ORIGINAL ARTICLE

Seven Years Experience of Surgical Management of Vesicovaginal Fistula at Regional Centre in Khyber Pakhtoon Khwa (KPK)

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ABSTRACT

Aim: To review our experience in the management of GUF over seven years period with emphasis on causes and outcome of surgical management.

Methods: This study was carried out at Regional Fistula Center, Lady Reading Hospital, Peshawar, KPK. This study included all the patients with VVF from Jan 2006 to Dec 2012. During this period we received 180 patients suffering from vesicovaginal fistula (VVF). We excluded the patients with ureterovaginal fistula and fistula secondary to malignancy or radiotherapy.

Results: One hundred and eighty cases were included in the study. The mean age was 35(15-55) years with parity ranging from one to nine. Obstetric cause was found in 81.66% cases, while 18.33% developed VVF secondary to gynaecological surgery. 89.3% women came from rural areas and 92.90% belonged to low socioeconomic strata of society. The commonest site of fistula was anterior vaginal wall (45%) and vault (27.22%). Size of fistula varied from 0.3cm to 5 cm. Obstructed labour contributed to 86(58.50%) cases while ruptured uterus ending in subtotal abdominal hysterectomy (STAH) accounted for 25(17%) cases. Instrumental delivery and Caesarean section contributed to 12.9% and 11.6% cases. Gynaecological fistula was seen in 33(18.3%) women. Transvaginal repair was done in 131(72.77%) cases and transabdominal route was chosen in 49(27.22%) cases. Successful surgical repair was reported in 85.55% case.

Conclusion: VVF is mainly caused by obstetrical complications. Despite its impressive outcome of surgical repairs, emphasis should be shifted towards the prevention of this devastating condition.

Keywords: Vesicovaginal, Subtotalabdominal hysterectomy, Management

INTRODUCTION

Vesicovaginal fistula is an abnormal communication between genital tract and urinary system. This abnormal communication causes continuous involuntary leakage of urine. In developing countries VVF is one of the most distressing complications of prolonged and obstructed labour[1]. This causes serious social and psychological problems, which leads to social cut off and even divorce in some cases. Today VVF secondary to obstetric causes is rare in developed world (5-8%)[2] while in contrast it is still the commonest cause (84-97%) in developing countries including Pakistan[3,4].

Poor socioeconomic class suffers the most due to lack of proper Antenatal care, neglected prolonged labour in the hands of untrained persons especially 'Dais'. There is marked pressure necrosis, oedema and tissue sloughing. The frequency of VVF is largely under reported in developing countries.[5-7] Majority of GUF in developed countries are a consequence of Gynaecological surger[8,9].

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Various methods of surgical repair are adopted to deal with this problem with different indications and success rates. Overall up to 90-91%[10] of the patients of reported to be cured. Vesicovaginal fistula is most commonly repaired transvaginally as most of the gynecologist finds this approach more convenient. Transabdominal route is adopted mostly by urologists particularly in cases where the fistula is too large to be repaired transvaginally. Scar of previous surgery and severe vaginal stenosis also makes it difficult to repair the fistula transvaginally. In general upto 80% fistulae are repaired transvaginally[11].

MATERIAL AND METHODS

This study was undertaken from January 2006 to December 2012 at Regional Fistulae center of LRH, Peshawar KPK as a part of UNFPA funded project. All the patients with complaints of urinary leakage and diagnosed on the basis of history and clinical examination as VVF were included. The patients with previous unsuccessful repair were also included. The surgery was planned after three month of Obstetric and Gynecological trauma or previous attempt of repair. All the patients were initially admitted and enrolled for thorough evaluation by detailed history,

physical examination and laboratory investigation including IVU and cystoscopy. Examination under anesthesia was performed to know exact site, and size of fistulae, surrounding fibroids and extent of vaginal stenosis. The women having ureterovaginal fistulae due to complete transaction or obstruction of either ureter were excluded from our study and were referred to urologist.

Route of repair was decided after examination full investigation and according to size and site of fistulae. The patients with large fistulae near the trigone or supra trigonal area, vesico uterine or vesico cervical fistulae were subjected to Trans Abdominal route of repair. Rest of patients had Trans vaginal route for surgery. Postoperatively the patients were given I/V antibiotics and I/V fluids. Output was monitored to be more than 25m/hr. All the patients were kept catheterized for 2-3 wks and they were hospitalized for same duration. Urine was sent for microscopy and culture and sensitivity at least two times a week and antibiotics were modified according to results. Follow up visits were planned after 6 wks and there months. These women were advised to avoid sexual contact for three months. Elective caesarean section was advised for future pregnancy in successful repairs. Successful repair was taken as absence of urine leakage per vagina on discharge from hospital and on follow up. Patients with failed repair were counseled and booked for repeat surgery. The result were obtained and analyzed.

RESULTS

One hundred eighty (180) patients of VVF were included in this study. The age of patients ranged between 25-55 years with mean age of 35 years. One hundred and eighteen (65.55%) cases occurred in women age between 26-35 years which is the main reproductive age group. The parity of patients ranged from 1-9. Ninety two (92) patients (51.11%) were para six or more. Eighty nine percent (89.3%) cases came from rural area and (92.2%) belonged to low socioeconomic strata of society. Obstetric cause was found in (81.66%) cases while (18.33%) developed VVF secondary to Gynecological procedures. (Tables 1-2).

