

SURGICAL REPAIR OF VESICO- VAGINAL FISTULA

Suchanda Das¹ Rokeya Begum² Bidhan Roy Chowdhury³ Nargis Sultana⁴

Summary

The objective of our study is to highlight the outcome of repair of vesicovaginal fistula in a tertiary care hospital. From May' 2013 to Dec'2014 some patients with vesicovaginal fistula underwent surgical repair in Chittagong Medical College Hospital. This is an observational study. Obstetrical complication mainly obstructed labour (98%) was the most common cause for the development of urinary fistula . Among 50 pt. (all are repaired with transvaginal approach) 41 pt –fully cured, 3 pt had urethral, incontinence. 1 pt. had vaginal stenosis, 5 pt had no successful outcome. The study concluded that genitourinary fistula is still a very troublesome complication of obstetric and gynaecological procedure in developing countries. The high prevalence of vesicovaginal fistula highlights the importance of hospital delivery and the need for skilled and competent health care personal. In all case of VVF repair, proper evaluation of pt. to decide type of procedure and route of repair is essential.

Key words

Vesicovaginal fistula; Obstructed labour; Vaginal stenosis.

Introduction

Urogenital fistulas, majorities of which are Vesico vaginal fistula (VVF), are a great challenge for women in developing countries [1]. Now a days, it is historical issue in developed countries. It is commonly caused by prolong obstructed labour and is one of the worst complication of the child birth and poor obstetric care.

On the other hand, iatrogenic injuries during emergency obstetric surgery is also the cause of Vesico vaginal fistula. Whereas gynecological surgery is responsible for high incidence of genital fistula in the developed countries [2-3]. This unpleasant complication leaves the affected woman with continuous leakage of urine into vagina causing odours and discomfort which causes serious social problems [4]. Such as prohibition from family homes and cooking & touching sharing utensils.

The most traumatic aspect of Vesico vaginal fistula from social point of view is the urinary incontinence, childlessness which may lead to marital breakdown & eventually divorce and out cast from society and family [5,6].

Various methods of surgical repair are adopted to deal with this problem with deferent indication and success rates. Depending upon the experience of the surgeon considerable difference of opinion exists regarding the method of repair after injuries [7,8]. Overall up to 90-92% of the patients are reported to be cured [7]. Vesico vaginal fistula is most commonly repaired transvaginally as it is more convenient .Transabdominal route is adopted mostly by urologist particularly in cases where the fistula is higher upon vault of vagina or size of fistula is too large to be repaired transvaginally [9-11]. Scar of the previous surgery and severe vaginal stenosis also makes it difficult to repair the fistula transvaginally [12]. In general upto 80% fistula are repaired transvaginally [13]. Various flaps can also be made to close the defect i.e. martius graft [14].

The objective of our study is to highlight outcome of repair of vesicovaginal fistula in a tertiary care hospital.

Materials & methods

From May 2013 to December 2014, 50 patient with Vesico vaginal fistula underwent surgical repair in Chittagong Medical College Hospital. This is an observational study. A detailed history

1. Junior Consultant of Obstetrics and Gynaecology
Chittagong Medical College, Chittagong
2. Professor of Obstetrics and Gynaecology
Chittagong Medical College, Chittagong
3. Associate Professor of Paediatrics
University of Science and Technology Chittagong (USTC) Chittagong
4. Medical Officer of Obstetrics & Gynaecology
Chittagong Medical College Hospital, Chittagong

Correspondence: Dr. Suchanda Das
Email: drsuchandadas@yahoo.com
Cell : 01817 738309

was taken to pin point the causal factors. The patients were analyzed with regard to etiology, size, site and number of fistula & outcome and postoperative complication and previous attempt at repair. Detailed examination were done includes-a) examination under anesthesia, b) speculum examination c) Catheter test d) Dye test, e) Three swab test. A complete urinalysis, Cystoscopy & IVU increase with suspected concomitant ureteric injury and/or ureterovaginal fistula.

Results

Among 922 women with gynaecological problem VVF was 50 i.e 5.75%. Majority of patient age belongs to age group 26-30year. 76% belongs to lower socioeconomic class. Most of the patients are primipara (42%), height on average <145 cm i.e. 64%, and 42% of the patient had history of prolong labour. Most of the patient had normal vaginal delivery i.e. 56 %. The duration of fistula was 1 day to 25days.

