

Surgical Management of Vesicovaginal Fistula

QADEER AHMAD TARIQ, SARFARAZ AHMAD, MAZHAR ABBASS

ABSTRACT

Aim: To look into the etiology of vesicovaginal fistulae, age, presentation of the patient, outcome of surgical repair.

Methods: This descriptive study was carried out in the Department Urology, Nishtar Hospital, Multan from September 2012 to March 2013. A total of 25 patients with vesicovaginal fistula were included in the study.

Results: All women were illiterate and in 72% of cases, their husbands were also uneducated. Out of 25 patients, 18(72%) belonged urban population and most of the patients are from poor class. Vesicovaginal fistula formed in 40% in primiparae and 60% in multipara. Duration of symptoms ranged from 3 months to 4 years, median 8 months. Out of 25 patients, 21(84%) patients had single fistula while 4(16%) had multiple fistula. Size of fistula was ranged from 0.5 cm to 4 cm Average postoperative stay of the patients in hospital was 7 days. Overall success rate of vesicovaginal fistula repair was 87.5%.

Conclusion: From the present study it was concluded that vesicovaginal fistulae continue to be a rather common problem in our country.

Keywords: Vesicovaginal fistula, preimipara, multipara

INTRODUCTION

Fistula is a Latin word (Pl. fistulas or fistulae) meaning "pipw"¹. Fistula is a communication between two endothelial or epithelial surfaces. A urinary fistula is an abnormal communication between any part of the urinary system and the skin and some internal hollow viscous² Vesicivaginal fistula is an abnormal communication between urinary bladder and vagina. In 1923, Professor DE Derry, at the Cairo School of Medicine, was first to record the presence of vesicovaginal fistula. During his dissection in the mummified remains of Queen Henhenit, one of the wives of Kin Mentuhotep-II of Egypt, he noted a large vesicovaginal fistula was due to obstructed labor³

During the 19th century, there were many achievements in the management of vesicovaginal fistula. In 1984, Lamballa repaired a small number of fistulae with pedicle skin flaps, using another technique.⁴ He was able to close a greater number of fistulae. In this technique, he dissected the bladder from the cervix and vagina, with curved releasing incisions in the vagina to facilitate mobilization. A study was done for the repair and prevention of vesicovaginal fistula after total hysterectomy in New York⁵. In 2001; a report of 45 patients with vesicovaginal fistula by Rafique et al at⁶ Nishtar Hospital, Multan and an article on vesicovaginal fistula was written. In 2001, dissertation on vesicovaginal fistula was written at PGMI, Lahore⁷.

*Dept. of Urology, Nishtar Medical College/Hospital, Multan
Correspondence to Dr. Qadeer Ahmad Tariq, Assistant Professor*

SUBJECTS AND METHODS

This descriptive study was carried out in the Urology Department, Nishtar Hospital, Multan from September 2012 to March 2013. A total of 25 patients with vesicovaginal fistula were included in the study.

RESULTS

All women were illiterate and in 72% of cases, their husbands were also uneducated. Out of 25 patients, 18(72%) belonged to urban population and most of the patients are from poor class. Vesicovaginal fistula formed in 40% in primiparae and 60% in multipara. Duration of symptoms ranged from 3 months to 4 years, median 8 months. Out of 25 patients, 21(84%) patients had single fistula while 4(16%) had multiple fistula. Size of fistula was ranged from 0.5 cm to 4 cm Average postoperative stay of the patients in hospital was 7 days. Overall success rate of vesicivaginal fistula repair was 87.5%. Age of the patients ranged between 18-48 years. Most patients (60%) were between 25-36 years (Table 1). All the patients presented with total urinary incontinence. Other associated presenting symptoms included; sexual difficulties, vulval pruritis and suprapubic pain (Table 2). Etiological factors of vesicovaginal fistula are summarized in Table 3. Most fistula 15(60%) were supratriangular. In 5 patients fistula was located at trigone and in other 5 patients fistula was involved the bladder neck. All patients underwent surgery 3 months after the formation of vesicovaginal fistula. Rout of repair was abdominal, vaginal and combined in 14, 9 and 2 patients respectively (Table 4).

