

An Out Come of Transvaginal Repair in 50 Cases of Vesico-Vaginal Fistula

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ABSTRACT

Objective: To see the out come of transvaginal repair of vesico-vaginal fistula.

Study Design: A consecutive case series study.

Place and Duration of Study: This study was conducted in the department of Urology and Dialysis Unit Peoples Medical College Nawab Shah, from Jan 2007 to the Dec 2009.

Materials and Methods: Patients were collected from the urology out patient department and the department of gynecology People's Medical College Nawab shah. Total 50 females were operated for the vesico-vaginal fistula trans-vaginally. After the admission care full history and examination were done to demonstrate the incontinence subjectively and objectively. Before surgery all subjects were diagnosed by the cystoscopic examination. All subjects were operated transvaginally.

Results: The total 50 females were operated for the vesico-vaginal fistula trans-vaginally. In 35 cases obstructed & prolonged labour and in 15 cases pelvic surgery was the cause of vesico-vaginal fistula. Cystoscopically all fifty fistulae were divided according to their site in the bladder. Supra trigonal 07, trigonal 35 and Marginal 08. All were repaired transvaginally. After two weeks catheter was removed, the leakage occurs in four (04) cases in supra-trigonal cases. In trigonal variety of vesico-vaginal fistula all thirty five (35) cases only three (03) fistulae were leaked. In third variety of vesico-vaginal fistula was marginal variety. Total eight (08) fistulae were and three (03) out of eight fistulae were leaked.

Conclusion: We conclude that transvaginal is an excellent approach for the vesico-vaginal fistula, especially in trigonal, solitary and smaller i.e. <4cm variety of fistulae. Careful selection of the patient and the time of repair are the important mile stones for the successful out come.

Key Words: Transvaginal approach, Vesico-vaginal fistula.

INTRODUCTION

In the context of Gynecology, a fistula refers to an abnormal communication between genital tract and either the urinary tract vesico-vaginal or GI tract, Recto vaginal fistula.¹ In 1935 while performing a dissection on an Egyptian Mummy (a queen of the 11th Dynasty, Circa 2050 BCE); Derry noted a large vesico-vaginal fistula that was the consequence of obstructed labour, he concluded² In 1852 James Marion Sims used silver wire as a suture material, avoided the use of electrocautry and utilized postoperative drainage with urethral cathatre.³ The scientific societies should join forces to improve the fate of fistula patients in African and Asian countries that are confronted with a large number of these women.⁴

An incidence of 1-2 per 1000 deliveries have been estimated world wide, with an Annual incidence of up to 50,000 to 1,00,000 in developing countries.⁵ Obstetric Fistula reflects the deficiency in the women's general health status occasioned by poor child birth attendance in developing countries.⁶ Successful management with prolonged bladder drainage has occasionally reported (1.9%). Mature fistulae requires formal operative repair. The first repair is crucial that

should be done properly.⁷ The literature reports following modalities like, 1) Conservative, which carries Prolonged bladder drainage with Very rare success rate of 1.9%. 2) Endoscopic Management i.e. tissue bioglues for very small fistulae. 3) Transvaginal Approach. 4) Transabdominal for Supra Trigonal, Multiple, Vesico-uterine and Uretro-vaginal.⁸ In Genito-Urinary Fistulae there is persistent Odor unimpeded leakage of urine, which is one of the most distressing complications that occur in women. This causes serious social and psychological problems which leads to social cut off and even divorce in same cases.⁹ A study was conducted in the hospital of Addis Ababa, Ethopia, that most obstetric fistula results from neglected obstructed labour often affecting very poor, young, illiterate, rural women and girls.¹⁰ Regarding the management of vesico-vaginal fistula, the difficult and complicated fistulae need experienced surgeon and establishment of separate fistula surgery units along with appropriate care and expertise accounts for desired results.¹¹ In order to prevent the recurrence a questionnaire based survey was conducted at Nigeria; Do the Patients Know the Cause? The study concluded that 70% of the patient knew the cause of their fistulae from the health talk while 30% remain unknown.¹² Due

to higher incidence vesico-vaginal fistula in Africa they have establish a separate fistula centre, Barhirdar Hamelin fistula centre. These fistula centers can give better results in repair and also educate the public to prevent this complication to occur rather than to treat.¹³ in some cases the fistula involves the continent mechanism, where the urinary diversion is the last resort of the treatment.¹⁴

MATERIALS AND METHODS

Total fifty (50) patients were initially admitted throughout patient department and were thoroughly evaluated by detailed history, Physical Examination, Laboratory Investigations including intravenous urography. Which was done only in marginal type of verity of fistula to rule out any ureteric involvement. The definite procedures were planned after cystoscopic examination. On examination there was a rent between bladder and vagina during per-vaginal examination.

