

Original Article

Surgical Outcome of Hundred Vesico Vaginal Fistula Patients in National Fistula Centre

*Akhter S¹, Mahbuba M², Yusuf NA³, Munirunnessa⁴, Rosy N⁵**Abstract:**

Vesico-vaginal fistula (VVF) is still a major global health problem. This study was performed to detect the surgical outcome of 100 VVF patients in National Fistula Centre. A descriptive cross sectional study was carried out among 100 VVF patients fulfilling the inclusion criteria admitted in the National Fistula Centre under the department of Obstetrics and Gynaecology during the study period of April, 2017 to September, 2017. During the period, 100 patients presented for surgical repair at a mean age of 28.7 years (SD7.1). Majority of them (49%) had a parity of one and 57% were less than 20 years old at the time of their first pregnancy. About 83% of women developed VVF following prolonged obstructed labour. Most of the fistula (95%) repaired through vaginal route by flap splitting technique and 73% repaired at 1st time. Recovery of most of the patient (75%) was uneventful. Inadequate post-operative care (26.9%) was the major causes of unsuccessful repair. Obstetric fistula is one of the tragedies of third world countries and it would be better solved by providing surgical procedure and easy access of all women to competent obstetrical care, irrespective of their social and economic status during pregnancy and delivery.

Keyword: Vesico-vaginal fistula (VVF), Surgery, Outcome

INTRODUCTION

Urogenital fistula represents a major global health problem, responsible for significant physical, social and

psychological morbidity.¹ Vesico-vaginal fistula is the most common type. A vesico-vaginal fistula (VVF) is an abnormal fistulous tract between the bladder and vagina, causing continuous dribbling of urine via the vagina.² Vesico-vaginal fistula results mainly from obstetrical and gynaecological causes. It is mostly caused by child birth in developing countries like Bangladesh when a woman with prolonged obstructed labour is delivered by unskilled birth attendant, no emergency obstetric care (EOC), lack of proper obstetric management, adolescent pregnancy and repeated child birth.¹ It can also be associated with complicated hysterectomy, following cancer operation, radiation therapy and during cone biopsy.³ Radiation treatment for pelvic cancer can lead to fistula formation as reported in 1.4% to 5.2% of post-radiation hysterectomies.² Focal injuries to the genitourinary tract during hysterectomy and caesarean section causes VVF. Additional causes of vesico-vaginal fistula are congenital abnormalities, infection, trauma and foreign bodies but these are relatively rare.¹

The exact magnitude of VVF worldwide is unknown. The world health organization (WHO) estimates that the prevalence of obstetric fistula is 0.3% of all deliveries.^{1,4} However the WHO estimated that over 20 million women are living with this condition with 50,000 to 100,000 new cases per annum.⁵ This is attributed to poverty, illiteracy, ignorance and poor obstetric services. In low resourced countries (LRC), VVF most often results following neglected prolonged obstructed labour. In contrast, urogenital fistula are relatively uncommon in well resourced countries (WRC). In LRC, while between 30,000 and 1,30,000 new fistulas developed annually.⁶ In Bangladesh, UNFPA (United Nation Population Fund) and Engender Health report finds that the number of women living with fistula is estimated to be 1.69 per 1000 ever married women.⁷ According to this report women living with fistula in Bangladesh are usually in the age group of 15-30 years, illiterate, poor and unaware that treatment is available, or cannot access or afford it. To date, very few concerted efforts have been undertaken to address

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the fistula issue.⁵ In Bangladesh 8,00,000 to 10,00,000 women are estimated to be awaiting repair.⁷

The outcome of VVF repair depends on many factors like site, size, number of fistula, bladder capacity and amount of scarring etc. Other associated responsible factor includes good preoperative assessment and care, timing of operation, effective post operative care and lastly expertise of the surgeon.⁷

MATERIALS AND METHOD

This descriptive cross sectional study was carried out in the National Fistula Centre, Department of Obstetrics and Gynaecology of Dhaka Medical College and Hospital, Dhaka, during the period of April 2017 to September 2017. The criteria for inclusion were diagnosed as a case of VVF and patient willing to participate in the study. Detailed medical and obstetric history was taken and thorough examination was done and all the information were recorded in the pre-designed data collection sheet. The information recorded on the sheet was 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 that included socio-demographic data, post operative complications and results of operations. All the information and data were systematically recorded and were analyzed by SPSS version 23 and was shown in the tabulated form. The quantitative data were expressed in frequency and mean \pm SD and the qualitative data were expressed in frequency and percentage. This study was approved by the Ethical committee of the Dhaka medical college.

