

CASE REPORT

Repair of Iatrogenic Urethrovaginal Fistula Using Labial Fat: A Case Report

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ABSTRACT

Urethrovaginal fistula is abnormal communication between female urethra and vagina leading to continuous leakage of urine. Though it is rare in practice, it is most commonly the result of iatrogenic injuries, obstetric trauma, malignancy or infections. About 98% of these fistulae are secondary to iatrogenic injury.¹ There are many repair procedures. However it appears that the martius operation with labial fat pad interposition between the repaired urethra and vagina is satisfactory.² We present our experience in repairing iatrogenic urethrovaginal fistula using martius operation with labial fat pad.

Keywords: Iatrogenic fistula, Martius flap, Urethrovaginal fistula

INTRODUCTION

Obstetric fistula is usually a consequence of obstructed labor. It often involves vesicovaginal and rectovaginal fistulae which results from bladder or rectal ischemia. This ischemia is followed by necrosis and sloughing of ischemic tissue there by creating communication between vagina and bladder or the rectum.³ Urethrovaginal fistula is another entity that is usually secondary to gynecological surgery or foreign body. Surgical repair is the mainstay of definitive treatment. Compared to those of vesicovaginal fistulae, option for urethrovaginal fistula repair may be more limited due urethral tenuous blood supply, limited mobility and delicate interposing tissue planes.⁴ Herein we present a case of iatrogenic urethrovaginal fistula repaired using labial fat pad.

CASE

A 43-years female presented with complaints of

continuous involuntary leaking of urine for six months after pelvic floor repair done for cystocele with stress urinary incontinence in nearby hospital. Her symptoms started after 15 days of her surgery. She required constant use of diapers for which she again visited the same hospital and had re operated twice for the same problem each at interval of a months. First one was after 2 months of initial surgery. However there is no documentation of procedure in discharge paper. There was no improvement despite treatments. She did not complain of pain or burning micturition, no hematuria. Her menstrual cycle was regular with average flow. She had 3 normal vaginal deliveries. Her last child birth was 21 years back. Also she is non diabetic and normotensive. One examination her general condition was fair and she was not icteric or pale. Per abdomen was soft, non-tender, no palpable organs.

On per vaginal examination there was about 1.5 cm x1.5 cm urethrovaginal fistula seen on anterior vaginal

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wall 1.5 cm below external urethra meatus as showed in Figure 1.

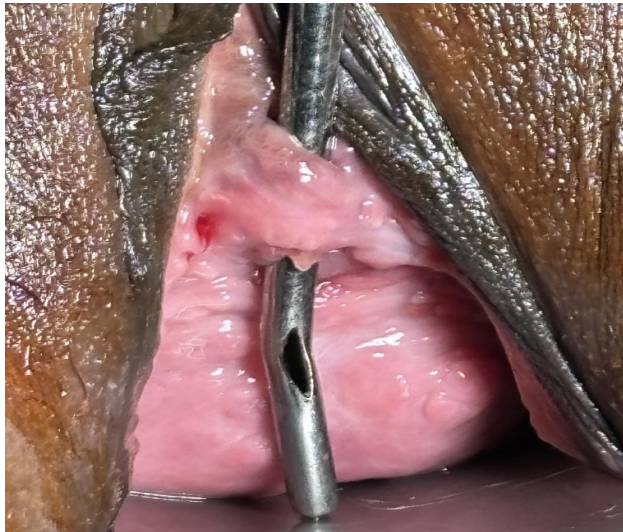


Figure 1. Urethrovaginal fistula

Surgical repair of fistula was planned. The case was discussed with urologist also. After the fistulous opening was identified, a vertical incision was made which included the fistulous opening (Figure 2). The vaginal mucosa was mobilized in all direction around the fistula. The fistula margin was excised completely.

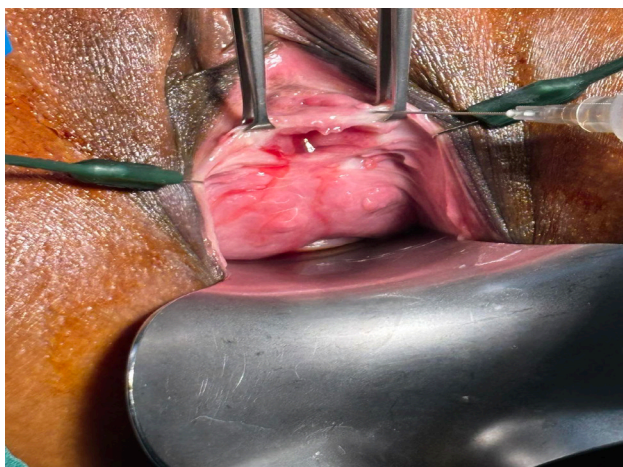


Figure 2. Transverse incision through the fistula.