Any defect which admitted two tips of finger easily during per-vaginal examination was labeled as larger fistula. Other laboratory investigations were done like, Urinalysis and urine culture were used to rule out coexisting urinary tract infection, Serum creatinine was done to evaluate renal function. The site of fistula, size of fistula sphincter mechanism, surrounding fibrosis, and extent of vaginal stenosis was carefully evaluated. All those patients who fulfilled the inclusion criteria, an informed written consent was taken. The patients were prepared with antibiotics, good nutrition and proper hygiene. Outcome was recorded in 14 days after repair. Cystoscopy with concurrent vaginal speculum examination was done to determine the location and size of the fistula in relation to Trigone and ureteric orifices. As shown in Figure.1.

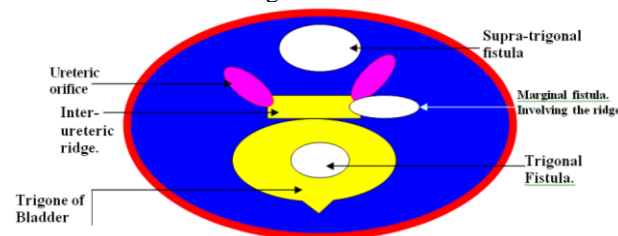


Figure1:Cystoscopic division of vesico-vaginal fisula.

RESULTS

The total 50 females were operated for the vesico-vaginal fistula trans-vaginally. Out of these 50 subjects the cause of vesico-vaginal fistula in 35 cases was obstructed & prolonged labour. While in remaining 15 cases pelvic surgery specially abdominal hysterectomy was the cause of vesico-vaginal fistula. These 35 subjects were below the age of 35 years. Twenty three 23 were prime-Para and 12 were multipara. Cystoscopically all fifty fistulae were divided according to their site in the bladder. Supra trigonal 07, trigonal

35 and Marginal 08. As shown in Table-1. All were repaired transvaginally.

Total seven (07) fistulae of supra trigonal variety were repaired three (03) were solitary and four (04) were multiple. Regarding the size of fistula all three solitary were smaller in size i.e. is less than 4cm, while among the four multiple supra-trigonal fistulae three were larger fistulae one remaining one was smaller one. Hence total smaller were four in number while three were larger defects in supra-trigonal variety. After transvaginal repair the bladder drainage were established in all cases for the couple of weeks. After the catheter removal the leakage occurs in four (04) cases in supra-trigonal cases. Out of these four cases of failed repair one was solitary and small while remaining leakage occurs in the three larger and multiple fistulae.

Hence the success rate in supra-trigonal type of fistulae was little bit lower .i.e. less than 50%. Especially larger and multiple fistulae in supra-trigonal variety carries higher failure rate. In thirty five (35) cases of trigonal variety of vesico-vaginal fistula thirty three (33) were solitary and only two (02) were multiple in number. Regarding the size of fistula twenty eight (28) were smaller and seven (07) were smaller in size. All thirty five cases of trigonal variety were operated by the same approach i.e. transvaginally. After putting folly's catheter for two weeks trial for clamping the catheter was given to check the continence. In this group only three (03) fistulae were leaked and showed failure of repair. Out of these three one (01) was larger and multiple variety and two (02) were solitary and smaller in size. So the success rate of transvaginal approach in trigonal variety remained higher. i.e. more than 90%. In third variety of vesico-vaginal fistula was marginal variety. Total eight (08) fistulae were repaired transvaginally.

Table No.1: Break-up of vesico-vaginal fistula according to their site.

Type of fistula	No:	Total
Supra-trigonal	07	
Trigonal	35	
Marginal	08	
	Fifty	50

Table No.2: Results of transvaginal repair of V.V.F.

