Original Article

Obst & Gynae

A Study of Vesicovaginal Fistula Repaired by Vaginal Route at Fistula Centre Lady Willingdon Hospital, Lahore

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ABSTRACT

Background: Vesicovaginal fistula is an abnormal communication between bladder and vagina that allows the passage of urine through vagina leading to continuous dribbling of urine. According to WHO in developing countries, 5 million of women each year suffer severe maternal morbidity in which obstetric fistula is on the top of the list.

Objectives: To determine the outcome of vaginally repaired vesicovaginal fistula (VVF).

Study Design: Descriptive case series study.

Place and Duration of Study: This study was conducted at Fistula centre Lady Willington Hospital/King Edward Medical University for a period of one year from Jan 2010 to Dec 2010.

Materials and Methods: This Descriptive case series was carried out for a period of one year in which 60 cases of VVF were included who were repaired by vaginal route and were followed by symptoms assessment like incontinence of urine and signs like soakage of pads were noted. The patients of 20 – 60 years of age who developed vesicovaginal fistula after obstructed labour or after surgeries like caesarean section, total abdominal hysterectomy, vaginal hysterectomy and operative deliveries whose vesicovaginal fistulae were repaired by vaginal route were included in the study, whereas those patients who developed VVF after malignancy and radiotherapy, or repaired by abdominal route and uretric fistulae were excluded from the study. Data was entered and analyzed on SPSS version 18.0.

Results: Majority of the patients included in the study 29(48%) were between 31-40 years and minimum patients were between 20-30 years old with overall mean age of 44.59±3.12 years and 6 (10%) patients were diabetic. Among 50 cases of first attempt, the success rate at primary repair was achieved in 48(96%) patients and only 2 (4%) cases were unsuccessful. The success at secondary repair was achieved in 4 patients (66.66%) and failure in 2 patients (33.33%), four patients were operated third time and surgery was successful in only one case. The success of procedure was significant in 1st attempt , p-value = 0.0000. Follow-up visit after 3 weeks soakage of urine (after removal of Foleys catheter) was seen in 6 (10%) patients, follow-up after 3 weeks by dye test proved 7 (11.66%) of cases. Incontinence of urine was found in 6(10%) of patients.

Conclusion: Transvaginal route of VVF repair has better outcome and primary repair is more successful, p-value = 0.0000.

Key Words: Vesicovaginal fistula, Transvaginal approach, Incontinence of urine.

INTRODUCTION

Fistula is an abnormal communication between two epithelial surfaces and hence vesicovaginal fistula (VVF) can be defined as an abnormal tract between bladder and vaginal epithelium[1].The true incidence of this problem remains undetermined; however an incidence of 1-2 per 1000 deliveries has been estimated worldwide, with an annual incidence of up to 50,000 to 100,000 in developing countries, including India. Majority of the fistulae are a consequence of neglected and obstructed labour. [2] The obstetrical fistula, due to obstructed labour, has been eradicated from developed world, but is still a major problem in developing countries like Pakistan[3]. Most of the patients in obstetrical fistula present with urinary leakage within first 24-48 hours. Iatrogenic fistulae generally appear immediately or after 1-6 weeks of surgery and some patients report exacerbation during physical activities, if fistula is small. In developed countries, the VVF is mostly due to iatrogenic injury during gynecological surgery and caesarean section. Woman having VVF, typically, presents with continuous dribbling of urine. [4]

If VVF is diagnosed within first few days of surgery, a transurethral or supra pubic catheter should be retained for a period of 4 weeks. Small fistula of around 1 cm may resolves itself due to continuous drainage of urine, if at the end of the 4 weeks of catheterization the size of fistula diminishes, a trial of continued drainage for additional 2-3 weeks may be beneficial but if no improvement is observed after 30 days, VVF is not likely to resolve spontaneously. Under these circumstances catheterization only increase the risks of infection and offer no increase benefit to fistula care[5].

Studies recommend the timing of repair to be dictated by overall medical condition of the patient and tissue

quality surrounding the fistula. Traditionally, 12-weeks interval between index surgery and repair is universally accepted as standard care in infected tissue in order to ensure full resolution of tissue necrosis[6]. While it is essential to ensure that the emotional status of the patient should not be underestimated, it should not play a dominant role in the decision process of when to repair a VVF[7].