RESULTS

Table I is showing that, 100 patients presented for surgical repair at a mean age of 28.7 years (SD7.1). Forty-nine had a parity of one, and 57 were less than 20 years old at the time of their first pregnancy. Thirty-nine experienced incontinence for one to five years at the time of presentation, with 15 women suffering incontinence for longer than five years.

Table II shows that based on complexity of fistula, more than half (53%) were simple (up to 3cm). Depending on the location of the fistula, 48% were at juxta-cervical region and 25% were mid vaginal. Sub-symphysial fistula was 15% and juxta-urethral was 12%.

Table I: Socio-demographic characteristics of the VVF patients

Patient characteristic	Frequency (n=100)
Age at presentation (years)	
11-15	12
16-20	4
21-25	55
26-30	7
31-35	5
36-40	7
41-45	3
>45	7
mean (SD)	28.7(7.2)
Education:	
no education	56
Primary	23
Secondary	12
Higher Secondary	9
Marital status:	
Married	48
Divorcee	32
Separated	18
Widow	2
Parity:	
1	49
2-5	35
>5	16
Mode	1
Age at first pregnancy (years)	
10-19	57
20-29	35
30-39	8
Mean (SD)	19.5(3.1)
Duration of incontinence	
<3 months	17
3 months-1 year	29
1-5 year	39
>5 year	15
Mean (SD)	2.6(4.1) years

Table II: Types of fistula

Types	Frequency	Percentage
Based on complexity:		
Simple up to 3 cm	53	53%
Complicated >3cm	47	47%
Depending on the site of fistula		
Juxta-cervical (vault fistula)	48	48%
Mid Vaginal	25	25%
Juxta urethral	12	12%
Subsymphysial	15	15%

Table III: causes of fistula

Causes of fistula	Frequency
Obstructed labour	83
Instrumental delivery	10
Caesarean section	3
Hysterectomy	2
Trauma	1
Others	2

Table III is showing the causes of VVF in the 100 patients. Among these commonest causes of fistula is obstructed labour (83%).

Table IV: Routes of repair of VVF

Routes of repair	Frequency	Percentage
Trans-vaginal	95	95
Flap splitting method	90	
Saucerization	1	
Colpocleisis	2	
Repair by graft	2	
Trans-abdominal	4	4
Trans-vesicle	4	
Trans-peritoneal	0	
Combined-abdominal-vaginal	1	1

Table IV is showing that most of the fistulas were repaired through vaginal route by flap splitting technique and only 4% were repaired abdominally (Trans-vesicle approach).

Table V: Distribution of patients according to attempts of repair (n=100)

Number of attempts	No. of patients	Percentage
1st	74	74
2nd	21	21
3rd	3	3
4th	2	2
Total	100	100

Table V shows that, out of 100 patients, 74% were repaired at 1st time, 21% were repaired at 2nd attempt and 3% were at 3rd attempt. Only 2% repaired at 4th attempt.

Table VI: Functional outcome among the successfully repaired patients of VVF (n=73)

Functional outcome	Frequency	Percentage
No dribbling	66	90.41
Stress incontinence	7	9.59
Mild	5	
Severe	2	
Total	73	100%

Table- VI showing that, out of 73 successfully repaired patient, 90.54% was really dry, rest 9.46% had mild to severe incontinence.

Table- VII: post-operative complications

Complications	Number of patients
Blocked catheter	5
Catheter leakage	7
Hemorrhage	2
UTI	5
Pyrexia	4
Wound infection	2
None	75
Total	100

Table- VII shows recovery of most of the patients (75%) were uneventful, catheter leakage(7%), blocked catheter (5%), hemorrhage(2%), UTI(5%), pyrexia(4%), wound infection(2%)were the leading complications.

