regarding the size, most fistula were 1 to 3 centimeter in size. Appropriate antibiotic cover was given to all the patients. Postoperative complications included urinary tract infection in six patients that was treated by antibiotic. Stress incontinence developed in three patients and was corrected conservatively. Breakdown of fistula repair occurred in four patients, repeat repair was done in these patients. Out of four patients three had successful repeat repair while one patient has breakdown.

Table 1: Age distribution of patients

Age (Years)	=n	% age
<20	02	9
20-30	10	45
31-40	07	32
41-50	03	14

Table : 2 Parity of patients

Parity	=n	%age
P 1	02	9
P 2	02	9
P 3	05	23
P 4	04	18
P 5 or more	09	41

Table: 3 Causes of Fistula

Causes	=n	% age
Obstetrical Causes	16	72
Surgical	05	23
Malignant	01	05

Table:4 Site of Fistula

Site	=n	% age
Juxtaurethral	03	14
Low vaginal	06	28
Mid vaginal	08	35
High vaginal	02	09
Vault	03	14

Discussion:

Patients with urinary tract fistula not only suffer physically but it also affects mental and social health. Aim should be the prevention of fistula in patients at risk. Women in the developing countries are at risk because of early marriage, home deliveries by unskilled persons, inadequate prenatal care, low socioeconomic status and illiteracy. In our study most of the patients were in the age group 20-30 years. This related to already published studies⁶⁻⁷. Regarding the parity of the patients most of the patients were multipara. With increasing parity, there is increase in birth weight, malpresentation and malposition leading to greater chances of obstructed labor. Like the other developing countries

obstetrical causes were the main causative factor for fistula formation. In study it was responsible in 72% of the patients. This relates to already published studies in which they were responsible in 80-90% of the patients⁸. It is in contrast to the causative factors in the developed world where most of the causes are surgical.

The success of the fistula repair depends on surgeon's expertise, preoperative evaluation, preparation, surgical techniques & postoperative care. With increasing the number of attempts success rate falls. Successful closure rate documented in the literature varies from 65% - 95%. In the study success rate of 95% was achieved which was comparative to the study reported by Rath & Nanda^{9,10,11}.

Prevention of fistula in the tropics is a great challenge for obstetricians. In developing countries like Pakistan most of the deliveries are being conducted by the traditional birth attendants.¹² It is important to train the (TBA'S) to recognize the high-risk cases and refer them early to nearby hospitals. These hospitals should be well equipped for the facilities of emergency operative delivery. Patients with the obstructed labor should be managed by prophylactic catheter drainage for 7-10 days. For good success rate of the surgical repair proper preoperative evaluation, operative technique & postoperative care all are equally important.

In developing countries like Pakistan where financial sources are limited and decision making is by family members, prevention of fistula can be educating the family members for choosing the place of delivery. Ojanuga¹³ also stressed it.

References

1. Richerdson DA. Ethics in gynecological surgical innovation. *Am Obstet Gynecol* 1994;170:1-6.
2. Lawson J. The management of genitupinary fistula. *Clin Obstet Gynecol* 1978;5:209-36.
3. Mahfouz NP. Urinary and fecal fistula. *J Obstet Gynecol Br Emp* 1957; 23-33.
4. Fouzia Parveen and Qamar Shah. Vesico vaginal Fistula: A challenge for women in developing countries. *JCPSP Vol. 8 (5):230*.
5. UNICEF. The state of world' s children 1989. Oxford University Press. Oxfordshire, UK, pp 100.
6. Aziz SA. Urinary fistula from obstetrical trauma. *J obstetric trauma. J Obstet Gynaecol Br Commonw* 1965;72:765-8.
7. Mustafa AZ, rushwan HM. Acquired genitourinary fistulae in Sudan. *J Obstet Gynaecology Br Commonw* 1971; 78: 1039-43.
8. Rathee S, Nanda S. Vesicovaginal fistula : a 12-year study. *J Indian med assoc* 1995;93:93-4.
9. Kelly j. Vsciovaginal fistulae. *Progress in Obstetrics and gynaecology Vol.3*. Editor Studd J, 1983, Churchill Livingstone, Edinburgh.
10. Lawson JB. Injuries of urinary tract obstetrics and Gynaecology in the tropics and developing countries ch.29, ed. Lawson JB and Stewart DB 1967; London Edward Arnold:481-552.
11. Little NA, Juma S, Raz S. Vesicovaginal fistulae. *Semin Urol* 1989;7: 78-85.
12. Jafarey SN. Characteristic and practices of traditional birth attendants(Dias)-preliminary study. *J Pakistan Med Assoc* 1981; 31: 2888-91.
13. Ojanuga DN. Education : the key to preventing vesicovaginal fistula in Nigeria. *World Health Forum* 1992; 13:54-6.