

Eight Years Experience in the Surgical Management of Vesico Vaginal Fistula

NAILA YASEEM MAHMOOD ALEEM

ABSTRACT

Objective: To review the etiology and success of transvaginal three layer repair with delayed absorbable suture material in simple vesicovaginal cases.

Design: Prospective study.

Place and duration of study: This study was carried out in DHQ Hospital, Faisalabad over a period of eight years from December 1996 to December 2004.

Patients and methods: This study was conducted in DHQ Hospital Faisalabad over a period of 08 years from December 1996 to December 2004. Patients were admitted through gynaecology outpatient Department. Patient's age, socioeconomic status, education, nutritional status, obstetrical history, previous history of surgery, i.e., caesarean section, caesarean hysterectomy, abdominal hysterectomy, vaginal hysterectomy and repair, previous history of vesicovaginal repair were noted. Complex fistula, postradiation fistulae and fistula requiring repair other than transvaginal route were excluded from the study.

Results: During 8 years study period sixty patient with a history true incontinence were confirmed to be patients of simple vesicovaginal fistula. 52(86.5) patients developed vesicovaginal fistula after obstructed lab our. 4(6.6%) had gynaecological operation as the primary cause for their fistula while the remaining 4(6.6%) resulted from the instrumental delivery by untrained person. **Conclusion:** 93.2% of vesicovaginal fistula resulted after obstructed labour and instrumental delivery. Vesicovaginal fistula can be successfully managed surgically. Standard obstetrical care can reduce such occurrence.

Key words: Vesicovaginal fistula, etiology, obstructed labour, surgical management.

INTRODUCTION

Vesicovaginal (VVF) fistula is a health condition caused by the interplay of numerous physical factors and the social, cultural, political and economic situation of women. This interplay determines the status of women, their health nutrition, fertility, behaviour and susceptibility to VVF¹. It is a distressing condition for the patient and also for the surgeon. It upsets the life of patient socially, sexually and obstetrically. The most traumatic aspects of VVF from social point of view are resulting incontinence, childlessness (which lead to marital break down and eventually divorce) and social excommunication. It is part and parcel of gynaecological practice in developing countries where obstetric care is scarce, the socioeconomic status poor and surgery is done by unqualified persons in poor sterilization². In developing countries, 90% of fistulas are caused by obstructed labor³. Lack of skilled attendance at birth, lack of emergency obstetric care and lack of transportation to maternity facilities contribute to the high rates of prolonged and obstructed labour and

resultant fistula in developing countries. Fistula afflicts millions of women in developing countries

Each year an estimated 50,000 to 100,000 more women develop obstetric fistula^{4,5}. It has been estimated that the WHO has estimated that over 2 million women are living with untreated obstetric fistula. Obstetric fistula is rare in the developed world because emergency obstetric care is readily available. When fistula occurs at all, they usually are the result of cervical cancer and radiation therapy or injuries sustained in surgery and are treated without delay⁶. Successful repair of vesicovaginal fistula, where give a good name and fame to the surgeon, simultaneously a much better medical and social relief to the patient⁷. For the service of developing countries women health, gynaecologist must be aware of this troublesome problem and should have reasonable expertise to deal with situation⁸.

AIMS

To review the etiology and success of transvaginal repair in simple vesicovaginal fistula cases.

MATERIAL AND METHODS

This study was carried out in DHQ Hospital, Faisalabad from December 1996 to December 2004. Sixty fistula patients were admitted in Gynae Ward

Department of Obstetrics & Gynaecology, DHQ Hospital, Faisalabad

Correspondence to Dr. Naila Yasmeen

Received October 2007; accepted January 2008

from OPD with complaint of persistent leakage of urine. Patient's age, parity, socioeconomic status, education, presentation and underlying factors leading to fistulae were noted. There were varieties of investigations carried out in the diagnosis of vesicovaginal fistula in our cohort.

