*IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*
*e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 21, Issue 3 Ser.10 (March. 2022), PP 35-39*
*www.iosrjournals.org*

# Outcome of Local Repair of VVF by Transvaginal Route at Fistula Center of Rangpur Medical College Hospital, Rangpur, Bangladesh

Ara S.[1], Basher A.M.E.[2], Begum F.[3], Bushra K.F.[4]

[1]*Dr. Shaheen Ara Begum, Resident Surgeon (Obs. and Gyne.), Rangpur Medical College Hospital, Rangpur, Bangladesh*

[2]*Dr. A. M. Enamul Basher, Assistant Professor, Department of Orthopaedic Surgery, Rangpur Medical College Hospital, Rangpur, Bangladesh*

[3]*Dr. Mst. Farhana Begum, Lecturer, Department of Anatomy, Rangpur Community Medical College Hospital, Rangpur, Bangladesh*

[4]*Dr. Kanij Fatema Bushra, Lecturer, Department of Biomedical Engineering, Chittagong University of Engineering and Technology, Chittagong, Bangladesh*

*Corresponding Author: Dr. Shaheen Ara Begum, Resident Surgeon (Obs. & Gynae.), Rangpur Medical College Hospital, Rangpur, Bangladesh*

***Abstract***

***Introduction:*** *The patients of Vesicovaginal Fistula become extremely disabled because of the physical, psychological and social consequences of urinary leakage. These fistulas usually result from obstructed labour and trauma. Among the different types of fistula, vesicovaginal fistula is the most common globally, and is a major ailment that can cause physical, mental and social complications for both the affected and their relatives.*

***Aim of the study:*** *The aim of the study was to observe the outcome of local repair of vesicovaginal fistula through the transvaginal route*

***Methods:*** *This prospective descriptive study was conducted at the Department of Obs and Gynae, Rangpur Medical College Hospital, Rangpur, Bangladesh. The study duration was 2 years, from September 2006 to September 2008. A total of 50 patients were selected for the present study following the inclusion and exclusion criteria.*

***Result:*** *60% of the patients were between the age of 21-30 years, and 38% were between 31-40 years. 52% had 1 para, 16% had 2 para, and the remaining had 3 or more. 84% of the patients had vesicovaginal fistula, 12% had mixed type of fistulas. 24% had associated complications. Successful outcome was observed in 84% of cases.*

***Conclusion:*** *The study contained a total of 50 patients, majority of whom were between the age of 21-30 years. Higher prevalence of fistulas were observed in low parity cases, and vesicovaginal fistula (VVF) had the highest prevalence. 24% of the patients presented with associated complications, and the success rate of the present study was 84%.*

***Keywords:*** *Vesicovaginal, Vaginal, Fistula, Obstetric*

---

Date of Submission: 12-03-2022 Date of Acceptance: 28-03-2022

---

## I. Introduction

A genitourinary fistula is an improper connection between the genital and urinary tracts that can be acquired or congenital, resulting in involuntary urine leakage into the vagina.[1] In underdeveloped nations, genitourinary fistulas caused by obstetric trauma have gained more attention and money to treat and prevent this severe disorder.[2] The most common genitourinary fistula is vesicovaginal fistula (VVF). It is a crippling ailment that has afflicted women for millennia, with the first mention of VVF around 1550 BCE.[3] Avicenna was the first to establish the link between VVF and obstructed labor, often known as traumatic birth, in 1037.[4] Although VVFs are infrequent, they are one of the most socially and psychologically painful medical conditions.[3] The etiology of VVF varies by location. A VVF is most usually caused by gynecological surgery, radiation, damage during the healing phase, or serious pelvic disease in industrialized nations. In contrast, in