Obstetrical complication mainly obstructed labour (48.98%) was the most common cause for development of urinary fistula followed by gynaecological surgery mainly hysterectomies (2,4%) as shown in table 1. The commonest type of urinary fistula was VVF (48.96%) as shown in fig 1.

In our series majority of the patient had small <2 cm (27,54%), Medium 2-3cm (18,30%) and large >3cm (5,10%) fistulas (Table II).

Post Operative complication occurs in around 1/3 of the cases (Table III).

About half of the fistula has no associated problem vaginal stenosis and urethral stricture constitute less than 10% of cases (Fig 2).

Four fifth of the cases cured completely & failed in a very few cases (Fig 3).

Table I : Aetiology of urinary fistula.

Causative factors	Number	Percentage %
Obstratic Trauma		
Obstructed labour(vaginal delivery)	28	56%
Obstructed labour(assisted vaginal delivery)	8	16%
Obstructed labour (Cesarean section)	10	20%
Cesarean hysterectomies		
Gynaecological cause	2	4%
Machester operation	1	2%
Hystrectomies	1	2%

Table II : Size & site of fistula

Size	Number	Fistula site	Number of pt	Percentage
Small<2cm	27	Midvaginal	24	48%
Medium2-3cm	18	Juxtracervical	14	28%
Large>3cm	5	Cervical	12	24%

Table III : Post operative complications

Parameters	Number of patients	Percentage
Catheter blockage	4	8%
Urine leakage	3	6%
Fever	4	8%
Vaginal discharge	3	6%
Evidence of UTI by urine culture	4	8%

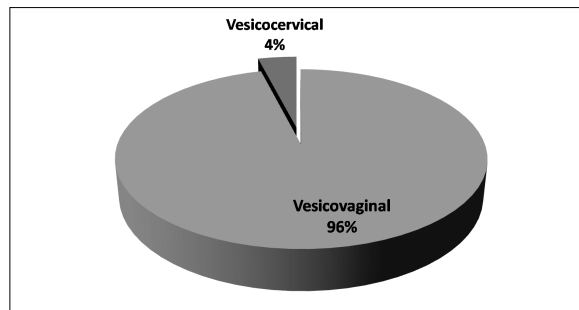


Fig 1 : Pie chart showing types of urogenital fistula

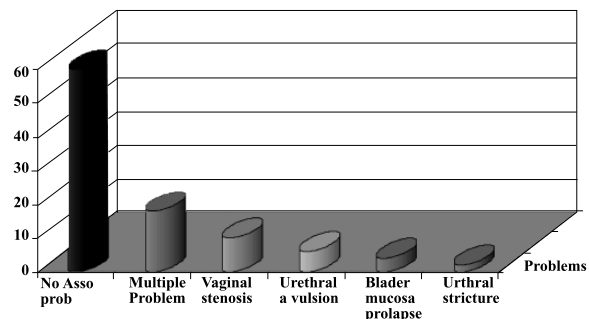


Fig 2 : Bar diagram showing Patient with associated problem

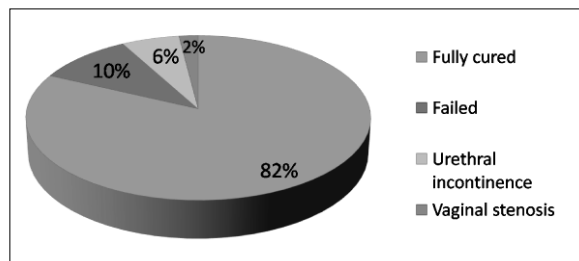
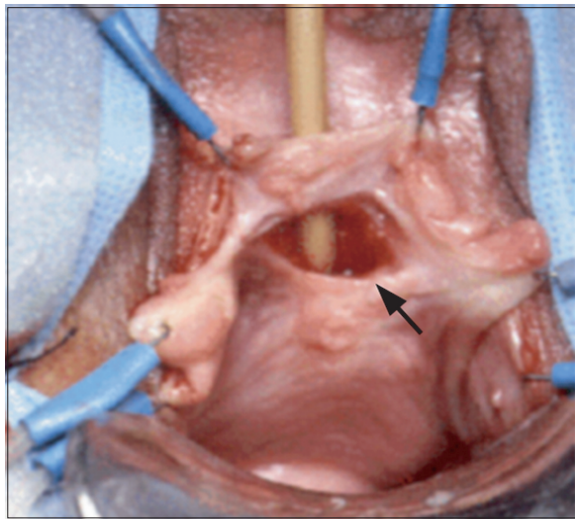