Postoperative complications included wound infection 3(12%), urinary tract infection 4(12%), paralytic ileus 2(8%) and chest infection 2(8%) as shown in Table 5.

Table 1: Age distribution (n=25)

Age (years)	n	%age
18-24	2	8
25-36	15	60
37-48	8	32

Table 2: Distribution of patients according to presenting symptoms (n=25)

Symptom	n	%age
Vulval pruritis	10	40
Sexual difficulty	9	36
Pain suprapubic region	3	12

Table 3: Etiological factors for vesicovaginal fistula

Factor	n	%age
Obstructed labour	8	32
C/section	10	40
Hysterectomy	5	20
D & C	2	08

Table 4: Route of repair (n=25)

Route of repair	n	%age
Abdominal	14	56
Vaginal	9	36
Combined	2	08

Table 5: Postoperative complications (n=25)

Complication	n	%age
UTI	4	16
Wound infection	3	12
Chest infection	2	08
Paralytic ileus	2	08

DISCUSSION

Vesicovaginal fistula is a subtype of genitourinary fistulae. It is abnormal fistulous tract extending between the urinary bladder and vagina that allows the continuous involuntary discharge of urine into the vaginal vault⁸. In addition to medical sequelae from these fistulae, they often have profound effects on the patient's quality of life. In the developing countries vesicovaginal fistulae are still a common finding and are usually a complication of obstructed labour. Other studies indicate obstetric causes to be responsible for 92%, 82%, and 68% of fistulae respectively⁹. Most cases of vesicovaginal fistulae form after obstructed labour in primigravida but a recent study has reported rather high incidence of vesicovaginal fistulae in multiparous women. It is attributed to osteomalacia after repeated child bearing and lactation which reflects poor nutritional status of these women¹⁰.

In present study vesicovaginal fistula is formed in primigravida and multigravida in 40% and 60% respectively. In addition, because of poor economic

conditions, many pregnant women have no access to skilled obstetric care¹¹. Most of the cases (72%) came from rural areas and similar percentage of patients belonged to poor social class. If bladder injury goes unrecognized during the time of surgery, urinary incontinence occurs when sloughing of bladder takes place¹². In addition to obstetric aetiology vesicovaginal fistula may be formed after pelvic/ gynaecological surgery. Risk factors for vesicovaginal fistula formation during pelvic surgery include previous uterine surgery, endometriosis, prior radiotherapy, recent cold knife cervical conisation¹³.

Rare cases of vesicovaginal fistula include pelvic infection including tuberculosis¹⁴, presence of foreign body like pessaries¹⁵, vesical stone, vigorous sexual intercourse etc¹⁶. In present study 72% formed due to obstetric aetiology. In 8% patient vesicovaginal fistula formed from prolonged obstructed labour and 10% due to caesarean section. High number of vesicovaginal fistula after C/S is due to the fact that patients presented quite late after caesarean section when pressure necrosis had already occurred. In 7 patients the vesicovaginal fistula formed after gynaecological procedures namely abdominal hysterectomy and dilatation and curettage.

Urinary incontinence is the most common complication of vesicovaginal fistula. It affects the quality of life. Leakage of urine may be apparent in the immediate post operative period after index surgery but most commonly manifests after 5-10 days¹⁷. In present study all patients presented with history of total urinary incontinence. Ten (40%) patients had vulval pruritis and 3(12%) complaint of suprapubic pain. Vesicovaginal fistula can be surgically repaired via abdominal, vaginal or combined abdominovaginal approaches¹⁸. Advantages of vaginal route are a low complication rate, minimal blood loss, rapid postoperative recovery and shorter hospital stay¹⁹. If fistula is too high to reach through vaginal route, abdominal approach should be used²⁰.