developing nations, VVF is most typically associated with delivery.[5] In developing countries, obstructed labour is a common problem for a variety of reasons. Women are economically underprivileged, illiterate, married early and have poor access to family planning and medical services. Teenage pregnancy is common and antenatal care unavailable to the vast majority of women in rural areas.[6],[7],[8] Women with cephalopelvic disproportion or malpresentations may be in obstructed labour which leads to ischaemic vascular injury from compression of the soft tissues between the fetal head and maternal pelvis. Ischaemic tissue necrosis leads to the development of a genitourinary fistula in the puerperium, usually after 7-10 days.[9] Fistula can be diagnosed by history and thorough clinical examination. Patient should be examined under general anesthesia, if necessary, to assess the nature of the fistula accurately and also to make a plan of appropriate type of surgery. Unless the loss of tissue is very extensive nearly all these fistulas can be closed by dissection and suture from the vaginal aspect. The results are usually better than those obtained by a transvesical approach. Adequate dissection and mobilization of tissue, excision of the fistula tract and all scar tissue, and good haemostasis are essential for a successful outcome. Most interventions to treat V.V.F have been surgical and hospital based. However, many women affected with V.V.F need preoperative rehabilitation to overcome infections caused by the neglected leakage of urine and feces, or to build up their strength sapped by malnutrition. Also, post-operative rehabilitation is needed, especially for girls, to overcome the psychological trauma of having been rejected by their families and communities. An appropriate intervention is one that takes care of the physical, mental, social and economic damage that has been commonly inflicted on girls and women with V.V.F.[8]

## II. Objective

**General Objective**

- To evaluate the outcome of local repair of VVF by transvaginal route

**Specific Objectives**

- To find out the difficulties in the vaginal approach.

## III. Methods

This prospective descriptive study was conducted at the Department of Obs and Gynae, Rangpur Medical College Hospital, Rangpur, Bangladesh. The study duration was 2 years, from September 2006 to September 2008. A total of 90 patients had VVF among those who were admitted into the Gynae. Department of the study hospital. Among them, 84 were operated on, and 50 were selected for the present study following the exclusion and inclusion criteria from those admitted at the study hospital. Ethical approval was obtained from the study hospitals ethical review committee, and after taking consent from the patient, history was taken, clinical examination was done and follow-up were done till discharge of the patient. All the information was recorded in a pre-organized data collection sheet.

**Inclusion Criteria**

- Women of all age selected for local repair of VVF through vaginal route
- Patients having 2 or less fistulas
- Patients who had given consent to participate in the study.

**Exclusion Criteria**

- V.V.F operated through abdominal route
- Unable to answer the criteria question.
- Genito-Urinary fistula other than V.V.F
- Patients associated with RVF

## IV. Results

**Table 1:** Age distribution of the participants (n=50)

| Age group | No. of Patients | Percentage of Patients |
|---|---|---|
| **21-30** | 30 | 60.0 |
| **31-40** | 19 | 38.0 |
| **41-50** | 0 | 0.0 |
| **≥51** | 1 | 2.0 |

The age of the patient varied from 17 to 55 years. Majority of the patient belongs to the age group of 21 to 30 years (60%), followed by 2nd common group of 31-40 years of age (38%). No patients were from the age range of 41-50 year (0.0%). One patient was admitted at the age of 55 years (2%).

**Table 2:** Parity distribution of the participants (n=50)

| Para | No. of Patient | Percentage (%) |
|---|---|---|
| **1** | 26 | 52 |
| **2** | 8 | 16 |
| **3** | 6 | 12 |
| **4** | 8 | 16 |
| **≥5** | 2 | 4 |

Majority of the participants (52%) had 1 para, 16% had 2, another 16% had 4, 12% had 3, and the remaining 4% had 5 or more parity.

**Table 3:** Distribution of patients by type of fistula (n=50)

| Fistula type | Number of patients | Percentage (%) |
|---|---|---|
| **Vesicovaginal** | 42 | 84.0 |
| **Vesicocervical** | 1 | 2.0 |
| **Urethrovaginal** | 1 | 2.0 |
| **Mixed** | 6 | 12.0 |

An Overwhelming portion of patients (84%) had vesicovaginal type of fistula. 2% had vesicocervical fistula, 2% had urethrovaginal fistula, and 12% had mixed types of fistulas.

**Table 4:** Distribution of associated problems among the participants (n=50)

| Problems | Number of patients | Percentage (%) |
|---|---|---|
| **None** | 33 | 66.0 |
| **Vaginal stenosis** | 8 | 16.0 |
| **Urethral avulsion** | 2 | 4.0 |
| **Urethral stricture** | 1 | 2.0 |
| **Multiple problems** | 6 | 12.0 |

66% of the participants faced no associated problems related to the fistulas. 16% had vaginal stenosis, 4% had urethral avulsion, 2% had urethral stricture, and the remaining 12% had multiple problems.

