Original Article

Efficacy of Trans-Abdominal & Trans-Vaginal Repair in the Management of Vesico-Vaginal Fistula

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ABSTRACT

Objective: To determine the success rate of transabdominal and transvaginal surgical repair of vesico-vaginal fistulae(VVF).

Study Design: Descriptive study

Place and Duration of Study: This study was conducted at the Departments of Urology & surgery at Peoples University of Medical and Health Sciences Hospital Nawabshah from December 2013 to May 2016.

Materials and Methods: Patients were selected on exclusion and exclusion criteria. Cases of Vesico-vaginal Fistulae (VVF) were included after a detailed history, clinical examination and investigations. Examination under anesthesia and cystoscopy were performed. Cases with genitor urinary pelvic malignancies, uretero vaginal fistulae, urethro vaginal fistulae, ocomplex fistulae involving intestine were excluded. Two groups A & B were made on the basis of approach of repair. In group A vaginal approach was opted to repair uncomplicated low fistulae. In group-B abdominal approach was opted to repair high vesico vaginal fistulae . Results were noted postoperatively and data was analyzed.

Results: This 30 months study included 52 female patients, 30 cases in group A and 22 cases group B. . Mean age was 37 years SD± 5 and a range of 22 to 53 in group A while in group B mean age was 34.6 years SD± 4.I and a range of 23 to 55. Mean post operative hospital stay was 6 days in group A while it was 10 in group B. Failure in terms post operative persistent urinary leakage was detected in 4(12 %) in group A while it was observed in 3(13%) cases in group B. consequently success rate of vaginal approach was 88% and that of abdominal approach was 87%.

Conclusion: Both vaginal and abdominal approaches to repair low and high vesico vaginal fistula respectively, are almost equally successful at a rate of 88% and 87% respectively.

Key Words: Birth trauma, Vesicovaginal Fistula, Transabdominal repair, Transvaginal repair

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INTRODUCTION

The historical background of vesico vaginal fistulas (VVF) dates back 2000 BC as evidences of VVF found in Egyptian mummies[1,2]. Birth trauma can lead to one of the most devastating complications, the Vesico-vaginal fistula (VVF)[3]. VVF is an abnormal granulated track communicating between epithelial surfaces of urinary bladder and vagina resulting in incontinence of urine[4]. In contrary to advanced countries, developing countries are still facing higher rates of VVF where a suboptimal management of prolonged obstructed labor is considered as a main etiological factor.[5,6] Obstructed labour can promote pressure necrosis, tissue sloughing, cicatrization and resulting in vesico-vaginal fistula formation[7]. In developed countries non obstetric factors like genitourinary malignancies and pelvic surgeries play a major role in causing VVF reflecting a better and improved pre-natal and natal obstetrics care[8,9]. The duration between the formation of VVF and its clinical presentation is variable and depends upon the etiolgical factors as it presents early in non obstetric surgical injuries while it takes about 7-30 days to present in obstetric injuries.[10] Diagnosis of VVF is clinical and suspected in patients with urine smelling vaginal discharging and history of recent obstructed labour or pelvic surgeries[11,12]. Alternate conditions like haematuria , cystitis, pyelonephritis can also raise the suspecious fear of VVF.[13]Symptomatic clinical differences between vesico vaginal and uretero vaginal fistula can be established, in former condition there is no normal voiding because of constant uncontrolled leakage of urine from vagina while in later case there is simultaneous normal voiding and uncontrolled leakage of urine per vagina[14,15]. VVF greatly distorts the quality of life and the affected patients always in search of a good permanent cure. For the management of this problem the ideal time of surgical intervention, route of approach and techniques some time poses matter of debate between the surgeons[16-17]. To repair VVF two common approaches, abdominal and vaginal, have got world wide acceptance but with variable results.

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Abdominal approach is generally considered as a good option for high level while vaginal approach is for low level VVF.