The size of fistulae ranged from 0.3cm to 5 cm or more. Eighty eight (48.88%) cases has fistulae ranging from 1-3 cm. Giant fistulae of 5 cm or more occurred in 8 (4.44%) cases. 58 (32.3%) cases had size of fistulae upto 1 cm size. The site of fistulae is given in Table no. 3. Commonest site was anterior vaginal wall (45.0%) and vault (27.22%) cases. One hundred and thirty one (72.77%) patients had vaginal repair of fistulae, while 49 (27.22%) had abdominal repair.

The outcome of repair and reasons for failure are given in Table no 4 and 5. The success rate of surgery was (85.55%) in our study. Transvaginal approach was used in complicated VVF like extensive scarring of tissue multiple fistulae, multiple failed previous attempt and large defects which can't be repaired vaginally.

Table 1: Type of fistula

Name	n	%
Obstetrical	147	81.66
Gynecological	33	18.33

Table 2: Causes of fistula (n = 180)

Causes	n	%
Obstetrical (147)		
Obstructed labour	86	58.56
Instrumental delivery	19	12.92
Ruptured uterus	25	17.00
Caesarean section	17	11.56
Gynecological (33)		
Abdominal Hysterectomy	24	72.72
Vaginal Hysterectomy	4	12.12
A/P repair	3	9.09
D& C	2	6.06

Table 3: Site of fistula (n = 180)

Site	n	%
Anterior vaginal wall	81	45.70
Vault	49	27.22
Juxta cervical	11	6.11
Juxta urethral	12	6.60
Vesico uterine	10	5.50
Vesicocervical	7	3.88
Vesico + urethero vaginal	3	1.66
Bladder neck	5	2.70
Uretherovaginal	2	1.11

Table 4: Outcome of repair (n=26)

Outcome	n	%
Successful	154	85.55
Failed	26	14.44

Table 5: Frequency of reasons for failure (n=26)

Reasons for failure	n	%
Large size of fistulae	6	23.07
Scarring Of tissue	6	23.07
Multiple fistulae	5	19.23
Bladder neck + urethral fistulae	5	19.23
Previous repair	4	15.38

DISCUSSION

Urinary fistulae in young women remains a problem in many developing countries. The causative factors include poor nutritional state, illiteracy. Early marriage, high parity, limited access to health care and mismanagement of deliveries by unskilled practitioners.[12] Fistula are not only the cause of immense physical, emotional and psychological

sufferings in women in the prime of their lives but they are also frequently responsible for adverse social consequences such as remarriage of husband and even divorce.

The occurrence of VVF is almost obsolete in developed countries while still a reasonable population faces the problem in underdeveloped nations. All major studies have shown that 70-90% of the VVF in developing countries are of obstetric etiology[13]. In our series 81.66% fistulae had an obstetric etiology. These findings are similar to other studies from Pakistan[14,15]. VVF in developed countries mostly occurs after pelvic surgery i.e. abdominal hysterectomy which occur in 0.05-0.5/100 cases.[16,17] In our study VVF due to gynaecological surgery occurred in 18.3% of total cases of VVF.

In Africa where the problem appears to be most prevalent, have at least 70% of the women with fistulae are less than 30 years of age and most of them develop VVF during the first pregnancy[18-20]. The reason for fistulae developing in young age and in first delivery is the android type of pelvis in the women of African countries resulting in obstructed labour and hence fistulae. Similar observations are mentioned in a study from Eastern Nigeria[21].

The comparison of age and parity of our patients with Nigerian women showed major statistical difference. In our study 65.55% women were aged between 26-35 years compared to 16.90% in Nigerian study.[21] We had only 18.90% women aged from 16-25 years compared to 35% in Nigerian study.[22] Similar observations were reported by other Pakistani studies[23,24].

In our study there were 19.60% primipara compared to 52% in the Nigerian study. There were 34.2% multipara while Nigerian study showed 31.12%. We had 47.30% grand multipara compared to only 14.45% in Nigerian series.[25] Other studies from Pakistan and present study pointed high parity of our VVF patients[26].

In majority of patients the size of fistula ranged from 1-3 cm, and these were the cases in whom maximum success rate of surgery has been observed. It is comparable to results of study by Mumtaz[27] from Hyderabad and Rafia.[28] Giant fistula was found in eight (4.4%) cases. Similar results are given by Nargis[29] and Khan.[30] Vaginal route was opted for surgery in 72.70% cases while 27.20% cases had abdominal route depending upon the site, size and type of fistulae[31,32].

We achieved successful fistulae closure rate of 85.50% which is similar to other National and In International studies.[33-35] Cure rate should be considered in terms of closure at first attempt. On average one might anticipate 80% cure[36,37].

All the patients actively participated in follow up. General lack of health awareness and need to travel long distance for only follow up are important factors for loss of follow up. It is conceivable that all of them having no long term complications, otherwise they certainly would have come back[38].

Those patients who had failed repair first time had successful repair in second attempt. We performed repeat surgery in six patients and they were completely cured after this surgery.

CONCLUSION

VVF is mainly caused by obstetric complications. Prolonged and obstructed labour and complications of delivery were the commonest causes in present series. Despite the impressive outcome of surgical repairs, emphasis should be shifted towards the prevention of this dehumanizing condition.

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