Vesicovaginal Fistula Following Trauma

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ABSTRACT

Vesicovaginal Fistula (VVF) is an abnormal communication between the bladder and vagina. The major causes of vesicovaginal fistula in developing countries are associated with obstructed labour whereas in developed countries, vesicovaginal fistula results from pelvic surgeries. Rarely vesicovaginal fistula may result due to direct trauma to the pelvis.

This is a case of 17 years female who presented with the history of fall from tree 5 years back, sustained genital injury and complained of involuntary leakage of urine one month after the incident. She underwent fistula repair with vaginal approach using Latzko technique.

KEY WORDS

Vesicovaginal fistula, Trauma, Transvaginal

INTRODUCTION

A vesicovaginal fistula (VVF) is an abnormal communication between the bladder transitional epithelium and the vaginal squamous epithelium.[1] This usually results in the unknown leakage of urine. VVF is the most common type of urogenital fistula. WHO estimates 50000 to 100000 new cases of obstetric fistula each year globally. In Nepal there is estimated incidence of 56.4 fistulas per 100000 women of reproductive age group per year.[2]

VVF continues to be a major problem in women's health in developing countries where majority of the cases occur due to prolonged and obstructed labour.[3] Other risk factors that attribute to VVF formation are poor socio-economic status, malnourishment, lower literacy rate, early marriage and child bearing and inadequate obstetrical care.[4]

This in contrast to high income countries where VVF occurs after radiotherapy, malignancy and surgery.[1] Hysterectomy is the most common gynecological surgery resulting in VVF formation in developed countries.

Very rarely, VVF may also occur due to trauma to the pelvis.[5] The trauma may be because of the fall injury, foreign body insertion in the vagina, contraceptive, neglected pessaries, rape or as punishment.[6,7] We present a case of 17 years female, with history of fall from tree 5 years ago and then presented with involuntary leakage of urine 1 month after the incident.

CASE REPORT

A 17 years girl, presented with complains of involuntary leakage of urine from the genitalia since 5 years. Complaints appeared one month following fall from tree 5 years ago. There was history of lower abdominal pain and genital

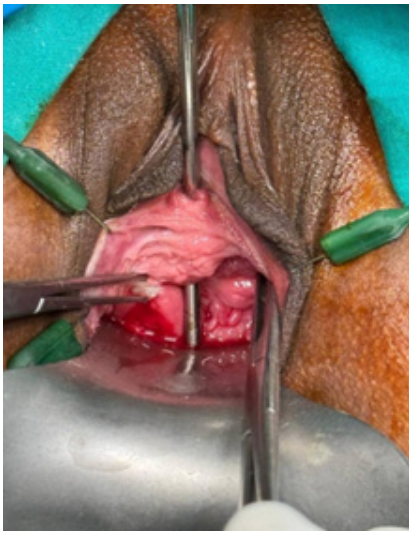

Figure 1. **Pre-operative photograph of VVF**

Figure 2. **Dissection of fistula**

Figure 3. **Closure of the fistula**

injury. After injury she visited nearby hospital where she was managed conservatively. However her symptoms persisted and hence visited a tertiary hospital where she was diagnosed with vesicovaginal fistula and repair was done. But her symptoms did not subside and she continued leaking urine and visited our centre. There was no history of fever, burning micturition and dysuria.

On examination, the patient was conscious, well oriented and vital signs were within normal limit. On systemic examination, her respiratory, cardiovascular and per abdominal examinations were unremarkable. On speculum examination, there was pooling of urine in posterior fornix. On per vaginal examination there was a defect of about 1 cm in anterior vaginal wall, 3 cm proximal to external urethral meatus (Fig. 1). Methylene blue test was positive. CT urogram showed extravasation of contrast through defect in posterior wall of urinary bladder with contrast collection in vagina suggestive of vesicovaginal fistula.

From the history and results of the physical and supporting examinations done, the patient was diagnosed with vesicovaginal fistula Goh2aiii.

The patient underwent fistula repair with a vaginal approach using Latzko technique (Fig. 2 and 3). Her postoperative period was uneventful. She was kept on continuous bladder drainage via foley's catheter for 14 days. Dye test was done on 14th day which was negative and foley's catheter was removed and then she was discharged.

DISCUSSION

VVF is an abnormal epithelized or fibrous communication between the bladder and vagina. A VVF can make a great impact on the physical, psychological and social life of women. This condition has far reaching social implications on the patients due to constant dribbling of urine causing wetting of clothes, the accompanying smell and the constant ostracism, humiliation and destitution.

The mechanism of VVF formation are often related to necrosis of posterior wall of bladder and the anterior vaginal wall or direct injury creating communication between vagina and bladder.[8]

VVF due to trauma is a rare entity. There are only few literatures where direct trauma, foreign body has been implicated as the cause for the development of fistula.[9] In our case, there is history of fall injury 5 years back after which she developed the symptom of involuntary leakage of urine.

The management of VVF operation is usually transvaginal or abdominal through a transvesical approach. The treatment depends on the size and location of fistula, surgeon's experience and need for concurrent action. The transvaginal route for repair is preferred as it has low morbidity, higher success rates and minimal complications.

In our case, the patient underwent the fistula repair using transvaginal approach using Latzko technique. In the study done by Cheikhrouhou et al. simillar approach was used to repair vesicovagina fistula.[10]

VVF following direct trauma to the pelvis, although rare, has a direct impact on the patient's quality of life. Meticulous examination, right diagnosis and timely repair are essential for the successful management of such kind of cases.

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