The commonest was introduction of methylene blue into the bladder and examination under anaesthesia, intravenous urogram for detection of concomitant ureterovaginal fistulae, and cystoscopy in selected cases. All complex fistula and those requiring repair by routes other than vaginal (transvaginal) were excluded from study. Surgery was performed after 12 weeks from the one set of fistula. The vaginal repair technique chosen was layered closure. Postoperative continuous bladder drainage was done for two weeks using transurethral catheter. The patients were re-examined before discharge. They were advised to avoid coitus for three months. Follow up visits were planned after six weeks and three months. Elective caesarean section was advised for future pregnancy. All these information were recorded in an especially designed proforma.

RESULTS

A total of 60 vesicovaginal fistulae patients were managed surgically during study period. Age of patient ranged between 16-40 years. Majority of patients were uneducated, belonged to poor socioeconomic class and came from rural areas. The commonest etiological factor of vesicovaginal fistula recorded in our study was obstructed labour, which account (86.6%) of total fistula cases. The other causes were instrumental delivery by unskilled persons and fistula resulted after hysterectomy, performed by less trained personnel. The average time of presentation was 60 days after the occurrence of fistula. Presentation of all patients were persistent leakage of urine. Surgery was done 3 months after the development of fistula using transvaginal layered closure technique. Postoperative hospital stay ranged between 14-21 days. There was a 93.3% success in the first repair.

Table 1: Area distribution of patients

Area	=n	%age
Urban	10	16.6
Rural	50	83.3

Table 2: Age of patients

Age	=n	%age
16-20 years	40	66.6
30-40 years	20	33.3

Table 3: Education of patients

Education	=n	%age
Illiterate	54	90
Primary	04	6.6
Secondary	02	3.3

Table 4: Incidence of aetiology

Cause	=n	%age
Prolonged obstructed labour	52	86.6
Forceps delivery	04	6.6
Post hysterectomy	04	6.6

Table 5: Success rate

Successful repair	=n	%age
First attempt	56	93.3
Second attempt	0	0
Third attempt	0	0

DISCUSSION

Vesicovaginal fistula, a marker of poor health care, rather a miss maternal death, most common cause of this problem is prolonged obstructed labour (76%), which corresponds to other studies in Pakistan⁹. While the predominant causes of vesicovaginal fistula in developing countries are obstructed labour and lack of prompt access to emergency obstetric care, pervasive poverty is often a root cause. Studies show that fistula patients tend to live in remote areas and to be impoverished^{10,11}. Factors typically associated with inadequate health care during pregnancy and delivery and thus with increased risk of obstetric complications. With less access to obstetric care, rural women are more likely to suffer from fistula than urban women^{11,12}. Among rural women those with lower social and economic status are more likely than others to suffer fistula and other obstetric problem^{5,13}. Although obstructed labour and obstetric fistulas can occur at any age during the childbearing years, adolescent women are at particular risk, especially where early marriage is common. In many developing countries many adolescent women are undernourished, stunted and under weight, factors that compound the risks of early pregnancy^{5,14}.

Most of fistula patients in our study came from rural areas and were young, uneducated, malnourished and belonged to poor socioeconomic status.

Vesicovaginal fistula is one of the most devastating consequences of obstructed labour. Fortunately, advances in obstetric care have made the serious consequences of obstructed labour nearly obsolete in the developed world. However, in the developing world, obstructed labour continue to be a common. Serious medical problem with thousands of women suffering significant morbidity

each year. A study carried out by Mustaf and Rushwan (1971) IN Khartoum in the late 1960¹⁵, confirmed that the major cause of vesicovaginal fistula is prolonged obstructed labour which is often followed by instrumental delivery (mainly forceps) and gynaecological operations. With regard to etiology our series presented here compares favourably with study of etiology of vesicovaginal fistula in developing countries. 93.2% of our cases related to obstetric factors such as obstructed labour, and instrumental deliver, while 6.6% were of gynaecological origin. Women typically present with specific intervals after the various antecedent events (child birth, pelvic surgery) with a primary complaints of constant, painless urinary incontinence. If the fistula is related to traumatic child birth, most patients experience urine leakage with in the first 24-48 hours. Following pelvic surgery, symptoms usually occur with in the first 30 days. The patients in our study presented with history of uncontrolled leakage of urine between 1 to 3 months after delivery (obstetrical injury) and 3-6 months after pelvic surgery.

