ORIGINAL ARTICLE

Outcome of VVF repair without omental interposition

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Abstract

Objective: To find out the outcome in cases of vesicovaginal fistula repair.

Methods: The descriptive study was conducted at the District Headquarter Hospital, Timergara, Lower Dir, Pakistan, from November 1, 2011 to November 2013, and comprised all patients admitted in Urology unit with vesicovaginal fistula. Repair was done with either transabdominal or transvaginal approach. Repair technique involved good tissue separation, interrupted sutures, and no omental interposition. Follow-up was of three months.

Results: There were 30 patients available, but 2(6.6%) were excluded. Among the remaining 28(93.3%) patients dehiscence was not noted in any patient, while only 4(14.3%) patients developed mild urinary tract infection. There were no intraoperative or postoperative deaths.

Conclusion: Transvaginal or Transabdominal repair of vesicovaginal fistula is successful treatment modality if good dissection and tissue separation is applied with interrupted suturing. Omental interposition is not essential for good healing.

Keywords: VVF, Repair. (JPMA 66: 590; 2016)

Introduction

Most vesicovaginal fistulae (VVF) are caused by ischaemic necrosis of bladder wall due to foetal head impaction during prolonged obstructed labour. Total hysterectomy and Caesarean Section (CS) are other causes. Rarely, radiation therapy and neoplastic infiltration may cause the condition. Clinical features include leakage of urine from vagina and excoriation of vulva. Swab test, cystoscopy, retrograde ureterogrphy and intravenous urography (IVU) may be done for diagnosis.[1]

VVF can be treated conservatively by bladder drainage in some cases, but the majority of patients will require definitive surgical procedure. Surgical repair may be carried out using transvaginal or transabdominal approach.[1] Transabdominal approach may or may not involve the use of omental transposition. Recent advancements in surgery has led to laparoscopic and robotic assisted surgical procedures for the repair of VVF.[2]

The current study was planned to evaluate the outcome of surgical intervention with transvaginal and transabdominal approaches.

Patients and Methods

The descriptive study was conducted at the District Headquarter Hospital (DHQ), Timergara, Lower Dir, Pakistan, from November 1, 2011 to November 2013. All patients presenting with VVF were included, while those opting out of the study were excluded. Patients were thoroughly investigated and those with alternative diagnoses were also excluded.

Accurate history of the disease along with age was noted, and physical examination and investigations were carried out. Contrast study and cystoscopy were performed as a part of the investigations along with baseline and other relevant investigations required to correct co-morbidities. Repair was carried out either transvaginally or transabdominally, performing good tissue separation, interrupted suturing and no omental interposition. Before carrying out the surgery, patients were asked to undergo a three-month waiting period in order to allow the inflammatory changes to settle down. Patients were followed up for three months post-surgery.

All the patients were counselled about their condition and informed consent was taken from them. All the patients were admitted on an elective basis.

Results

There were 30 patients available, but 2(6.6%) were excluded. Among the remaining 28(93.3%) patients dehiscence was not noted in any patient, while only 4(14.3%) patients developed mild urinary tract infection. There were no intraoperative or postoperative deaths.

Discussion

The study was carried out to assess the early success and outcome of VVF repair in patients presenting in the local setting. The condition is quite common in the study

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location due to high incidence of trauma and complications during delivery, and obstetric procedures resulting from lack of experience of healthcare practitioners and lack of awareness regarding antenatal and perinatal care. The fact that the disease is quite common in local setup is shown by large number of patients received during local studies (Table).

One study reported 100% healing of fistulas with very few minor complications.[3] It used transvaginal and transabdominal techniques and recommended that careful selection of the patients, experience of the surgeon as well as timing of repair were the important milestones for the successful outcome. Another reported 91% success rate in 20 patients of VVF and advised 3-month waiting period before repair to allow inflammatory changes to settle down.[4] One study comprised133 VVF patients and the success rate was 88%.[5] It noted that obstetrical trauma was the most common cause of VVF. Another study reported 94% and 100% success rates with transabdominal and transvaginal approaches respectively. The study had 26 patients,[6] and it also recommended a waiting period of three months in order to let inflammatory changes settle. One set of researchers studied 47 patients and showed 65% to 85% success rate.[7] Another study showed 90% success rate in 21 VVF patients. They emphasised on adequate tissue mobilisation, division of scar tissue and good postoperative care for successful outcome.[8] Success rates of 97% and 85% have also been reported in 86 patients studied having undergone VVF repair.[9,10] Researchers also assessed VVF repair outcome in 40 patients and reported 85% success rate.[11] They concluded that urogenital fistulae are rarity in the developed world, but are frequently encountered problem in developing countries like Pakistan, often resulting from prolonged obstructed labour due to poor obstetric care. Utilising basic principles of surgery, all types of urinary fistulae can be repaired.

Table: Local studies on VVF repair.

Author	Publication year/ location	No.of patients	technique	outcome
Memon MR et	2013	27	TA, TV	100%
Rehman SA et	2011	20	TA, TV	91%
Nawaz H et	2010	133	TA, TV	88%
Rasool M	2006	26	TA, TV	94%
Lodhi SK	1997	47		65% & 85%
Wagan F et	2006	21	TA, TV	90%
Mehmood A et al	2009	86		97%
Sachdev PSet al	2009	250	TV	85%
Jalbani MH et al	2006	40	TA, TV	85%
Mubeen RM et al	2007	32	TA, TV	87%
Hafeez M et al	2005	14		85%
Baloch R et al	2003	70		85%
Shaikh AR et al	2011	32	TA, TV	85 & 100 %
Present study	-	30	TA, TV	100%

A study of 32 patients reported 87% success rate,[12] while another study reported 81% success rate with 11 patients[13] and concluded that VVF can be best managed following basic surgical principles like adequate exposure, identification of structures, wide mobilisation, tension-free closure, good haemostasis and uninterrupted bladder drainage.

A study comprising 14 patients reported 85% success rate[14] and noted that transabdominal repair was the most successful method of repair. One study of 70 patients had 85% success rate.[15] Another one used omental interposition and reported 85% and 100% success rate with transvaginal and transabdominal approaches; transabdominal being more successful. It emphasised the use of omental interposition for VVF repair with transabdominal approach.[16]

A study of 24 patients recorded 75% success rate. Laparoscopic VVF repair has also been studied in recent years.[17] One study using laparoscopic and open repair of 27 patients reported 77% and 94% success rates respectively. It concluded that laparoscopic surgery is a good alternative for open repairs.[18] Researchers studied 16 patients, out of whom 14 were cured in first surgery and 2 in second surgery.[19] One study had five patients who all underwent successful VVF repair by laparoscopic technique.[20] Another study used interposition flap in 26 patients and reported success in 25in first surgery.[21] A study of five patients reported 100% successful repair after laparoscopic procedure.[22]

It can be seen that most local studies have not mentioned omental interposition in their technique, and interposition was not performed in the current study as well. Therefore it can be said that omental interposition is not absolutely necessary for good results in VVF repair. Three-month waiting period has been recommended by few local studies and the same was done in the present study. Abdominal approach was found to be more successful than vaginal approach in some studies, but in the present study both approaches were observed to be equally successful. As seen above, foreign authors have found the results of laparoscopic approach satisfactory.

Conclusion

VVF repair had good outcome with both transvaginal and transabdominal approaches, proper investigations, good tissue separation and interrupted suturing were

significant parameters. Three-month waiting period helps give good results in repair while omental interposition is not necessary for good results.

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