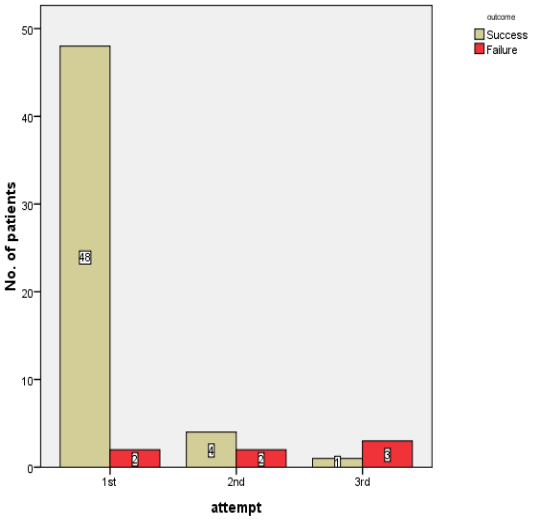
Fistula can be repaired either through abdominal or vaginal route. Exclusion criteria for vaginal repair include circumferential induration at fistula site exceeding 2 cm, fistula location or vaginal architecture precluding, adequate vaginal exposure and fistula involving the ureters. Additionally, vaginal repair is considered as gold standard in selected cases[8,9]. Transvaginal repair is a preferred method as it avoids laparatomy and splitting of bladder. Also, the recovery is shorter with less morbidity, blood loss and postoperative bladder irritability. The results through this repair are as successful as through abdominal approach. [8] It is acceptable to repeat repair through a vaginal approach even after a first vaginal approach failure, excision of the fistulous tract in vaginal cuff scar enables the surgeon to suture viable tissue in every layer, thereby providing conditions optimal for wound healing[10].The rationale of this was to determine the outcome of vaginally repaired VVF so that better approach can be adopted for the benefit of the patients.

MATERIALS AND METHODS

This study was conducted at Fistula centre Lady Willington Hospital/King Edward Medical University for a period of one year from Jan 2010 to Dec 2010. In this descriptive case series 60 cases of VVF were included using non-probability purposive sampling, who were repaired by vaginal route and were followed by asking their symptoms like incontinence of urine and signs like noting the soakage of pads. Those patients of 20 – 60 years of age developed VVF after obstructed labour or after surgeries like caesarean section, total abdominal hysterectomy, vaginal hysterectomy and operative deliveries, whose vesicovaginal fistulae were repaired by vaginal route were included in the study. Whereas, the patients who developed VVF after malignancy and radiotherapy, repaired by abdominal route and uretric fistulae were excluded from the study. The cases fulfilling the inclusion criteria were admitted through out-patient department and an informed consent was taken from each of them. Their demographic details like age, parity, mode of delivery was obtained. Vaginally repaired patients were followed by asking symptoms like incontinence of urine and signs like soakage of pads with urine were noted. These patients were evaluated after 3 weeks by removing the Foleys catheter and were assessed for presence or absence of urinary incontinence by soakage of pads with urine and dye test. . Data was entered and analyzed on SPSS version 18.0. The variables to be analyzed included demographic details, repair outcome sign and symptoms. These variables were analyzed using descriptive statistics. Quantitative variables such as age were presented as mean and standard deviation whilst Qualitative variables like absence of incontinence of urine were presented as frequency and percentages. Potential effect modifiers like number of attempts for repair and diabetes were studied through stratification. Vhi-square was applied for the comparison of success of procedure in different attempts, p-value $\leq$ 0.05 was taken as significant.

