

Transabdominal and Transvaginal Repair of Vesicovaginal Fistula

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ABSTRACT

Objective: To evaluate the results of surgical repair of VVF through transabdominal and transvaginal routes.

Study Design: Prospective study

Place and Duration of Study: This study was carried out in Teaching Hospital, Ghazi Khan Medical College, DG Khan from June 2009 to May 2014.

Patients and Methods: Total 26 patients of VVF with age range of 22-60 years were included in the study. Fistulas had two types, simple and complex, according to site, size and aetiology. Simple VVFs were repaired through the vaginal route and complex ones through abdominal route. Patients were assessed at an interval of two to three weeks to start with, twice after three-months and thereafter depending on complaints.

Results: Sixteen (61%) patients had simple fistulas, while 10 (38%) patients had complex fistulas and one of the patients had complex fistula associated with rectal communication who was excluded. The most common cause was trauma during obstructed labour in 12(47%) patients, whereas the other common cause was hysterectomy. Sixteen(61%) patients were approached through transvaginal route, out of them 9 had supratrigonal and 7 trigonal fistulas. Ten (38%) patients with complex fistulas were approached by abdominal route. Duration of the surgery, blood loss, pain after surgery and stay in hospital was found to be shorter in transvaginal surgery. Two patients have failed repair with significant complications, a success rate of 92% was achieved. At a follow-up of one year 24 women had uneventful, active sexual life while 2 of them had some degree of pain during sexual intercourse.

Conclusion: It's concluded that both the routes of VVF repair has a similar success rate

Key Words: Vesicovaginal, Fistula, Simple, Complex, Management

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INTRODUCTION

Vesicovaginal fistula is a type of female urogenital fistula which is an abnormal communication between bladder and the vagina and results in continuous involuntary drainage of urine into the vagina.¹ The simple fistulas can be repaired through vagina route whereas complex fistula need to be approached transabdominally to achieve a successful repair. Vesicovaginal fistula (VVF) is difficult clinical entity which needs some special skill to have a successful repair.² Traditionally, they are approached through a vaginal route but at times it is inevitable to approach the high and complex fistulas through abdomen. VVF is not only a fistula between the bladder and the vagina with continuous dribbling of the urine into the vagina.^{3,4} In addition to this troublesome dribbling of the urine, it often have an affect on the patient's psychological well being.⁵ A number of methods are available to deal the VVF, to the surgeons.⁶ Vesicovaginal fistulas are associated with necrosis, swelling, tissue loss and cicatrization. The incidence of VVF is mostly under reported in the third world countries.^{7,8} Continuous

leakage of the urine into the vagina is the main symptom of the patients with urogenital fistulas, postoperative pain abdomen, ileus and fever usually indicate possibility of urinary leakage, urinoma or urinary ascites and needs prompt evaluation and diagnostic work-up.⁹

MATERIALS AND METHODS

This descriptive study was carried out in Teaching Hospital, Ghazi Khan Medical College, DG Khan from June 2009 to May 2014. Total 26 patients of VVF with age range of 22-60 years were included in the study. Fistulas had two types, simple and complex, according to site, size and aetiology. Simple VVFs were repaired through the vaginal route and complex ones through abdominal route. Patients were assessed at an interval of two to three weeks to start with, twice after three-months and thereafter depending on complaints. At the time of diagnosis, all patients had a local examination, basic bio-chemical profile. The IVU and an ascending cystogram with anteroposterior and lateral views were taken. Three-gauze test with gentian violet instilled in the bladder to detect the Fistulae undetected on the cystogram was also used as a tool. In the transabdominal approach, we used a mid line infra-umbilical incision and transvesical approach, whereas, in transvaginal approach we identified the Fistulous

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opening using a vaginal retractor, a small caliber Foley's catheter was placed in the tract and whole of the fistulous tract excised, with a two layered repair of the bladder and vaginal mucosa. Only those patients were considered to have a success who remained continent.