Fig 3 : Pie chart showing final outcome of operation

Discussion

Before 17th century vesicovaginal fistula was considered as a hopeless condition. Marian Sim's first paper on vasicovaginal fistula appeared in 1852. The successful surgical treatment of VVF started in mid 19th centuries by Sim's. Since then many surgeon have made courageous attempts at its repair [15].

The present study has been conducted in fistula center of Chittagong Medical College Hospital, to evaluate the outcome of repair of VVF. During this study period, prevalence of vesicovaginal fistula in VVF corner was reported of be 5.78% which was higher in comparison to study of 'Engender Health' 1.69%. Though high prevalence was due to increase number of cases referred from different parts of Chittagong to this only tertiary center of this region.

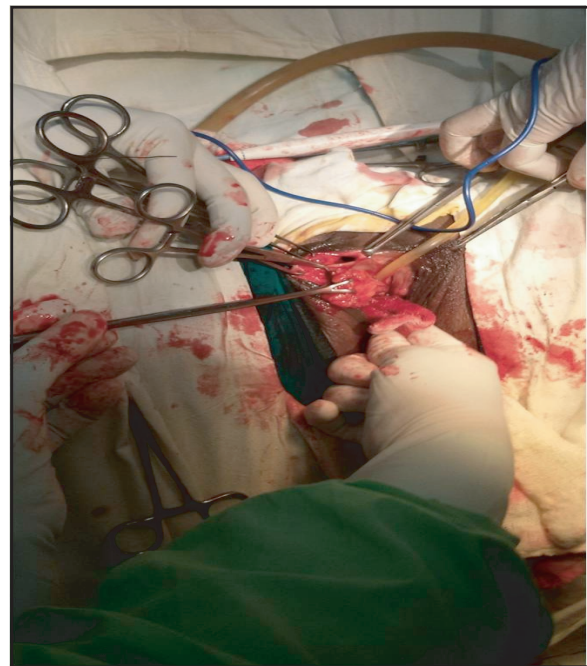


Considering the age of the patient with fistula Murphy (1981) in her classic study from Nigeria has shown that fistula arising out of obstructed labour in underdeveloped country were usually in younger age group [4]. In this study majority of fistula patient were in 26-30 year age group. On the other hand, Dally et al33 reported that maximum number of patient 61.09% belongs to the age group of 20-30 years which are comparable to current study.

Majority 76%of the patient in this study belongs to low socioeconomic status which is very similar to the study as Murphy (1981) in Nigeria [4]. Because they are unable to avail transport and other means to go to hospital to have safe delivery service.

Prevention of genital tract fistula requires significant changes in a wide range of socioeconomic, cultural issues. Education of girls/ woman and economic empowerment are vital in addressing this issue. All patients in this study underwent local repair through vaginal approach. The transvaginal approach seen to be faster, less morbid with relatively minimum blood loss and comfortable. It is similar to the study of CR Majinge [16]. Among 50 patient success rate is 82% which is comparable to MR khan et al in Singapore (2003) [17].

Interpretation of failure of operation it was due o extensive scaring, large size of the fistula, impairment of drainage of urine due to post operative catheter problem & due to infection. During repair of the fistula labial fat graft (modified Martious) was given in some patients. Soft tissue interposition like omentum, gracilis muscle Mortius pedicle graft on fibrofatty tissue and bladder mucosa, may also be used in case of complicated fistula [18-21].



Conclusion & Recommendation

The study concluded that genitourinary fistula is still a very troublesome complication of obstetric and gynaecological procedure in developing countries. In all the cases proper evaluation of the patient to decide the type of procedure and route of repair is essential. Good post operative care and continues uninterrupted bladder drainage one key steps in successful management of genito urinary fistula. The high prevalence of Vesicovaginal fistula highlights the importance of hospital delivery and need of skill and competent health care professional for intrartum care at home and performance of gynaecological surgeries like Hysterectomies by properly trained surgeons. The Government must take a serious steps to provide the essential obstetric services to prevent the development of fistula and help those who had already developed fistula.