RESULTS

Majority of the patients 29(48%) were between 31-40 years and minimum patients were between 20-30 years of age with overall mean age of 44.59±3.12 years. Out of 60 patients, 6 (10%) were admitted through emergency while remaining 54(90%) were admitted through outpatient department. Distribution of cases for repair by number of attempts showed that 50 (83.33%) patients were for 1st attempt, 6 patients (10%) for 2nd attempt and 4 (6.66%) for 3rd attempt. Success at primary repair was achieved in 48(96%) and failure after primary repair was found in 2(4%) patients out of all 50 cases of 1st attempt. Success at secondary repair was achieved in 4 (66.6%) patients and failure in 2 (33.3%) patients out of 6 cases of 2nd attempt, 4 patients were operated third time and in one case only the success was the outcome. The success of procedure was significant in 1st attempt, p-value = 0.0000. Six (10%) patients were found to be Diabetic. Follow-up at 3rd week Soakage of pads with urine (after removal of Foleys catheter) showed 6 (10%) patients. Follow-up at 3rd week by Dye test proved 7(11.6%) positive cases. Incontinence of urine was found in 6(10%) of the cases.



p-value = 0.0000 (significant)

Figure No.1: Comparison success and failure rates at different attempts

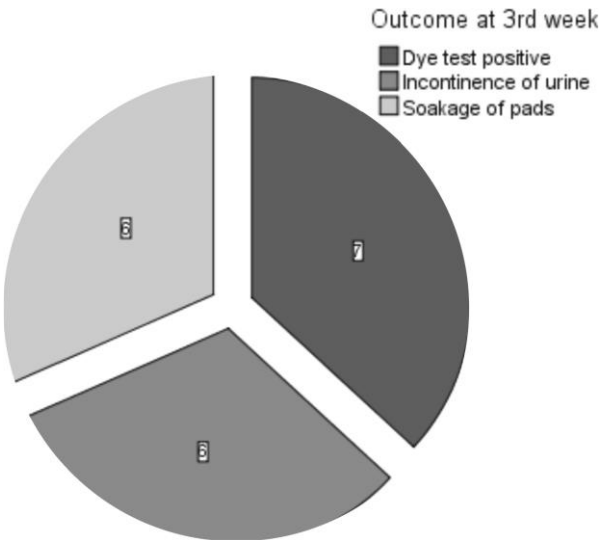


Figure No.2: Outcome after repair of 3rd week

DISCUSSION

Pakistan is the seventh most populated country of the world and majority of the births occurs at home by traditional birth attendants. Caesarean sections and gynecological surgeries are also conducted by inexperienced hand; high frequency of VVF in our country reflects the low socioeconomic status as well as lack of proper obstetrical and gynecological care. Age of the patient affected by VVF vary greatly among countries and even in different regions of the same country. Our study observed age range between 20-60 years with the mean age of 44.59±3.12 years. In another study conducted at Bahawal Victoria Hospital, Bahawalpur, Pakistan the mean age observed was lesser than in our results being 34 years and overall ranging between 22-48 years[11]. The age recorded in studies of different regions of Pakistan varied, as it was between 13-55 years in Sindh[12] and 25-45 in Lahore[13]. While mean age in different international studies ranged between 17-40 being much lesser than what was observed in our setting [14,15].

The overall success rate at primary attempts was reported as 96%,while success rate at primary attempt were 90% and 93.3% in studies by Hancock and Collie[16]and Chauduri [17]respectively. Furthermore, it was almost 93% in studied carried out by sindu[18] and Sarkar[19]. In another study success rate was 92%[20]. Providentially, our results are in compatibility with these studies. Thus, the primary repair is recommended to be well planned to offer the women best chances of success as high failure rate were recognized when there was excessive scaring of fistula margin after previous failed attempts.

In the light of outcomes observed in our study we may provide some suggestions in nutshell. Most simple fistulae irrespective of their locations could be easily accessible by vaginal route. It is less invasive and comparable success rate with other approaches can also be achieved. Vaginal approach avoids laparatomy, splitting of bladder and ureter implantation. Also, recovery is short and bloodless with less morbidity. Six patients had diabetes that were well controlled and did not affect the outcome of repair. Hence, in view of our results in current study, it is suggested to apply vaginal repair if the access is good and tissues are sufficiently mobile.

CONCLUSION

Transvaginal approach has better outcome regarding success rate. Overall success rate at primary repair is significantly higher as compared to second or third attempt, p-value =0.0000. Thus primary repair should be well planned to offer the women best chances of continence.

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