**Table 5:** Post-operative observation data of the participants (n=50)

| Parameters | Number of patients | Percentage (%) |
|---|---|---|
| **Catheter blockage (n=50)** | | |
| Yes | 2 | 4.0 |
| No | 48 | 96.0 |
| **Urine leakage at postoperative (n=50)** | | |
| Present | 15 | 30.0 |
| Absent | 35 | 70.0 |
| **Repack given (n=50)** | | |
| Given | 12 | 24.0 |
| Not given | 38 | 76.0 |
| **Fever (n=50)** | | |
| Present | 14 | 28.0 |
| Absent | 36 | 72.0 |
| **Vaginal discharge resembling Infection (n=50)** | | |
| Present | 5 | 10.0 |
| Absent | 45 | 90.0 |

| Vaginal infection evidenced by | | |
|---|---|---|
| Culture of high vaginal swab | 5 | 10.0 |
| Evidence of UTI by urine culture | 5 | 10.0 |

During the post-operative observations, 4% of patients had faced catheter blockage. Urinary leakage was present in 30% of patients, repack was given to 24%, and 28% had high to mild fever after operation. 10% of the patients had vaginal discharge resembling infection, which was later confirmed in all 10% of cases by both vaginal swab and evidence of UTI by urinary culture test

**Table 6:** Final outcome of the participants (n=50)

| Outcome | Number of patients | Percentage (%) |
|---|---|---|
| **Fully cured** | 42 | 84.0 |
| **Failed** | 8 | 16.0 |

In the final outcome of the operation, 84% had been fully cured of VVF, and in16% cases, the operation was not successful.

## V. Discussion

Vesicovaginal fistula (V.V.F) is a real misery for women in developing countries. It is a lesion causing great social, domestic and marital inconvenience to a large number of women in our society. It is not only the problems of the patient but also to others in their social surroundings. Currently most studies have demonstrated that majority of genitourinary fistula develop due to obstetrical injury in developing countries. Among obstetrical injury, obstructed labour is the most common one. Obstructed labour occurs especially in rural areas where transportation is poor and access to medical services is limited. Among the different types of genitourinary fistulas, VVF's have the highest prevalence.[10],[10] Incidence of obstetric fistula ranges from 50,000 to 100,000 women globally each year, according to the World Heath Organizations 2018 report on obstetric fistulas.[11] In the present study, majority of the women (60%) were between the age of 21-30 years, and only 1 patient over the age of 40 had fistula, at age 57. Overall, 98% of the patients of the present study were aged 40 years or younger. This high prevalence of fistula cases in women under the age of 40 years was similar to the findings of some other studies.[12],[13] 52% of the present study participants had 1 parity, or 1 childbirth, be it a healthy newborn or stillborn, after a minimum of 24 weeks of gestational period. This was similar to 2012 case-control study.[14] Primipara patients are at higher risk of developing fistulas compared to women who have experience giving birth twice or more.[15],[16] In the present study, vesicovaginal fistula had the highest prevalence, at 84%, and mixed fistula had the second highest prevalence at 12%. Vesicocervical and urethrovaginal fistula both had prevalence of 1 cases each in the present study. This supports the general understanding of VVF having the highest prevalence among fistulas.[10],[10] 66% of the participants faced no associated problems related to the fistulas. 16% had vaginal stenosis, 4% had urethral avulsion, 2% had urethral stricture, and the remaining 12% had multiple problems. Though we excluded associated Recto-vaginal fistula in our study, 24% patient still presented with associated vaginal stenosis, urethral avulsion and urethral stricture, which complicated the vesico-vaginal fistula and interfered with the successful outcome of the repair. During post-operative observations, 30% of the patients had urinary leakage. 28% had fever, 4% had catheter problems, 10% had vaginal discharge resembling infection, which was later confirmed by culture of vaginal swab and UTI by urinary culture. Among the 50 cases present in the study, 84% had successful outcome, and 16% had failed outcome. The success rate of the present study was somewhat lower compared to other conservative treatment and surgical treatment based studies.[17]

*Limitations of The Study*

The study was conducted in a single hospital with small sample size. So, the results may not represent the whole community.

