

## Original Article

## A Study on Outcome of VVF Repair at Kumudini Women's Medical College Hospital

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### Abstract

This cross sectional study was carried out on 101 cases of vesico-vaginal fistula who were admitted and operated in Kumudini Women's Medical College Hospital. The aim of the study was to find out the outcome of vesicovaginal fistula repair. A detailed interview was taken from the patients and attendants by using a questionnaire. Necessary information were collected from the patient's record sheets. Small, medium and large sized fistulae were 59.41%, 26.73% and 11.88% respectively. The result of the study showed that success of fistula repair was 73.27%, though seven cases developed

### Introduction

Vesicovaginal fistula (VVF) has a serious impact on a women's physical, mental and social well-being. The world Health organization estimates the prevalence of obstetric fistula is 0.3 percent of all deliveries. In Bangladesh 1.9 percent women are suffering from vesio-vaginal fistula.<sup>1</sup> A study was done by UNFPA and Engender Health, found that the incidence is 1.69 per thousand ever married women.<sup>2</sup> Among genitourinary fistulas, VVF is the commonest variety. Vesico-vaginal fistula results mainly from obstetrical and gynecological causes. In the developing countries, 80-90 percent VVFs are of obstetrical origin.<sup>3</sup> Obstetric vesico-vaginal fistulas are caused simply by unrelieved obstructed labor. Prolonged pressure of the baby's head against the back of the pubic bone produces ischemic necrosis of the intervening soft tissue, i.e. some part of the genital tract and bladder.<sup>4</sup> Ischemic tissue necrosis leads to the development of a genitourinary fistula in the puerperium, usually after 7-10 days.<sup>5</sup> Other causes include operative injury, traumatic, malignancy, radiation, infection etc.<sup>3</sup> VVF can be diagnosed by detailed history and clinical examination which includes inspection, palpation, metallic catheterization and dye test. Based on size, VVFs may be tiny (admitting only a small probe), small (0.5-1.5 cm), medium (1.5-3cm), large (>3cm) and extensive i.e. involving major loss of bladder and urethra.<sup>4</sup>

stress incontinence. Totally 27 patients were unsuccessfully repaired. Of which 19 (70.37%) were dropped out, 5(18.52%) were referred and 3(11.11%) had operative failure. Post-operative recovery was mostly (87.13%) uneventful. Urethral leakage (6.93%), blocked catheter ( 2.97%) and UTI (2.97%) were the leading complications. To improve the outcome, more training and skill of surgeons, improvised per-operative and post-operative care is necessary. Approaches should be designed to make the incidence of drop out to zero.

Repair of the VVF is still a challenging task for the fistula surgeons world-wide. The outcome of VVF repair depends on many factors like-site, size and number of fistula, urethral length, bladder capacity and amount of scarring etc.

The shorter the urethra, the higher is the chance of stress incontinence. Other associated responsible factors include good pre-operative assessment and care, timing of operation, effective post-operative care and lastly expertise of the type of surgery. Even experts can not cure every case, however.<sup>4</sup>

This study was designed to assess the outcome of VVF repair in Kumudini Women's Medical College Hospital ( KWMCH), Mirzapur, Tangail.

### Materials and Methods

This study was carried out at the fistula ward under the department of obstetric and Gynecology of Kumudini Women's Medical College Hospital (KWMCH), Mirzapur, Tangail. KWMCH is a 750 bedded hospital, situated in rural area about 60 km away from Dhaka, the capital of Bangladesh. It was a cross sectional study during the period of April 2008 to December 2010. In this period total 101 new patients were admitted and operated in KWMCH. All the patients were enrolled in this study. A data collection sheet was used to collect the information. The information recorded on the sheet were based on detailed history taking by interviewing the patients and attendants, proper clinical examination (sometimes examination under anesthesia), type and location of fistula, methods and attempts of repair, post operative complications and result of operations. All the information and data were systematically recorded and were statistically analyzed.

### Results

All the recorded data were analyzed and was shown in the tabulated form. Table 1 shows, out of 101 patients, 60(59.41%) had small, 27 (26.73%) had medium and 12 (11.88%) had large sized fistula. Only 2 (1.98%) had extensive sized fistula. As per location of fistulae, more than half (57.43 %) were at bladder base. 24.75% were located at neck and 4.95% were at juxtra-cervical region. Circumferential fistulae were 5.94% and 6.93% were located at vault.

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**Table-1: Distribution of patients according to the type and location of fistula. ( n=101)**

Fistula	Number of patients	Percentage
Type	60	59.41
Small	27	26.73
Medium	12	11.88
Large	2	1.98
Extensive		
Location		57.43
Base	25	24.75
Neck	5	4.95
Juxtracervical	6	5.94
Circumferential	7	6.93
Vault		

Most of the fistulas (98.02%) were repaired through vaginal route by flap splitting technique. And only 2(1.98%) were repaired abdominally. ( Transvesical approach) Table-2.

**Table-2: Methods of repair of fistula (n=101)**

Route of operation	Number of patients	Percentage
Vaginal (Flap splitting technique)	99	98.02
Abdominal ( Transvesical)	2	1.98
Abdomino- Vaginal	0	0.00

According to table -3, out of 101 patients, 75 ( 74.26%) were repaired at 1st time, 21 (20.79%) were repaired at 2nd attempt and 2.97% were at 3rd attempt. Only 2 ( 1.98%) repaired at 4th attempt.

