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ORIGINAL ARTICLE

VESICO VAGINAL FISTULAS – AN EXPERIENCE AT TERTIARY CARE CENTRE IN ANDHRA PRADESH

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ABSTRACT: Vesicovaginal fistula (VVF) is a preventable calamity, which has been an age-long menace in developing countries. The etiology of VVF has shifted from obstructed labor to post-surgical complication due to good obstetric care at primary health centers. In the present study a total of 35 patients with vesico-vaginal fistulas were operated during the 5 years period of study. The most common etiology was post-surgical complication following hysterectomy and caesarian section in 71.42% of cases. Most of the fistulas were simple. The success rate after surgery was 91.4%.Recurrence was seen in 3 cases and is mostly due to complex fistulas.
KEYWORDS: VVF, Etiology, Success rate.

INTRODUCTION: Vesicovaginal fistula is a devastating injury in which an abnormal opening forms between a woman's bladder and vagina, resulting in urinary incontinence. This condition is rare in developed countries, but in developing countries it is a common complication of childbirth resulting from prolonged obstructed labour. Estimates suggest that at least 3 million women in poor countries have unrepaired vesicovaginal fistulas, and that 30 000-130 000 new cases develop each year in Africa alone. The general public and the world medical community remain largely unaware of this problem. [1]

An author from Ethiopia, with experience of repairing 25,000 urogenital fistulas quotes "The women with VVF come with only faith, hope and urine soaked clothes". A failed attempt to repair a VVF yields one of the most demoralized patients. So every effort should be made to increase the success rate of closure in the first attempt. This may be attained by pre-operative improvement in the nutritional status, treating urinary infection, treating vulval excoriation, planning surgery in post menstrual period and performing surgery by most skilled person without keeping eye on watch and mind on tea. There is no reliable data for estimating global prevalence of VVF due to uneven reporting. [2]

In India, the incidence of VVF varies from 0.3 to 3.4%.The prevalence of VVF ranges from 1.5 to 1.57 for 1000 deliveries. In India, 80-90 % of bladder fistulae are the result of obstetric causes. Prolonged ischaemic changes in the bladder and vaginal walls secondary to prolonged second stage of labor or obstructed labour ultimately lead to tissue necrosis and fistula formation. Here in we describe the experience of VVF in tertiary care centre for the last five years

MATERIAL AND METHODS: This was a retrospective study conducted in the Department of Urology and Obstetrics and Gynecology for a period of 5 years from August 2010 to July 2015.This study included all patients with VVF presenting to Urology and Gynecology outpatient department during this period and referral patients from primary and secondary health care

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centers as well as by private practitioners. Inclusion criteria were: All cases of VVF including cases with history of one failed repair. Exclusion criteria were: Fistula following carcinoma cervix, post RT VVF, VVF due to tuberculosis and fistulas associated with complete loss of bladder neck following exenteration surgeries.

Data was recorded on a proforma and included underlying etiology, site, size and number of fistulas, surgical approach and ancillary procedures required. All patients were evaluated pre-operatively by history, physical examination, serum creatinine, USG and IVU. Cystoscopy was performed to determine site, size, number of fistulas along with assessment of mucosa. Based on cystoscopy findings fistula was dived into simple and complex fistulas. Primary fistula greater than 4 cm in size, recurrent fistula greater than 2 cm in size, fistula involving urethra and bladder neck, fistula with large bladder stone, fistula with scarred and non-capacious vagina were grouped under complex fistula and rest were grouped as simple fistula. Primary fistulas were repaired once local vaginal tissue was healthy and infection free while for recurrent or obstetric fistula repair was delayed for at least three months or unless infection free. Simple VVF's were approached through vaginal route and complex via trans abdominal route. Vaginal technique used was the Flap splitting technique with Martius labial flap interpositioning. Abdominal approach was by O'Conor technique with omental flap interpositioning. Abstinence from sexual intercourse was advised for three months post-operatively. Patients were evaluated at two to three weeks initially and three monthly later for 6 months and later on depending on presence of symptoms.

RESULTS: A total of 35 patients with vesico-vaginal fistulas were operated during the 5 years period of study. Majority of cases were aged above 30 years resulting in 25 cases [71.42%] (Table 1)

The most common etiology was post-surgical complication following hysterectomy and cesarean section found in 25 cases [71.42%] (Table 2)

Most of the fistulas were simple i.e. 26 cases [74.28%] and supra trigonal 23 cases [65.71%] indicating good prognosis and higher chances of success following surgery. (Table 3). Most common technique used was the abdominal route in 22 cases [62.85%] (Table 4). The success rate is 91.4%.Recurrence was seen in 3 cases and is mostly due to complex fistulas. (Table 5)

DISCUSSION: VVF'S are among the most distressing complications of obstetric and gynecological procedures. Obstetric VVF'S remain a major medical problem in many developing and under developed countries in contrast to western countries where surgeries are the major cause of VVF. Various methods of fistula repair have been described. Flap splitting technique, O'Connor bivalve technique etc. Vaginal approach in jack knife position essentially involves adequate exposure and dissection of fistulous tract along with layered closure of fistula with or without an inter positional graft. The most frequently used abdominal approach now a days is the Connors bivalve technique. The success rate has varied between 75-95% with these various techniques. Transvaginal exposure of VVF'S may be a little challenging but it has been shown to be associated with less blood loss, morbidity and shorter hospital stay.