## VI. Conclusion

The study contained a total of 50 patients, majority of whom were between the age of 21-30 years. Higher prevalence of fistulas were observed in low parity cases, and vesicovaginal fistula (VVF) had the highest prevalence. 24% of the patients presented with associated complications, and the success rate of the present study was 84%.

***Funding:*** No funding sources

***Conflict of interest:*** None declared

***Ethical approval:*** The study was approved by the Institutional Ethics Committee

## References


[1] Datta DC. Genital fistula. In: Konar H, editor, Text - book of Gynecology, 4th ed, Calcutta. Central Book Agency, 2003: 385-391.
[2] Mellano EM, Tarnay CM. Management of genitourinary fistula. Current Opinion in Obstetrics and Gynecology. 2014 Oct 1;26(5):415-23.
[3] Ghoniem GM, Warda HA. The management of genitourinary fistula in the third millennium. Arab journal of urology. 2014 Jun 1;12(2):97-105.
[4] Davila GW, Ghoniem GM, Khater UM. Vesicovaginal fistula. Pelvic Floor Dysfunction. London: Springer-Verlag. 2006.
[5] Riley VJ, Spurlock J. Vesicovaginal fistula. EMed WebMD. 2006 Jun 25.
[6] Hassan MA, Ekele BA. Vesicovaginal fistula: Do the patients know the cause?. Annals of African medicine. 2009;8(2).
[7] Sachdev PS, Hassan N, Abbasi RM, Das CM. Genito-urinary fistula: a major morbidity in developing countries. Journal of Ayub Medical College Abbottabad. 2009 Jun 1;21(2):8-11.
[8] Mohammad RH. A community program for women's health and development: Implications for the long- term care of women with fistulas. International Journal of Gynecology & Obstetrics. 2007 Nov;99:S137-42.
[9] Tindall VR. Genital tract fistulas. Jeffcoate's principles of gynaecology. 6th ed. Butterworth-Heinemann Ltd. 2001:249-58.
[10] Priyadarshi V, Singh JP, Bera MK, Kundu AK, Pal DK. Genitourinary Fistula: An Indian Perspective. The Journal of Obstetrics and Gynecology of India. 2016 Jun 1;66(3):180-4.
[11] Obstetric fistula [Internet]. World Health Organization. World Health Organization; 2018 [cited 2021Dec27]. Available from: https://www.who.int/news-room/facts-in-pictures/detail/10-facts-on-obstetric-fistula
[12] Raashid Y, Majeed T, Majeed N, Shahzad N, Tayyab S, Jaffri H. Iatrogenic vesicovaginal fistula. J Coll Physicians Surg Pak. 2010 Jul 1;20(7):436-8.
[13] Ayaz A, un Nisa R, Anwar S, Mohammad T. Vesicovaginal and rectovaginal fistulas: 12-year results of surgical treatment. Journal of Ayub Medical College Abbottabad. 2012 Dec 1;24(3-4):25-7.
[14] Mwangi HR. Factors associated with obstetric fistula repair failure among women admitted at Gynocare women's and Fistula Hospital in Kenya, 2012-2016: a case control study (Doctoral dissertation, University of Nairobi).
[15] Umeobika JC, Ojiyi EC, Ikeako LC, Ezenyeaku CT, Ezebialu IU. The Sensitivity of Transvaginal Ultrasound in the Detection of Vesicovaginal Fistulae. Tropical Journal of Medical and Health Sciences Research. 2020 Mar 8;1.
[16] Eikins TE, Ghosh TS, Tagoe GA, Stocker R; Repair of obstetric fistulas; J. Obstet. Gynaecol, 1992; 79(3):455-60.
[17] Bodner-Adler B, Hanzal E, Pablik E, Koelbl H, Bodner K. Management of vesicovaginal fistulas (VVFs) in women following benign gynaecologic surgery: a systematic review and meta-analysis. PloS one. 2017 Feb 22;12(2):e0171554.


Dr. Shaheen Ara Begum, et. al. "Outcome of Local Repair of VVF by Transvaginal Route at Fistula Center of Rangpur Medical College Hospital, Rangpur, Bangladesh." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 21(03), 2022, pp. 35-39.