

Iatrogenic Vesicovaginal Fistula

Yasmin Raashid¹, Tayyaba Majeed¹, Naeem Majeed², Nadeem Shahzad³, Shafia Tayyab² and Hussain Jaffri²

ABSTRACT

Objective: To find the frequency of iatrogenic VVF in patients admitted for repair of VVF in Lady Willingdon Hospital, Lahore.

Study Design: An observational study.

Place and Duration of Study: Lady Willingdon Hospital, Lahore, from January 2007 to December 2008.

Methodology: All cases of VVF treated at the centre during the study period were included in the study. The patients were admitted and evaluated through detailed history, physical examination, relevant investigations and evaluation under general anaesthesia (EUA). Iatrogenic VVF was defined as the one following gynaecological procedure. Repair was done through abdominal or vaginal route based on the findings of EUA. Results of repair were noted and analyzed using SPSS version 12.

Results: Iatrogenic cases of VVF made more than half of the total cases (54%) while 46% were due to obstructed labour. Women under the age of 40 years, made up 77% of the total cases. The success rate for repair of VVF was 87%.

Conclusion: This study shows that iatrogenic injuries in women under 40 years of age form a major share in the etiology of VVF requiring a check on the experience of surgeons doing the gynaecological and obstetrical surgeries in a developing country.

Key words: Vesicovaginal fistula. Obstructed labour. Hysterectomy. Iatrogenic.

INTRODUCTION

Vesicovaginal fistula (VVF) is an abnormal communication between the urinary bladder and vagina resulting in an uncontrollable, involuntary leakage of urine in vagina.¹ This complication has been recognized since ancient times, being noted in the Egyptian mummy dating back to 2000 BC.² It is still a common problem in the developing world, as 84-97% of cases occur in these countries.³ In developing countries the major cause is obstructed labour while in developed countries, 90% of VVF are caused by gynaecological procedures.^{4,5} The iatrogenic fistulas caused by surgeries are seen most commonly in transabdominal and transvaginal hysterectomies and comprise 75% of fistulas.⁶ Fistulas could also occur due to urological and gastrointestinal surgeries, illegal abortions, and in LSCS.⁷ An overall incidence of 0.33% urinary tract injury has been reported in all pelvic surgeries.⁸ This constant dribbling of urine due to VVF has a profound effect not only on the physical health of the woman; it also causes immense psychosocial problems in her life.⁹ Robertson gave an emphatic account of the social and hygiene problems faced by the victims.¹⁰

In Pakistan, obstructed labour is still considered to be the major cause of VVF as 80-90% of the cases reported occur because of this obstetric complication.¹¹ However, the authors observed that iatrogenic injury was an equally important cause of VVF particularly in patients seen at Lady Willingdon Hospital. The reasons for this changing trend in the etiology of VVF can be that in Punjab there has been a marked improvement in skilled birth attendance.¹² Patients with obstructed labour are timely referred for surgical interventions therefore, reducing the number of VVF occurring due to obstructed labour. Whereas gynaecological operative procedures like; abdominal hysterectomies and vaginal hysterectomies are being performed in the periphery by doctors not trained in this specialty. Therefore, this study was conducted to find out the changing trends in the frequency of iatrogenic injuries in the etiology of all the patients admitted for the treatment of VVF at Lady Willingdon Hospital (LWH), Lahore.

METHODOLOGY

This study was carried out at the Fistula Ward of Department of Gynaecology and Obstetrics, LWH, Lahore from January 2007 to December 2008. All females complaining of urinary incontinence due to VVF, referred to Outpatient Department of Lady Willingdon Hospital, Lahore were included in the study. Cases of stress incontinence and rectovaginal fistula were excluded from the study. A detailed history was taken to record demographic variables e.g. age, parity, cause and time interval of appearance of fistula after surgery or delivery and previous attempts of repair, if any. After informed verbal consent, the selected patients were

¹ Department of Obstetrics and Gynaecology, King Edward Medical University, Lahore.

² Research Unit/Department of Obstetrics and Gynaecology³, Lady Willingdon Hospital, Lahore.

Correspondence: Prof. Yasmin Raashid, 91-B, Iqbal Housing Avenue, Johar Town, Lahore.

E-mail: yasmin@thalassaemia.org.pk

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subjected to thorough physical examination and the patients were admitted for operative repair. Along with the routine investigations, an IVU was done and an examination under anaesthesia (EUA) was performed to assess the number, site and size of fistula. Cystoscopy was done in only those patients where the findings were not clear on other investigations. The route for the procedure (abdominal/vaginal) was planned after EUA.

The cases were then operated upon by gynaecologists and where necessary, urologists became a part of the team. Retrograde catheterization of ureteric orifices was carried out where required. The vaginal route was used for repair in 53 cases while 8 were repaired using the abdominal route. In 3 patients omental pedicle grafts were applied. Postoperative cases were nursed in the intensive care unit. Parenteral antibiotics were given for 7-10 days postoperatively. Adequate hydration was maintained with fluids and special care was taken for continuous drainage of urine for 21 days. Routine urine examination was done to exclude any infection. In case of any infection, culture sensitivity of urine was done and specific antibiotics were given. Success rate was described and evaluated as symptom free state at follow-up visit (after 6 weeks).

