

Out Come of Vesicovaginal Fistula Repair

SOBIA MAZHAR, GHULAM SARWAR RIAZ, SADAF SALEEM AKHTER
Department of Obstetrics &Gynaecology, Multan Medical Dental College, Multan.
Correspondence to Dr. Sobia Mazhar, Assistant Professor

ABSTRACT

Aim: To evaluate the outcome of vesicovaginal fistula (VVF) repair.

Design: A descriptive study.

Place and duration of study: The Department of Obstetrics and Gynaecology, Ibn-e-Siena Hospital, Multan Medical and Dental College, Multan, from June 2011 to May 2013.

Methods: The patients presenting with vesicovaginal fistula after clinical examination and investigations were selected. Investigations include intravenous urogram (IVU), abdomen pelvic ultrasound, three swab test, cystoscopy and examination under anaesthesia. Those having urethral, ureteric and colonic involvement, malignant pelvic tumors and radiation induced VVF were excluded. Total of 24 patients were selected. Surgical repair was performed through vaginal route in 21 patients and through abdominal route in 3 patients.

Results: Out of 24 patients surgical repair proved successful in 20 (83.3%) patients and repair of VVF failed in 4(16.6%) patients.

Conclusion: Birth trauma is the most common cause of VVF in our study. Surgery remains an effective treatment for VVF.

Keywords: Vesico vaginal fistula, obstetrical trauma, surgical repair.

INTRODUCTION

Vesicovaginal fistula has been a social and surgical problem for centuries. Vesicovaginal fistula leads to devastating effects on physical, social and mental health of women. Vesicovaginal fistula is a condition that has been known since ancient times being recognized in mummified remains of Egyptian Queen Henheit back in 2000 BC¹

This condition is still prevalent being more common in developing countries², especially in Africa and parts of Asia due to lack of maternity services^{3,4}. Numerous factors contribute to development of VVF in developing countries. Commonly these are areas where culture encourages marriages and pregnancy at a young age often before full pelvic growth has been achieved. Chronic malnutrition further limits pelvic dimensions. Only few women have access to medical facilities during child birth. Their obstructed labour may be protracted for days or weeks. Fistula is associated with poverty, poor medical services and social discrimination against women.

Surgical trauma, genital tract malignancies and ionizing irradiation are largely responsible for few cases of genital tract fistula in developed countries^{5,6}

In Pakistan majority of the cases of VVF are due to obstetrical trauma^{7,8,9}. According to WHO globally each year some 50,000—100,000 women develop obstetric fistula while giving birth. This figure is based on women seeking treatment (the majority do not) and it likely grossly underestimates the true prevalence of this condition. Vesicovaginal fistula is characterized by continuous leakage of urine with persistent perineal wetness, urinary stench and perineal excoriation.^{3,4}

Surgical repair for vesicovaginal fistula can be performed through vaginal or abdominal route. The choice of procedure in a particular patient depends upon location of fistula, presence or absence of vaginal stenosis and experience of surgeon. To increase vascularity and provide support to the repaired tissue synthetic and tissue graft interposition in between bladder and vaginal mucosa is done.

PATIENTS AND METHODS

This study was conducted in department of Obstetrics and Gynaecology, Ibn-e-Siena Hospital, Multan Medical Dental College Multan from June 2011—May 2012. Total of 24 patients with VVF were admitted. Those having urethral, ureteric or colonic involvement, malignant pelvic tumors and radiation induced fistulas were excluded from the study. Detailed history was taken. The age, parity, place of delivery,

duration of labour, mode of delivery, H/O previous pelvic surgery was recorded. Intravenous urogram (IVU) was performed to look for any ureteric involvement. Examination under anaesthesia and cystoscopy was performed in all patients to evaluate the size, site and number of fistula. Vaginal examination was performed to assess the vaginal opening of fistula. 21 patients were operated via the vaginal route and 3 patients via abdominal route. In these 3 patients inter position of omental graft was done. Patient operated via the abdominal route have large or high fistulas. Post operatively patients were kept in ward for 7-10 days and they remained catheterized for 14-21 days. Postoperative complications like sepsis, hematuria, paralytic ileus, failure of repair were noted. Repair was considered successful if patient remained symptom free post operatively.