Type of fistula.	No:	Leakage.	Success rate. % age.
Supra-trigonal	07.	04.	36%.
Trigonal.	35.	03.	91%.
Marginal.	08.	03.	70%.
Total leaked.		10/50 (20%)	

According to their location five were involving the inter-ureteric ridge, two near left ureteric orifice and one was near the right ureteric orifice. So out of this total eight marginal fistulae six (06) were single and

remaining two (02) were of multiple variety. As shown in table No:02. According to the size of fistulae three were larger and five were of smaller size. In these cases ureteric catheters on both sides remained for the longer period .i.e. 14 days in the comparison of other types of fistulae where we kept only for the period of one week. The success rate of transvaginal approach in these marginal type of fistulae was about 70% .i.e. three (03) out of eight fistulae were leaked. These three were those fistulae which were nearer to ureteric orifice and of larger size. So totally leakage, as shown in table No: 03, occurs in ten (10) cases out of fifty cases. .i.e. 20% leakage rate was observed in our study of transvaginal repair of vesico- vaginal fistula.

Table No.3: Break-up of 10 cases of leakage.

Fistula variety	Number	Leakage	Failure rate
Larger >4cm	13	07	52%.
Smaller.	37	03	< 8%.
Multiple.	08	05	62%.
Solitary.	42	05	8.2%.

DISCUSSION

The stage of the disease, obesity, diabetes and postoperative infection acted as predisposing factors for the development of these fistulae.¹⁵ Being a third world country the obstructed labour remained the most commonest cause of vesico-vaginal fistula as in Nigeria and India.^{16,17} Hence the world literature and our study have highlighted the obstructed labour as commonest cause of vesico-vaginal fistula. The time of repair decided is the important factor for the successful outcome. We decided the period of 4-6 weeks after the onset of fistula as an ideal time for the repair. Angioli R et al recommended that for the better out come, proper mobilization and reduced scaring the period of 4-6 weeks is mandatory between the onset of fistula and repair.¹⁸

In our society it carries high social problems. Even the divorce rate remained 25% due to this dreadful and foul smelling problem, a study conducted in Nigeria.¹⁹ The classification system for vesico-vaginal fistula are based on descriptions of size and anatomic location of the defect.²⁰ Regarding the site of fistula in bladder we divided supra-trigonal, Trigonal and marginal. Regarding their site in relation with vagina mostly they are mid-vaginal fistulae and most affected women were prime-para in our study, which closely matches the international data.²¹ The location of the fistula is essential for the optimal management & planning.²² After the repair of vesico-vaginal bladder drainage with urethral catheter was established for at least 14 days in our series.

In our study regarding the size we recommend the fistula which is greater than 4cm, or roughly during per/vaginal examination can admit two finger tips

labeled as larger fistula. When it is 4cm of fistula with scaring, involving continent mechanism and affecting the bladder capacity is labeled as larger & complex fistula.²³ We preferred the vaginal rout for those 50 cases. A Kumar et al in a services of 1558 cases of Genito-urinary fistulae preferred vaginal rout for the repair. the literature reports 3 approaches for fistula repair vaginal, abdominal and combined abdomino-vaginal rout.²⁴ Another recent approach is laparoscopic repair of fistula which carries least morbidity and improves cosmetics.²⁵ Our series reflects the higher failure rate in supra-trigonal and marginal variety of fistulae. The cause of failure in these cases was limited mobilization due to little bit higher position of supra-trigonal fistulae. Because of this reason some authors preferred trans-vesical abdominal approach for high supra-trigonal and vault fistulae.

Besides the site of fistula in these 50 cases failure rate was also attributed to the number and size .i.e. larger fistula has higher failure rate. The fistulae >3cm to size likely to fail more in this study. If we see the break-up of those four supra-trigonal leaked fistulae, three were of larger in size and multiple in number. While among the marginal variety of fistulae three were leaked out of eight and all three were of larger size and one was the multiple type of fistula. This reveals that why our supra-trigonal and marginal fistulae showed compromised results in comparison of world studies.

CONCLUSION

We conclude that transvaginal is an excellent approach for the vesico-vaginal fistula, especially in trigonal, solitary and smaller .i.e. <4cm variety of fistulae. Careful selection of the patient and the time of repair are the important mile stones for the successful outcome.

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