Data was analyzed using SPSS software (version 12). Simple descriptive statistics were calculated. Age was presented as frequency distribution table. Frequency and percentage was calculated for certain variables i.e. iatrogenic VVF and success of the repair.

RESULTS

During this 2 years study period, 61 cases of VVF were referred to LWH, Lahore, for management. All patients presented with incontinence of urine. The number of iatrogenic cases were 33 (Table I). That included 25 cases after hysterectomy for gynaecological indications, 2 after caesarean hysterectomies and the 5 after LSCS for indications other than obstructed labour and one instrumental delivery which was not for an obstructed labour. The VVF caused by obstructed labour was seen in 28 cases which included 17, who developed VVF after delivery and 11 after LSCS. In the 2 cases that developed VVF after a hysterectomy done for obstetric reasons, one was done for the postpartum haemorrhage and the other for the removal of the ruptured uterus. The total number of cases which had undergone hysterectomies were 27 and all had been done through the abdominal route. Out of those, 25 had developed VVF after hysterectomies for gynaecological indication, while 2 were for obstetric indications. Patients who developed a VVF after LSCS were 16 in number and out of these 11 of the LSCS had been done for obstructed labour while 5 had been done for other indications. Out of the 18, who had developed VVF after delivery, 17 developed it after obstructed labour and one developed a VVF after instrumental delivery (Table I). The age distribution is given in Table II.

Table I: Causes of VVF (n=61).

Cause	Procedure	No. of patients	Percentage (%)	Total patients	Percentage (%)
Iatrogenic	Hysterectomy (Gynaecological)	25	89		
	Hysterectomy (cesarean)	2	100		
	Instrumental delivery	1	4	33	54%
	Lower segment CS (for reasons other than obstructed labour)	5	7		
	Post delivery	17	60		
Obstructed labour	Lower segment CS (for obstructed labour)	11	40	28	46%
	Total	-	-	61	100

Table II: Distribution of Women with VVF according to age group (n=61).

Age group of patients	Number of cases	Percentage (%)
20-40 years	47	77
41-60 years	14	23
Total	61	100

Out of these 61 cases, 53 (87%) were repaired using the vaginal route while 8 (13%) were repaired using the abdominal route. Successful repair was achieved in 53 (87%) of the cases while failure was observed in 8 (13%) cases. Forty six (87%) of the VVF repaired through vaginal route were successful while 7 (13%) were unsuccessful. Similarly, 7 (88%) of the VVF repaired through abdominal route were successful, while 1 (12%) was unsuccessful.

DISCUSSION

VVF still ranks as one of the major gynaecological problems in many developing countries.¹⁴ Its impact lies on the social life of women. Uncontrolled leakage of urine into the vagina or incontinence along with odour and discomfort causes serious social problems resulting in multifaceted problems for women.¹⁵

Different studies in Pakistan have labeled obstructed labour as the most common etiological factor for VVF,¹⁴⁻¹⁷ while in the developed countries, gynaecological procedures are considered to be responsible for most of the VVF cases.⁴ However, this study showed that 54% of the cases were iatrogenic in origin whereas 46% of the cases were due to obstructed labour. In comparison a report of 2004 from the same hospital showed that 79% of fistulas were obstetric in origin.^{16,18} Similarly it was seen in a study in Sir Ganga Ram Hospital, Lahore, in 2005 that 71% of the patients admitted for fistula repair had an obstetric cause.¹⁹ This shows that in the last 3-4 years there has been a rise in iatrogenic cases being admitted in tertiary care hospitals of Lahore. Majority of the patients who came to LWH had been operated in private hospitals in the periphery and some had even been operated in small towns. The development of VVF in the post-hysterectomy cases

indicates that they had been operated upon, either by inexperienced surgeons or surgeons who lacked proper training in this field.

In this series, the second most common cause was obstructed labour (46%) where the VVF developed after a normal delivery or after a lower segment caesarean section (LSCS) done for obstructed labour. This pattern is different from other studies in Pakistan, where majority of the patients who presented with VVF had obstructed labour as a predominant cause.^{13,15,16,17}

Majority of patients, 47 (77%) were below 40 years of age while only 14 (23%) were above 40 years of age. The disturbing part is that majority of the cases occurred in younger age group and if not treated these women would have to spend a long part of their lives with this affliction, creating social and psychological problems in addition to medical issues.

The surgical approach selected for repair depended on factors like the site, size and the number of previous repairs. The overall success rate of the VVF repair in the patients included in this study was 87% which is comparable to other studies in Pakistan.^{15,16,18}

This study was limited to the cases presented at Lady Willingdon Hospital and it could be biased, as the cases that did not present at the Hospital were not included. Thus, it could be possible that VVF is still being caused more commonly by obstructed labour rather than iatrogenic cases. However, the occurrence of new cases of iatrogenic VVF can be reduced by enhancing the anatomical knowledge and surgical skills of the surgeons practicing in this field. Only qualified surgeons should be allowed to perform such surgeries and they should also restrict themselves to their domains of expertise. There should be a strong audit system for major surgical procedures. Early recognition and timely referral can help in proper treatment and provision of psychological, social and rehabilitation support by health care system to the victims of fistulae.

CONCLUSION

This study shows a rising trend in iatrogenic injuries in the last 3-4 years resulting in VVF in patients admitted LWH. As majority of the patients came from peripheral hospitals, it is an indication that gynaecological surgery is being performed by untrained hands in the periphery.

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