RESULTS

In the 2 year study, total of 24 patients were included. In 21 patients VVF repair was performed through vaginal route while 3 patients were operated abdominally. In these 3 patients inter position of omental graft was done. Most of the patients with VVF are young women in child bearing age. Age range was 18-60 years. Nineteen patients (79%) were between 18-40 years (Table 1)

Table 1: Distribution of patients according to age

Age in years	=n	%age
18-30	9	37.5
31-40	10	41.6
41-50	3	12.5
50-60	2	8.3

In 16 patients (66.6 %) fistula followed the obstructed labour while in 2 patients (8.3%) it occurred after cesarean section. 1 patient (4.1%) developed VVF after cesarean hysterectomy. Total 19 patients (79%) developed VVF due to obstetrical cause. Gynaecological surgery (total abdominal hysterectomy and dilatation and curettage) leading to VVF is seen in 4 patients (16.6%), 1 patient (4.1%) had surgery on the bladder in peripheral hospital (Table 2)

Table 2: Causes of VVF

Obstetrical causes	=n	%age
Obstructed labour	16	66.6
Cesarean section	2	8.3
Cesarean hysterectomy	1	4.1
Gynaecological causes		
Abdominal hysterectomy	3	12.5
D & C	1	4.1
Other operations		
Surgery on bladder	1	4.1

Out of 24 patients 7 patients had prior fistula repair attempts (1-2) without success while 17 had no previous attempts of repair of fistula. Out of 24 patients 20 patients (83.3%) had successful VVF repair (Table -3). The repair was unsuccessful in 4 patients (16.6%). In 3 patients operated abdominally the VVF repair was successful.

Table 3: Result of VVF repair

Results	=n	%age
Successful	20	83.3
Unsuccessful	4	16.6

All the patients were given antibiotics in post operative period for 7-10 days. Patients remained catheterized for 14 days post operatively. One patient required catheterization for 4 weeks due to urinary retention. Two patients developed fever, 2 patients urinary stress in incontinence and they were treated conservatively. It subsided in 1 patient but persisted in other patient for long term.

DISCUSSION

This study was carried out in Obstetrics and Gynaecology Department, Ibn-e-Sina Hospital Multan Medical and Dental College, Multan, to evaluate the outcome of VVF repair. Vesicovaginal fistulas are mostly seen in young women of child bearing age^{10,11}. Major cause in developing countries is obstetrical trauma¹¹⁻¹⁴. Our study showed that in 79% patients cause of VVF obstetrical trauma. 66.6% of the cases of VVF are due to obstructed labour. In obstructed labour there is pressure necrosis of bladder and vaginal wall between the fetal head and pubic bone. Many international studies have also labeled obstetrical trauma to be the major cause of VVF in under developed countries.^{15,16,17} This is also in accordance with other studies carried out in Pakistan¹⁸⁻²¹.

However study by Jafari AA et al²², showed that 20% of the patients developed VVF due to obstructed labour which is in contrast to our study. WHO estimates that atleast two million women remain untreated in under developed countries even though fistula is both preventable and treatable. Improved obstetric care, access to maternal health care services are basic requirements for the prevention of VVF.

In our study most of repairs were done through vaginal approach. The repair through this route can be easily performed under regional anaesthesia. The benefits include early resumption of oral feeding, lesser risk of anaesthesia complications and reduction in the cost of surgery. However vaginal approach is constrained by limited operating space.

The success of VVF has been regarded as closure of fistula and patient became continent. In our series success rate is 83.3% which is comparable with the studies presented world wide^{23,24} but study conducted by Nargis et al²¹ and Memon GU et al¹⁸ showed success rate of 67% and 69% respectively. Rasool M et al²⁵ reported success rate of 100% with vaginal repair.

Timing of the repair of fistula is very important. In our study time lapse before the repair was at least 3 months. General health of patient should be improved. Before repair it is important that surrounding tissues are in healthy condition i.e. no oedema or inflammation. Similar practice has been seen in other studies¹¹⁻¹⁴.

Variety of tissues like omental or peritoneal flaps, gracilis muscle can be interposed between vagina and bladder to provide support and to increase the vascularity of tissue. In our study the 3 patients in whom VVF repair was done abdominally inter position of omental flap was done. In these 3 patients VVF repair was successful.

Other techniques of vesico vaginal fistula repair like laparoscopic and robotic repair, transurethral repair and closure of fistula with fibrin glue have been introduced. They are found successful in well selected cases.

CONCLUSION

Birth trauma is the major cause of VVF in our study. Through concerted action, in our country, we can prevent fistula and for those now suffering, through treatment, we can restore hope and dignity to their lives.

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