Symptomatic vesicovaginal fistula merits appropriate treatment. If a fistula is suspected immediately following an obstructed labour, the patient may initially receive continuous bladder drainage to avoid stretching the injured tissues, which would impede healing. Prompt catheterization increases the likelihood of spontaneous closure of some fistula^{16,17}. Varing success rate have been reported for conservative management.

In our study one fistula patient responded to conservative therapy i.e., continuous bladder drainage for 4 weeks. Most fistula require surgical repair. Successful repair can depend on both the initial stat of fistula and the skill of the surgeon as well as on the quality of post operative care¹⁸.

Most surgical experts recommend waiting two to three months after the fistula has occurred before attempting repair in order to avoid operating on dying tissues¹⁹. Margolis and Mereer simply recommend delaying surgery until inflamed and infected tissue has been treated and the infection and inflammation have resolved²⁰. In our study we waited at least 3 months prior to attempting repair. There are internationally recognized techniques for fistula repair²¹. The specific method used usually depends on the surgeon's preferences and the nature of fistula. Most gynaecologist seem to favour the transvaginal repair while urologist prefer transabdominal repair^{22,23}. Transvaginal repair achieve comparable success rate, while minimizing operative complications, blood loss and hospital stay. There is a reduction in length of postoperative hospitalization as well as perioperative bleeding²⁴.

Additionally vaginal approach obviates bowel manipulation reducing operative morbidity²⁵. It has obvious advantages in term of cosmesis and patient discomfort. It also ensure that repair is performed outside of a recently operated pelvis. The abdominal route may be preferred when fistula is high and inaccessible, large and complex, multiple in number or when there is concurrent uterine or bowel involvement or a need for ureteral reimplantation.

The vaginal repair techniques can be categorized as to those that are modifications of the Latzko procedure or a layered closure with or without a Matius flap. Transvaginal approach for repair of simple vesicovaginal fistulae remained the procedure of choice in our study.

A laparoscopic repair has been reported with comparable result but requires advanced skill with endoscopic suturing and knot tying²⁶.

Recovery after surgery takes two weeks, during which the patient needs to drain her bladder through catheter^{6,27}. Continuous bladder drainage for 10-14 days following the repair, is vital for successful vesicovaginal fistula repair²⁸. In our study postoperative continuous bladder drainage done for 2 weeks using transurethral catheter.

However, to date no prospective randomized trials have demonstrated the superiority of any single type of catheter drainage. Post fistula repair stress incontinence occurs in approximately 10% of patients²⁹. In our study 5(8.3%) patients developed stress incontinence^{30,31,32,33}.

Surgeon can repair fistula successfully in 80 to 90% of cases^{26,27,28}. Success rate declines with increasing attempts at closure. Patients undergoing their third attempt had only 33% successful repair³⁴.

The success rate of fistula surgery in our study was 93.3%. This high success rate was because of proper preparation, selection of simple vesicovaginal fistulae and expertise of the surgeon.

The developing world the true incidence of vesicovaginal fistulas is unknown, as many patients with this condition suffer in the silence and isolation. Some estimates place the worldwide prevalence as high as 2 million women worldwide³⁵.

The problems of fistula, both medical and social are likely to persist until better health care reaches the poor and most vulnerable members of society.

Three elements form the core of a comprehensive approach to helping women and their family.

1. Reducing the number of adolescent pregnancies by encouraging late marriage and expanding access to family planning services.
2. Amenable to surgical repairs with good outcome.

3. Improving access to good obstetric care including emergency care.
4. Providing surgical treatment and counseling to women living with fistula.

Vesicovaginal fistula remains “one of the most neglected issues in international reproductive health”. To end the neglect requires commitment and action from policy makers, government and the international health community. The more that opinion leaders recognize the scope of obstetric fistula and understand the severity of its medical and social consequences the more likely that a consensus will develop to take action⁵.

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