Table- VIII: Outcome of repair

Outcome	No. of patients	Percentage
Successful	73	73%
Unsuccessful	27	27%
Total	100%	100%

Table- VIII: Causes of unsuccessful repair

Causes of unsuccessful repair	No. of patients -26	Percentage
Drop out	13	50%
❖ After 1ST attempt	3	11.53%
❖ After another attempt	10	38.46%
Inadequate post-operative care	7	26.9%
Operative Failure	6	23.07%
Total	26	100%

Table- VIII, among the 100 patients, seventy three cases of VVF was repaired successfully. The rate of unsuccessful operation was 27%.

Table- VIII is showing the causes of unsuccessful VVF repairs. Out of 26 unsuccessful repair drops out were 50%. Inadequate post-operative care was in 26.9% and operative failure was in 23.07% of the cases.

Table IX: Duration of hospital stay

Duration	Frequency
<1 month	68
>1 month	32

Table IX is showing that 68% patients stayed less than 1 month in the Hospital.

DISCUSSION

In this descriptive cross-sectional study, 100 VVF cases were included. Out of the 100 patients presented for surgical repair at a mean age of 28.7 years. In the present study 49% of VVF patients had a parity of one, and 57% were less than 20% years old at the time of their first pregnancy. 39% experienced incontinence for one to five years at the time of presentation, with 15% suffering from incontinence for longer than five years. This findings are almost similar to a study carried out at Kumudini Women's Medical College Hospital in 2011 by Begum². Based on the complexity of fistula, there was no such huge difference between the prevalence of simple (up to >3cm) and complicated (<3cm) fistula which was 53% and 47% respectively. These findings are quite similar with a study done by Humaira in DMCH in 2003⁹. Prevalence of complicated fistulas were found quite similar to simple fistula in DMCH may be due to DMCH is the highest

referral center for VVF patients. Most of the difficult complicated and large sized fistulas are referred to DMCH. Based on the location, 48% were at Juxtra-cervical region which is more than the previous studies done at Kumudini Womens Medical college Hospital in 2011² and DMCH in 2003.⁹ Eighty three percent women with VVF had the features of obstructed labour. This findings are inconsistent with that of done by Humaira⁹ and Begum.² About 66.6% of the cases of VVF were found due to obstructed labour in a study done in 2013 by Mazher.⁸ Many international studies have also labeled obstetrical trauma to be the major cause of VVF in under developed countries.^{5,6,7} Most of the fistulas (95%) were repaired through vaginal route by flap splitting Technique. This findings are similar to the previous findings in DMCH.⁹ Predominance of vaginal route was found also in other countries.¹⁰ Out of 74 successfully repaired patients, 66% were really dry, no dribbling of urine detected. This is also in accordance with other studies carried out in our country.² Recovery of most of the patients (75%) were uneventful⁹. The rate of unsuccessful operation is 26 among 100 patients. Drop out rate was 50%. Inadequate post-operative care was one of the major causes of unsuccessful repair (26.9%). Present finding varies from another study carried out at DMCH done by Humaira where post operative mismanagement were found in 33%.⁹

CONCLUSIONS

This study clearly analyzed the outcome of repair of vesico-vaginal fistula. Most of the cases had successful repair in DMCH. The study population was selected from one selected hospital in Dhaka city, so that the result of the study may not represent the whole population. More training and skill of surgeons for repair of fistulas, employing modified techniques wherever applicable can improve the result. Post-operative mismanagement and catheter problem can be minimized to get maximum successful outcome of repair. Obstructed labour is the

major causes of VVF in the study which indicates the poor antenatal and intranatal care in Bangladesh. Though concerted action, in our country, we can prevent fistula through proper treatment, who are still suffering from fistula. Increase awareness about VVF and knowledge how to prevent it and treatment providing in tertiary level hospital through government and non government organization should be encouraged.

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