

# EXPERIENCE OF VVF REPAIR IN A PRIVATE PERIPHERAL MEDICAL COLLEGE HOSPITAL

AHSAN KABIR<sup>1</sup>, ARIFA AKHTER JAHAN<sup>2</sup>, MW ISLAM<sup>3</sup>, MA AWAL<sup>4</sup>, A RASUL<sup>4</sup>, ABBAS UDDIN MASUM<sup>5</sup>

### Abstract:

*Vesicovaginal fistula (VVF) is one of the oldest diseases of women of child bearing age. It is more common in developing countries and has been a great social and a surgical challenge to Urologists as well as Gynecologists. Though, there have been lot of developments in the understanding the diagnosis, treatment and use of modern technologies for these fistulae but controversies still exists regarding timing and ideal approach for repair. Every woman with obstetric fistula suffers a very miserable life, either socially outcast separated or divorced, unless any help comes forward. 62 cases of fistula were operated at Kumudini Medical College Hospital, Tangail, from April 08 to May 09. Out of these, 50 (80.65%) patients have been cured. This review was taken to look into the results of operation in a peripheral private Medical College with insufficient facilities. Though, prevalence of obstetric fistula was more in our series but number of fistula cases is rising following gynecological operations. VVF is a preventable disease, so more emphasis should be given on the prevention. Surgical operation is the only treatment for VVFs and it doesn't require too many costly instruments but experience of the surgeon is very important. The scale of problem in our country is enormous. Safe motherhood is birth right of every woman, Government & society should provide that at any cost.*

### Introduction:

Vesico-vaginal fistula (VVF) has been one of the oldest diseases, almost from the very early days of mankind on the earth. VVF was found in 1923, when Derry examined the mummified body of a lady, who reigned around 2050 BC (1). Still repair of VVF is a challenge to Urologists & Gynecologists.

VVF is more common in developing countries and mostly due to neglected child birth. VVF is one of the debilitating conditions; a woman can have after a prolonged obstructed labor and suffers a very miserable life, until treated surgically. It happens mainly among the poor uneducated women & where medical facilities are not available. Sometimes, both VVF and RVF (Recto-vaginal fistula) may develop at the same time which add more sufferings & cause more difficult to manage.

There are many conditions which can develop VVFs or RVFs but in a country like ours, it is more common after a prolonged obstructed labor (almost 97%). Obstructed labor and obstetric trauma, leads to ischemia and pressure necrosis of the bladder floor and anterior vaginal wall which causes development of VVF. Following pelvic surgery, hysterectomy, injury, post-radiation therapy, forgotten tampons, use of corrosive chemicals by the traditional healers can also develop VVFs. Inadvertent bladder injury during pelvic surgery (90%), gynecologic procedures and radiotherapy contributes a major etiological factors in developed countries. The term fistula (previously called rupture) was not established until 1597, when Luiz de Mercado first established the term (2). In 1675 Johann Fatio documented the first successful repair of VVF. However, not until the 19<sup>th</sup> century did successful repair of VVFs become common (3). A thorough clinical history, physical examination, necessary investigations are essential for proper diagnosis and treatment.

Exact number of VVF/RVF cases is not known in Bangladesh; but incidence is quite high. Many patients with this condition suffer in silence and isolation. So, it is always under reported. In 2003, EngenderHealth in collaboration with UNFPA, conducted an assessment of obstetric fistula in Bangladesh. In this assessment it was found that the number of women living with fistula is estimated to be 1.69 per 1000 ever married women. Another maternal morbidity study in Bangladesh suggests that there are over 400,000 women living with VVF, 1.22 million women suffering from urinary incontinence, and over 16,000 women living with RVF (4).

Over the years many new techniques have been developed but still controversies exists regarding timing and ideal approach of operation. With the advent of modern technology like laparoscopy and robot assisted procedures are playing an important role in the management of VVFs. However, bulk of patients will require trans-vaginal or trans-abdominal approach to repair VVFs.

In Kumudini Women's Medical College Hospital, Mlrzapur, Tangail there is project for the VVFs patients, financed by USAID. All operations were performed at Kumudini from April 2008 to May 2009. We could not

do any modern endoscopic procedures due to lack of facilities and proper equipments.

The aim of this study is to get a picture of our endeavour, though, working atmosphere was not very congenial for such a difficult operations.

### Material & Methods:

All most all patients presented to us with a history of uncontrolled leakage of urine following a childbirth, hysterectomy or intra-vaginal use of some chemicals/ drugs by quacks. The age ranged from 16-64yrs and parities ranged from 0-7. The duration of VVF was varied from 2 months to 42 years. (Table -1)

April 2008 to May 2009, total 62 patients had under gone operation, 7 patients were referred to DMCH due to complex fistula with other medical problems. So, they are not included in the list. Most of the patients were anemic and some of them had local (Vaginal) skin rash (ammoniacal dermatitis). Out of 62 patients only 27 patients had their husband and rest of them have left the woman after developing VVF/RVF. Three of the women had lost their husband due to natural death. Two patients had been married twice with the VVF, one delivered a child.