MATERIALS AND METHODS

These 30 months was conducted at Peoples University of Medical and Health Sciences Nawabshah in departments of urology and surgery from December 2013 to May 2016. Cases were selected on the basis of detailed history, clinical examination including pervaginal examination and cystoscopy under anesthesiae. Exclusion of cases was followed for the patients having complex fistulae, urethro vaginal fistulae, uretro vaginal, entero vaginal fistulae and fistula with associated malignancy. All cases under went routine workup comprising basic blood investigations, blood chemistry, ultrasound and contrast enhanced pelvic CT scans. Two groups of Cases were made on the basis of level of VVF and method of repair. Group A comprised In group A vaginal approach was opted to repair uncomplicated low fistulae. In group-B abdominal approach was opted to repair high vesico vaginal fistulae. Spinal anesthesia was used for both approaches. Patients for abdominal approach were positioned supine and patients for vaginal approaches were placed in lithotomy positioned on the operating table. Both procedures were preceded with preliminary cystoscopic examinations to confirm site of the fistulous opening in the urinary bladder and to secure the ureters with ureteric catheters. In group A a negotiable foley's catheter is introduced through the vaginal opening into the bladder for tenting the fistulous tract to facilitate the dissection. All surrounding fibrous tissues along with the tract was excised. The vagina and urinary bladder isolated from the tract and meticulously repaired in separate layers. In group B lower mid line incisions were given and bladder was entered. Vesical fistulous opening was searched and a negotiable foley's catheter is introduced through the vesical opening into the vagina for tenting the fistulous tract to facilitate the dissection. Whole fibrous along with fistulous tract was excised, bladder and vaginal walls were separated from each other and repaired separately using 2/0 vicryl with inter positioning of omentum.

Postoperatively the urinary bladder was kept decompressed with urinary catheters for 1 week, broad spectrum antibiotics were administered. Patients was discharged from hospitals after 6 to 11 days. Weekly follow up visits were scheduled up to 6 weeks and then as per needed.

RESULTS

This study was conducted for 30 months and included 52 cases of vesico vaginal fistulae. Group A comprises 30 cases while in Group B 22 cases were included. Mean age was 37 years SD± 5 and a range of 22 to 53 in group A while in group B mean age was 34.6 years SD± 4.I and a range of 23 to 55. In group A post op pain was mild in 21 cases and remaining cases had no pain. In group B 4 cases experienced severe post op pain, 7 cases had moderate pain while remaining 11 cases had mild post operative wound pain. Mean post operative hospital stay was 6 days in group A while it was 10 in group B. Post operative vaginal surgical site infection was not occurred in any case in group A. In group B post operative abdominal surgical site infection was found in 3 cases, two of them were of grade iii and one grade iv according to Southampton wound grading system. Haematurea was noted post operatively in 4 cases of group A and 2 cases of group B but this haematurea was temporary and of short duration lasting not more than three days. Temporary urinary leakage was recorded in 7 cases post operatively in group A and it was found 5 cases of group B. Persistent post operative urinary leakage is considered as failure of the procedure and was found in 4 cases of group A and 3 cases of group B.

DISCUSSION

Even today, the era of modernized globalization, vesico vaginal fistula is one of the most devastating surgical complications in the field of gynecology and obstetrics. Although its frequency has been decreased in the developed countries but it is still prevailing with significant frequency in developing countries mainly because of poorly managed prolonged obstructed labor[19,20]. Apart from the morbidity resulted from VVF there is an associated profound social embarrassment[21]. In the current study mean age of the cases was 37 years in group A while in group B mean age was 34 years that is parallel with Wadie & Kamal[22]. Post operative pain was comparatively minimal in group A with vaginal approach as there is no external wound on the skin and subcutaneous tissues. Similarly there was no any surgical site infection in vaginal approach while it occured in 3(13%) again reflecting the role of skin & sub-cutaneous wounds. Urinary leakage from the VVF is the key factor rendering the patients physically morbid and socially embarrassed to seek definitive cure. As the aim of a management plan of any surgical challenge is to achieve a maximum success, likewise permanent cure of urinary leakage in VVF cases remains the goal and successful outcome of any selected approach. The current study observed post operative persistent urinary leakage in 4(12%) cases of group A and 3(13%)cases in group B, translating the success rate of vaginal approach 88% and that of abdominal approach 87%. Success rate in present study is within range of both national and international data and very similar to javed et al(87%) but higher than Bassem's study[22,23].

CONCLUSION

Both vaginal and abdominal approaches to repair low and high vesico vaginal fistula respectively, are almost equally successful at a rate of 88% and 87% respectively.

Author's Contribution:

Concept & Design of Study:	Qamar Raza Brohi
Drafting:	Muhammad Ali Suhail
Data Analysis:	Habib ur Rehman Khan Toor
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Conflict of Interest: The study has no conflict of interest to declare by any author.

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