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Uprety DK, Subedi S, Budhathoki B, Regmi MC[3] studied 23 patients with VVF; the cause of VVF in all was obstructed labor except in one, which followed abdominal hysterectomy

Twenty-three subjects underwent VVF repair, of which 14 (56.5%) had successful outcome.

Twenty patients were operated through vaginal route, of which labial fat graft interposition was done in one. Thirteen (56.5%) patients out of 23 had successful outcome.

A retrospective analysis of 252 cases of vesicovaginal fistulae was done by Goyal NK et al[4] to analyse its etio-pathology and management in an Indian population. The conclusions made were that simple and small fistulae should be repaired with layered closure. All complicated fistulae should be repaired with tissue interposition or tissue graft. This is the first study from India compiling 10 years of experience on vesicovaginal fistula

Eilber KS et al[5] in their study a total of 207 patients underwent transvaginal repair of a vesicovaginal fistula. Etiology of the fistula was hysterectomy in 91% of cases.In 159 patients (77%) at least 1 previous repair had failed. Repair in 120 patients (58%) was done with tissue interposition, including a peritoneal, Martius and full-thickness labial flap in 83, 34 and 3, respectively. The cure rate after initial repair with a peritoneal, Martius and labial flap was 96%, 97% and 33%, respectively. There were no intraoperative complications.

A peritoneal flap for transvaginal repair of vesicovaginal fistulas has minimal morbidity, results in a success rate comparable to that of the Martius flap and is especially useful for proximal fistulas when previous repair has failed

Wall LL et al[6] analyzed a total of 932 fistula of which 899 cases (96.5%) were associated temporally with labor and delivery. Obstetric vesicovaginal fistula is extremely common in north central Nigeria. A complex interaction that involves multiple biologic and socioeconomic factors appears to predispose young women to this devastating childbirth injury.

Ijaiya MA[7] conducted study in Nigerian woman**,**his observations were; obstetric fistula accounts for 84.1%-100% of the Vesicovaginal fistula and prolonged obstructed labour is consistently the most common cause (65.9%-96.5%) in all the series. Other common causes include caesarean section, advanced cervical cancer, uterine rupture, and Gishiri cut. The identified predisposing factors were early marriage and pregnancy, poverty, illiteracy, ignorance, restriction of women's movement, non-permission from husband and transportation. Overall fistula repair success rate was between 75% and 92%.

In this study 35 patients with VVF'S were studied. The most common etiology was post-surgical complication following hysterectomy in 71.4% of cases. The second most common cause was obstetric causes found in 28.57% of cases. Only one out of the 10 cases due to obstetric causes was due to obstructed labour. The rest was a complication of caesarean section.

Due to availability of good obstetric care at primary health centers the cause of majority of VVF's has shifted from obstetric trauma to post hysterectomy. In this study 26 patients had simple fistula while 9 had complex fistula.32 were having primary fistulas and 3 were having recurrent fistulas. The location of the fistulas was supratrigonal in 23 cases and infra trigonal in 12 cases.12 patients were operated vaginally and 22 by abdominal route and one patient by combined route. Bladder dysfunction was managed conservatively by administering anti cholinergics.Wound infection was treated with antibiotics.

Recurrence was seen in 3 cases and they were managed by surgery 3 months later. There were only 3 failures with a success rate of 91.4 %.Martius labial pad of fat was the flap of choice for vaginal repair, while in abdominal route it was omentum. The results of both trans abdominal and trans vaginal routes are comparable. It was found that vaginal approach was associated with less morbidity, less post-operative pain, early recovery and shorter hospital stay. Furthermore, to improve results of fistula repair various grafts and flaps have been interposed between bladder and vagina to promote healing and decrease the incidence of recurrence. Though the number of simple fistulae were more abdominal approach was opted for in majority of the cases because of location of fistula in supra trigonal region and need for ureteric reimplantation.

CONCLUSION: This study concludes that incidence of VVF due to obstetric trauma has declined drastically while incidence of VVF as post-surgical complication of hysterectomy and caesarian section has increased. There is a changing trend in the underlying cause of VVF from obstetric cause (due to obstructed labour) to surgical complication of hysterectomy and caesarian section. The approach to management of VVF has to be individualized based on local findings.

Policy recommendations to combat this problem include enhancing public awareness, raising the priority of women's reproductive health for developing countries and aid agencies, expanding access to emergency obstetric services, and creation of fistula repair centers.

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Age interval	Number of cases
< 20 yrs	1[2%]
20-30 yrs	9[25.71%]
30-40 yrs	13[37.14%]
40-60 yrs	12[34.28%]
Total	**35**

Table 1: Age distribution

Etiology	Number of cases
Post surgery	25[71.42%]
Obstetric causes	10[28.57%]
Total	**35**

Table 2: Etiology of VVF

Nature of fistula	Number of cases
Simple	26[74.28%]
Complex	9[25.71%]
Location of fistulas	
Infra trigonal	12[34.28%]
Supra trigonal	23[65.71%]
Total	**35**

Table 3: Nature and location of fistula

Approach	Number of cases
Vaginal	12[34.28%]
Abdominal	22[62.85%]
Combined	1[2.85%]
Total	35

Table 4: Surgical Technique

Complications	Number of cases
Recurrence	3
Infection	2
Bladder dysfunction	5
Total	10

Table 5: Complications

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