Routine investigations were done and also high vaginal swabs were taken for any bacteria, tested at ICDDR, Dhaka.

Before taking patients to the operation theatre, we examined all patients thoroughly to assess the size, location & identify the fistula & other ailments. According to the size & location, we took decision on the approach of operation.

### Treatment:

Actually, there is no medicine for VVFs cure. The treatment of VVF is mainly surgical but medical or conservative approach can be applied, if the diagnosis is made immediately or within first few days of surgery and size of the fistula is small (<1cm). A transurethral or Suprapubic Foley catheter should be kept in place for 30 days. Sometimes small fistula may resolve or decrease in size by this procedure. If no improvement is observed, after a Foley catheter placement and keeping for 30 or more days, then, it is unlikely to resolve spontaneously.

**Surgical treatment** is only the main method of repair, regardless of cause. Controversy exists on timing for operation. Traditionally, one should wait at least 8 to 12 weeks after the development of VVF but in case of radiation induced fistula, the interval should be more than one year. Emotional status of the patient should not be ignored but it should not dominate in the decision

process of timing to operate. Longer intervals are universally accepted as the standard of care in infected or irradiated tissue.

We approached in most of the cases (57patients) through vaginal route and only in 5 cases through both trans-abdominal & vaginal route. The position of the patient was in dorsal lithotomy with standard Trendelenburg. All the operations were done under Sub arachnoids block (SAB) except in two patients, who required both SAB & General anesthesia.

### Techniques of operations & results:

A Foley catheter was introduced through the fistulas tract, and then the balloon was inflated. A gentle traction was placed on the catheter to facilitate the excision of the margin of the fistula. With caution the fistulous tract was excised and made it big. Then the bladder wall was separated from the vaginal wall. Usually, we stitched the bladder wall first transversely with 3-0 Vicryl and then vaginal wall vertically with Vicryl 2-0. A two way Foley's catheter was kept in for 3 weeks. In 3 cases ureteric re-implantation was required because the fistulous opening was just at the margin. In 6 cases we used Martius flap as interposition flap. The flap was taken from labial fold. Martius first described his procedure in 1928 as a technique used in VVF repair. He used bulbocavernous muscle and its overlying fibro adipose tissue as a pedicle graft for VVF repair. There have been various modifications of his original procedure. Success rates range from 85-100% (5).

The abdomen was opened through Pfannenstiel incision. The absolute indication was big fistula, ureteral re-implantation, involvement of the VVF with ureteric orifice and inadequate exposure of fistula through Vagina.

Out of 62 patients, 2 patients required two times operation and one required three times operation to make it success. Though, it was not a very big or difficult fistula. 6 patients had once failed previous operation by another team. In 12 (19.35%) patients, we failed to correct (Table-2). Out of that one had two VVFs. We could not identify the small one at the time of operation.

The post operative period was almost uneventful except in one, who developed wound infection and required secondary stitches. This patient had both VVF & RVF. Blood transfusion was given in two patients. 50 patients were made cured after the operation. All patients were given injectable Ciprofloxacin for 3 days then followed by tablet for 10 days and occasionally any analgesics. I/V fluids for 1st 24hrs. 2 patients required urethral dilation after 6 months of operation, due to poor of urine flow. These patients had fistula at urethra. Few of them had frequency & urgency for 2-3 weeks.

**Table-I**

No. pts.	Age	Duration of VVF	No. children	Cause of VVF	Husband	Delivery	No. Opn	Remarks
69	16-64 yrs	2 months-45yrs	0-7	51 Obstructed labor, 9 post hysterectomy 2 use of intra-vaginal chemicals/ drugs	27 had 3 died 32 left	All at home by family member/ untrained dais	2-4 times. (9 pts)	7 pts referred to National Fistula Centre, Dhaka

**Table-II**

No. pts.	Operated Trans-abdominal route	Vaginal route	Type of Fistula	No. of Opns.	Post op. problem	Hospital stays after Opn.	Remarks
62	5 both Trans-abdo & vaginal	57	VVF+RVF (2) VVF(49) Urethro-vaginal (11)	2 times (4) 3 times (1)	1 pt. required secondary stitch (VVF+RVF pt) Rest uneventful	22-35days	2 pts. Came after 6 & 8 months of the operation for narrow stream (VVF at Urethra) 12 failed & 50 cured.