**Table-3: Distribution of patients according to attempts of repair ( n=101)**

Number of attempt	Number of patients	Percentage
1 <sup>st</sup> attempt	75	74.26
2 <sup>nd</sup> attempt	21	20.79
3 <sup>rd</sup> attempt	3	2.97
4 <sup>th</sup> attempt	2	1.98

Outcome of 101 patients. 74 (73.17%) were repaired successfully. The rate of unsuccessful operation is 26.73% ( Table 04).

**Table-4: Outcome of VVF repair (n=101)**

Outcome	Number of patients	percentage
Successful	74	73.27
Unsuccessful	27	26.73

The causes of unsuccessful VVF repair are shown in Table-5. Out of 27 unsuccessful repair, drop out were 19 (70.37%), referred to higher centre were 5 ( 18.52%) and true operative failure were 3(11.11%).

**Table -5: Causes of unsuccessful repair (n=27)**

Causes	Number of Patients	Percentage
1. Drop out	19	70.37
a) After 1 <sup>st</sup> attempt	18	
b) After other attempt	1	
Referred to higher Centre	5	18.52
3. Operative failure	3	11.11

Table-6 shows out of 74 patients, 75.68% patients were repaired successfully at 1st attempt and 20.27% at 2nd attempt, 1.35% and 2.7% of patients were successfully repaired at 3rd and 4th attempt respectively.

**Table- 6: Success of repair as per attempt of surgery (n=27)**

Number of attempt	Number of patients	Percentage
1 <sup>st</sup> attempt	56	75.68
2 <sup>nd</sup> attempt	15	20.27
3 <sup>rd</sup> attempt	1	1.35
4 <sup>th</sup> attempt	2	2.70

Table-7 shows that out of 74 successfully repaired patients, 90.54% were really dry i, e no dribbling of urine detected. Rest 9.46% had incontinence.

**Table-7: Functional outcome of successfully repaired patients (n=74)**

Functional outcome	Number of patients	Percentage
No dribbling	67	90.54
Stress incontinence	7	9.46
1. Mild	5	
2. Severe	2	

Table-8 shows recovery of most of the patients (87.13%) were uneventful. Urethral leakage (4.95%) and blocked catheter (2.97%) and UTI (2.97%) were the leading complications. Acute renal failure (0.99%) and post-operative psychosis (0.99%) were also observed.

**Table-8: Post-operative complications ( Immediate and Early) (n=101)**

Complication	Number of Patients	Percentage
Acute renal failure	1	0.99
Blocked catheter	3	2.97
Urethral leakage	5	4.95
Urinary tract infection (UTI)	3	2.97
Post-operative psychosis	1	0.99
No complication	88	87.13

### Discussion:

In this study,101 vesico-vaginal fistula cases were included. Out of these, 59.41% fistulae were small in size and 12%

were large in size. This findings are almost similar to a study carried out at Dhaka Medical College Hospital (DMCH) in 1998 by Akturrenassa.<sup>6</sup> She found the percentage of small sized fistula was 62%. But present finding varies from another study carried out at DMCH over the period from January 2001 to December 2005, done by Homaira.<sup>7</sup> The decreased number of large sized fistula in rural area is an important indication of improved antenatal, intranatal and postnatal care in Bangladesh. This is due to continuous efforts of government and non-government health service provider. But large sized fistulas were found more in DMCH. DMCH is the highest referral center for VVF patients. Most of the difficult, complicated and large sized fistulas are referred to DMCH. So, in this regard variation of findings between KWMCH and DMCH is quite logical and pragmatic. Here almost all the fistulae were repaired vaginally. This findings are similar to the previous findings in Dhaka Medical College Hospital.<sup>8</sup> Pre dominance of vaginal route was found also in other countries.<sup>9</sup>

In this study one important finding was the dropout of the patients. After the 1st attempt of repair, 18 patients were dropped out and after consequence attempts another one was dropped out. The causes of dropout were economical insolvency, acceptance of the condition as destiny and there were nobody to help the patients for attending Kumudini Hospital. Five patients were referred to higher centre. These cases were too much complicated and there is no highly experienced fistula surgeon in KWMCH. Outcome of 101 patients. 74 (73.17%) were repaired successfully.

The rate of unsuccessful operation is 2 Among 101 patients, 74 (73.27%) were successfully repaired, of which 67 became really dry. This is comparable with the standard outcome of VVF repair.<sup>4</sup> This finding also shows that in some cases successful closure of fistula may not totally relief the patients from the distressing symptoms of being wet.<sup>10</sup> Post-operative recovery of most of the patients were uneventful (87.13%). Urethral leakage ( 6.93%), blocked catheter (2.97%) and UTI (2.97%) were the leading complications. One study<sup>7</sup> showed 78% patients had no post-operative complications but 20% suffered from UTI. Probably the high rate of UTI is related to the sterility status of the whole chain and proper post operative care.

## Conclusion

This study has clearly showed the outcome of VVF repair in KWMCH. Here out of 101 patients, 74(73.27%) were successfully repaired. The causes of unsuccessful repair were drop out, referral and operative failure. More training and skill of surgeons, dedicated per-operative and post-operative care can improve the outcome. To minimize the drop-out cases, multi sectorial approach should be taken.

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