Vertical closure of uroepithelial surface was performed with 4.0 delayed absorbable polyglactin suture in 2 layers (Figure 3).

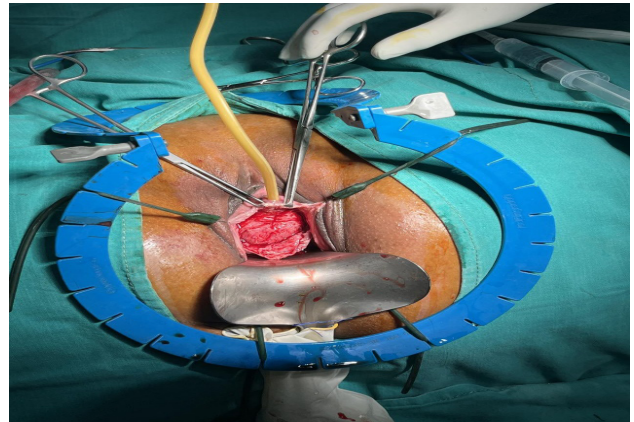


Figure 3. Closure of bladder defect

The labial fat pad was prepared through vertical incision along the right lateral edge of labia majora. A pedicle of well vascularized fibro-fatty tissue was dissected and pulled into the vaginal wound (Figure 4). The fat pad was sutured over the fistula in all position. Vaginal mucosa was closed with 2.0 delayed absorbable polyglactin suture. Vaginal packing was kept for 48 hours. Bladder was drained with foley catheter without tension for 21 days.

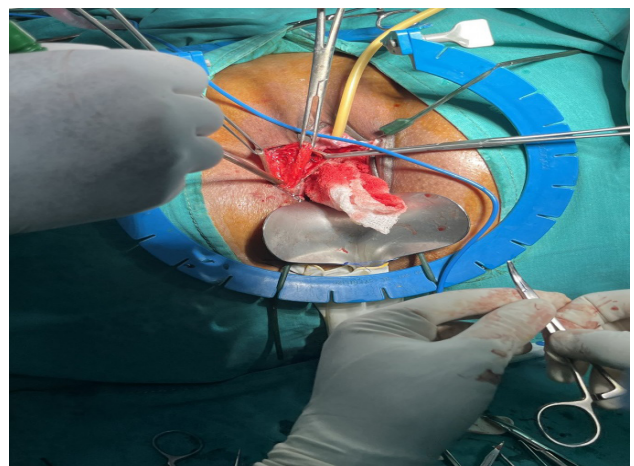


Figure 4. Martius flap from right labia majora

DISCUSSION

Although urethrovaginal fistulas are rare, continuous involuntary leakage of urine is a challenging condition that significantly affects the quality of life of affected patient. It leads to infection and social stigmatization. In 1928, Heinrich Martius 1st described the martius flap procedure, which involve the use of bulbocavernosus and bulbospongiosus muscle. Over the time, the martius flap has been undergone revisions and evolved into a more extensive procedures. The martins flap repair method, involving the use of well vascularized tissue flap, provides the robust support for the fistula closure, reduces tension at the repair site and promotes optimal healing condition. In this case, we achieved a favorable outcome with a full restoration of urinary function during follow up. This success can be attributed to several factors, including meticulous preoperative planning, appropriate patient selection and the technical precision of the surgeon.

A comparative study done by Rangnekar, there is only 75 % failure rate with anatomic repair in comparison with only 12.5% with martius flap repair.⁵ Martius flap offers distinct advantage by providing reliable vascular supply, which enhance tissue integration and reduce the risk of postoperative complications. Despite these positive results, it is important to acknowledge the potential challenges and limitations of the procedure. The size and location of the fistula as well as the patient's overall health, including factors like previous surgeries, infection status and tissue quality play a critical role in the success of the repair.

CONCLUSION

Martius flap repair demonstrates significant potential for managing urethra-vaginal fistulas. This case adds to growing evidence supporting its utility, emphasizing the importance of individualized patient care and surgical expertise in achieving optimal outcome.

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