**Discussion:**

This retrospective study was carried out to evaluate the outcome of operations in uro-genital fistula. Our success rate was 80.65%, which is slightly lower than other international studies. Our failure was due to many factors. Lot of short comings were there like, Lack of doctors for post-operative follow ups, inadequate OT light, shortage of basic instruments etc. We failed mainly in patients with big fistula and operated through both vaginal & trans-abdominal route. But the size of the fistula has become reduced than before. Three ureteric reimplantations were done because the ureteric orifice was almost at the margin of fistula.

Anyway, no operation technique is universally applicable to all types of uro-genital fistula. It mainly depends on the choice and experience of surgeon & individual case.

Our post-hysterectomy patients presented very early following the development of VVF but Obstetric fistula patients came after a prolong sufferings.

As more than 90% of uro-genital fistula develop from neglected obstructed labor specially in developing countries like Bangladesh. So we should give more

emphasis on the prevention of developing fistula. Every woman has got their birth right to safe motherhood. Both Government & private sector should come forward to tackle the age old problem of child bearing women. We have to stop early marriage, increase medical facilities, educate women, compulsory antenatal checkups, encourage hospital delivery, improve socio-economic condition etc measures can be taken to reduce the uro-genital fistula.

Prolong obstructed labor not only produces uro-genital tract fistula but also result in multiple birth related injuries, like urethral injury, cervical tear, vaginal stenosis, PID, infertility etc<sup>6</sup>. Since development of fistula is more common in poor uneducated women, so, they have to suffer a lot and can't express their sad ordeal to anyone. Sometimes they have to spend their whole life with it, unless some help is offered to them.

It has been observed that development of VVF is on the rise, in the country, following Gynecological operations. Only properly trained doctors should do the pelvic surgery.

In our series, most of the operations were done through vaginal route, as it is less traumatic and reduces the

post operative morbidity<sup>7</sup>. Successful repair of fistula depends on many factors like skill & experience of the surgeon, trained ancillary staffs, good theatre lights, basic surgical equipments etc. The post operative vigilant care is very much essential for successful outcome of operation.

There were lots of shortcomings in the theatre regarding OT light, basic surgical instruments and management of post operative patients. So, we had to use our own personal instruments for proper skillful surgery.

Since obstetric fistula is a preventable condition, so, every one concerned should pay more attention to reduce this old debilitating & disgraceful condition for women.

VVF/RVF can be repaired successfully after proper training, with a high percentage of closure. Once a specialist is trained, he/she should continue doing VVF-repairs with a minimum 30-40 per year. More centers, more doctors & nurses should be trained to tackle the present situation in Bangladesh. Awareness among the expectant mother regarding the consequences of pregnancy should be increased. Training is best done through workshops, in-service training at specialist centers and regular supervisory visits. Both Government and private sector should come forward to handle the huge task. We must offer women a safe motherhood, so, that they can live with their birth right and dignity in the society.

#### References:

1. John Spurlock, MD; "Vesicovaginal Fistula" eMedicine Obstetrics and Gynecology, St. Luke's Hospital of Bethlehem, Oct. 2009
2. John Spurlock, MD; "Vesicovaginal Fistula" eMedicine Obstetrics and Gynecology, St. Luke's Hospital of Bethlehem, Oct. 2009
3. Situation Analysis of Obstetric Fistula in Bangladesh, UNFPA and EngenderHealth 2003.
4. Martius H. Die operative Wiederherstellung der Volkmen fehlenden Harnrohre und des Schliessmuskels derselben. 2. entrallbl Gynakol. 1928; 8: 480
5. Arrowsmith S, Hamlin EC, Wall LL. Obstructed labour injury complex: obstructed fistula formation and the multifaceted morbidity of maternal birth trauma in the developing world. *Obstet - Gynaecol Surv* 1996;51(9):568-74.
6. Hadley HR. Vesico Vaginal Fistula. *Curr Urol Rep* 2002;3(5):401-7.

#### Authors

1. Former part time consultant Urologist. Kumudini Women's Medical College Hospital, Mirzapur, Tangail. At the moment consultant Urologist, Monowara Hospital, 54 Siddeshwari road, Dhaka-1217.
2. Asst. Prof. Gynae & Obstetric Department, Kumudini Women's Medical College Hospital, Mirzapur, Tangail
3. Assistant Professor, Department of Urology, National Institute of Kidney Disease & Urology, Sher-e-Bangla, Nagar, Dhaka-1207.
4. Assistant Professor, Dhaka Medical College, Dhaka
5. Asst. Registrar, Surgery Department, Kumudini Women's Medical College Hospital, Mirzapur, Tangail. At the moment FCPS 2<sup>nd</sup> part student, Surgery, BSMMU, Dhaka.