Disclosure

All the authors declared no competing interest.

Reference

1. Perveen F, Shah Q, Vesicovaginal Fistula: A challenge for women in developing countries. *J Coll Phycians Surg Pak.* 1998;230-232.
2. Kapoor R, Ansari MS, Shing P, Gupta P, Khurana N, Manddhani A, et al. Management of Vesicovaginal Fistula: An experience of 52 cases with a rationalized algorithm of choosing the transvaginal or transabdominal approach. *Indian J Urol.* 2007;23:372.
3. Lind LR, Bhatia NN. Genitourinary fistula. In: Sengupta BS, Chattopdyay SK, Datta DC (eds). *Gynaecology for postgraduates and Practitioners*, 1st ed. New Delhi, BI Churchill Livingstone Pvt. Ltd. 1998:336-346.
4. Khan RM, Raza N, Jehsnzib M, Sultana R, Vesicovaginal Fistula: An experience of 30 cases at Ayub teaching hospital Abbottabad. *J Ayub Med Coll Abbottabad.* 2005; 17(3):48-50.
5. Murphy M. Social consequence of Vesicovaginal Fistula in Northern Nigeria. *J Biosocial Sci* 1981; 13:139-150.
6. Kelly J. Vesicovaginal Fistula and Rectovaginal Fistula: *J Obstet Gynaecol.* 1998; 18:249-251.
7. Lee RA, Symmond RE, Williom TJ, Current status of Genitourinary fistula. *Obstet Gynaecol.* 1988;72 :313-319.
8. Thompson JD. Operative injury to the urinary tract. In: Nicholas DH, (edi). *Re-operative gynaecological surgery.* St Louis, Mosby. 1991;163-210.
9. Sachder PS, Surgical repair of Vesicovaginal Fistula. *J Coll Physician Surg Pak.* 2002;12:223-226.
10. Chowdhury MR. Transvesical repair of Vesicovaginal Fistula. *Pak Armed Forces Med J.* 1995;45:59-62.
11. Nawaz H, Khan S, Khan S, Sheir Ahmed, Arif Pervaiz, Sallahud Din, Sultan Mahammed. Surgical repair of Vesicovaginal Fistula. *J Surg Pak.* 2001;6:6-8.
12. Mannan A, Sahzad K, Anwar S, Dhurrba B Adhikari, M Nawaz Cugtai. Transvesical repair of difficult Vesicovaginal Fistula. *Ann King Edward Med Coll.* 2001;7:1-3.
13. Villagran-Cerventes R, Rodriguez-Colorado S, Delgado-Urdapilleta J, Kunhardt-R J. Genitourinary fistula in National institute of Perinatology. *Gynaecol Obstet Max.* 1996;64:335-337.
14. Perveen F, Shah Q, Vesicovaginal Fistula: A challenge for women in developing countries. *J Coll Phycians Surg Pak.* 1998;230-232.
15. Akter S. Historical survey of fistula, In: Sayeba Akter, editor. *Female Genital Tract Fistula.* 2008;2-26.
16. Majinge CR. Successful management of vesicovaginal fistula at St. Gaspar Hospital, Tanzania, East Africa. *Med J.* 1995; 72(2): 121-123.
17. Akhtarunnessa. outcome of repair of genitourinary fistula using different modified technique.

- 18.** Von Theobald P, Hamel P, Febraro W. Laparoscopic repair of Vesicovaginal Fistula using a omental J flap. Br J Obstet Gynaecol. 1998; 105:1216-1218.
- 19.** Hamlin RHJ, Nicholson EC. Reconstruction of urethra totally destroyed in labor. Br Med J. 1969; 1:147-150.
- 20.** Punecker SV, Buch DN, Soni AB, Swami G, Rao SR, Kinne JS, et al. Martius labial fat pad interposition and its modification in complex lower urinary fistulas. J Postgrad Med. 1995; 45:69-73.
- 21.** Brandt LF, Lness Zuto FR, Albuquerque CD. Treatment of Vesicovaginal fakistula bladder mucosa autograft technique. J Am Coll Surg. 1998;186;645-648.