In the present study vesicovaginal fistulae were repaired by abdominal, vaginal and combined approaches in 14, 9 and 2 patients respectively. In all cases we applied the basic surgical principles of repair like tension free closure of bladder and vagina in separate plane. In patients undergoing abdominal or combined approach, omental interposition graft was placed while labial fat pad was used in vaginal repair of vesicovaginal fistula. The overall success rate of vesicovaginal fistula repair was 12(87.5%), 7(77.5%) and 2(10%) patients respectively. Overall postoperative hospital stay was 7 days which is comparable with other studies²¹. No major complication was observed. These results are comparable with other studies²².

CONCLUSION

From the present study it was concluded that vesicovaginal fistulae continue to be a rather common problem in our country.

REFERENCES

1. Dornald's illustrated medical dictionary. 28th ed. Philadelphia: WB Saunders, 2001.
2. Mann CV, Russell RCG, Williams NS. Bailey and Love's short practice of surgery. 23rd ed. London: Arnold, 2000.
3. Derry DE. Note on 5 pelvis of women in the 11th Dynasty in Egypt. *J Obstet Gynaecol* 1935;42: 490.
4. Lamballa AJ. Trait des fistules vesico uterines. In: clinical urogynaecology. Mark DW, Mickey MK, editors. Philadelphia: St Louis Mosby. 1993; 21:330.
5. Tancer ML. Observations on the prevention and management of vesicovaginal fistula after total hysterectomy. *Surg Gynaecol Obstet* 1992; 175: 501-6.
6. Rafique M, Ahmad R, Rauf A, Arif MH. Surgical repair of vesicovaginal fistula. *J Neph Urol Transplant* 2001; 2: 52-5.
7. Nasir JM. Comparison of free bladder mucosal graft versus conventional repair of vesicovaginal fistula. Dissertation: PGMI Lahore 2001; 1-145.
8. Goodwin WE, Scardino PT. Vesicovaginal and ureterovaginal fistulae. *J Urol* 1980; 123:366-8.
9. Smith CA, Witherrow RON. Female pelvic floor dysfunction. *Br J Urol* 2000; 85: 579-87.
10. Bhutta SZ. Vesicovaginal fistula more than an obstetric problem. *J Pak Med Assoc* 1996; 46(6): 135-6.
11. Fatima S. Prisoners of ignorance: a case report. *Spectrum* 2000; 2(3): 7.
12. Hilton P. Fistulae. In: Shaw RW, Soutter WP, Stanton SL editors. *Gynaecology* 2nd ed. Edinburgh: Churchill Livingstone, 1997; 779-801.
13. Macaulau AJ, Stern RS, Homes DM. Micturition and the mind: Psychological factors in the etiology and treatment of urinary symptoms in women. *Br Med J* 1987; 294: 540.
14. Carl P. Vesico-ovarian fistula in suppurative ovarian inflammation and salpingitis. *J Urol* 1990; 134: 352.
15. Hanai T, Miyataka R, Kato Y, Iguchi M. Vesicovaginal fistula due to vaginal foreign body. *Hinyokika Kyo* 2000; 46: 142-3.
16. Gosset M. Calculus in the bladder, vesicovaginal fistula. Advantages of the filter wire suture. *Lancet* 1934.
17. Woo HH, Rosario DJ, Chapple CR. The treatment of vesicovaginal fistula. *Eur Urol* 1996; 29: 1-9.
18. O'Conr VJ. Transperitoneal, transvesical repair of vesicovaginal fistula with omental interposition. *AA* 1991; 10: 98-103.
19. Dupont MC, Raz S. Vaginal approach to vesicovaginal fistula repair. *Urol* 1996; 48: 7-9.
20. Wang Y, Haddey RH. Non-delayed transvesical repair of high lying vesicovaginal fistula. *J Urol* 1990; 144: 34-6.
21. Rangnekar NP, Imdad A, Kaul SA, Oatak HR. Role of the martius procedure in the management of urinary and vaginal fistulae. *Am Coll Surg* 2000; 19(3): 259-63.
22. Marshal VF. Vesicovaginal fistula on one urological service. *J Urol* 1979; 121: 25.