RESULTS

The age of patient was from 22-60 years. In 12(47%) patients, aetiology was transabdominal hysterectomy at periphery in less than Ideal circumstances, 12 patients (47%) had VVF due to prolonged obstructed labour. Non-Qualified Health care providers at Sub-Urban Areas and villages mishandled them. One patient (3%) had VVF after vaginal hysterectomy at a tertiary care hospital and One patient (3%) had it after lower segment C-Section at periphery (Table 1). Sixteen patients had urinary incontinence and came to us from one month to 2 years after the happening. 5 patients belonging to far flung areas presented to us after four years of occurrence. 5 patients had a unsuccessful repair by inexperienced Surgeons . The usual defect seen in our experience was between 0.5 to 4.0 centimeters. After Investigations, 16(61%) patients were found to have sub-trigonal fistulae and were repaired by transvaginal route. 10 patients (38%) were having Supra-trigonal and complex fistulae and were repaired transabdominally. We faced 2 (6%) failures in transvaginal repair and 1 (3%) failure through transabdominal approach. Foleys was placed for an average of two weeks. We had some postoperative complications in our patients shown in Table 2.

Table No.1: Frequency of aetiology (n=26)

Aetiology	No.	%
Transabdominal hysterectomy	12	47.0
Obstructed labour	12	47.
Transvaginal hysterectomy	1	3.0
Post C-Section	1	3.0

Table No.2: Postoperative complications

Complaint	Transabdominal repair	Transvaginal repair
Hematuria	4	2
Bladder spasm	5	3
Lower abdominal pain	8	3
Prolonged ileus	5	-
Recurrence	1	2

DISCUSSION

There are different methods of fistula repair like, transabdominal, transvaginal, laparoscopic endoscopic and urinary diversion according to the presentation of the fistula.¹⁰ Vesicovaginal fistula in developed countries are often due to pelvic surgery like abdominal hysterectomy, which occur in 0.05-0.5/100 cases.^{11,12}

In our study 16 patients were operated through vaginal rout and 10 patients with trigonal fistulas needed traction by catheter placed through the fistula to helps us in bringing the fistula closer to view thus making the vaginal approach convenient. When the fistula is complex or high vaginal exposure of the fistula is difficult, which may compromise the repair and ureters are also endangered . In this situation abdominal approach should be preferred. In our study 10 cases of complex VVFs were managed through abdominal approach.

In addition, to have a successful repair of fistula different grafts and flaps have been placed between the bladder and vagina to enhance healing and decrease the recurrence of fistula¹. As some of the patients were malnourished, failed repair done elsewhere and complicated fistulas, so we interposed labial pad of fat as a flap in vaginal repair, while in abdominal approach omentum was found to be the best option .In comparasion of the two approaches i.e. transabdominal versus transvaginal, the results were more or less similar. However vaginal approach has relatively less morbidity and less postoperative pain, with prompt recovery and short hospital stay.

Now a days, laparoscopy has been used for the repair of VVF, surgical principles are same as of trans abdominal rout, but a limited number of studies are reported to date. Largest series had 17 cases with mean operative time of 2.5hrs, hospital stay of 3-5 days and success rate of 91% at mean follow-up of 24.5 months.^{13,14} However, a number of studies are required to recommend this approach, limited skill and high failure rates with cost-effectiveness of this procedure, remains an issue considering that VVF is a disease of third world countries.

Indweling, uninterrupted bladder drainages is a need in both transvaginal and transabdominal repairs. Urethral Foley's catheter drainage was kept upto 2 weeks . The period of bladder drainage reported in various studies is 7-35 days.¹³ The follow up period in our study was 12-24 months. In different studies duration of follow up varies from 7-35 months.¹⁵⁻¹⁷ Success rates are considered in the form of uneventful closure at first attempt and one should predict 85% cure with 15% failure rates.¹⁸

CONCLUSION

Majority of the simple fistulas are easily approached transvaginally where as in complex fistulas we recommend transabdominal approach. Depending on the clinical expertise both the approaches had similar success rates.

Conflict of Interest: The study has no conflict of interest to declare by any author.

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