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A Rare Case of Rectovaginal Fistula Due to Consensual Sexual Intercourse: A Case Report

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Case Report

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Abstract

Rectovaginal fistula is most often caused by obstetric complications, but this case demonstrates its rare occurrence following consensual intercourse in a woman with an anatomically intact hymen. Our patient is a 25-year-old woman who experienced seven years of fecal incontinence and primary infertility after consensual intercourse. Examination showed a 5 x 4 cm rectovaginal fistula with an intact hymen. Surgical repair with transvaginal layered closure resolved the incontinence and restored anatomy, leading to a spontaneous pregnancy.

Introduction

Rectovaginal fistula (RVF) is an abnormal epithelialized communication between the rectum and vagina, most commonly caused by obstetric trauma, accounting for a 82% of cases(1). Less common etiologies include inflammatory bowel disease, iatrogenic trauma, malignancy, and post-radiation injury(2). Rarely, RVF may occur secondary to traumatic sexual intercourse, a mechanism that remains underreported in the literature, particularly in cases with consensual sexual intercourse(3). The patients typically report acute pain and vaginal bleeding at the time of injury, followed by passage of feces and flatus through the vagina(4).

A thorough physical examination is necessary to identify the site and size of the fistulous tract and to evaluate the condition of the surrounding tissues, including the rectum, vagina, and rectovaginal septum(1). Determining the level of fistula is important, as it directly guides the choice of surgical approaches. Low-type fistulas can be corrected with a vaginal or transrectal approach, whereas high-type fistulas may need an abdominal approach(5). The overall success rate for rectovaginal fistula surgery is reported to be about 82.5%. Compared to the transabdominal approach, which has a reported success rate of 50%, local repair techniques show better success rates, which were 87.5%(6). This report aims to highlight sexual trauma as a rare but important cause of RVF, to discuss the diagnostic challenges posed by an intact hymen, and to illustrate the successful surgical management that resolved both incontinence and infertility.

Case Report

A 25-year-old nulligravida female presented with a seven-year history of fecal and flatus incontinence. She had been married for seven years and denied any history of pregnancy or obstetric trauma. Shortly after her marriage, she experienced an episode of forceful sexual intercourse, which resulted in severe pain and vaginal bleeding. Subsequently, she developed persistent fecal and flatus incontinence, significantly impairing her social functioning and emotional well-being. The patient reported regular menstrual cycles with normal flow and no dysmenorrhea. Despite regular unprotected intercourse, she had not conceived over the past seven years, and she had no history of female genital cutting. The leakage of feces and gas, combined with infertility, has led to substantial psychological distress. She also expressed concerns regarding her husband's intention to remarry to fulfill his desire for children.

On physical examination, the patient was hemodynamically stable and well-nourished. Abdominal and cardiovascular examinations were unremarkable. Perineal examination revealed a flat vestibule and a thick intact hymen (Fig. 1) with two pinhole fenestrations, each approximately 3 mm in diameter (Fig. 2). A large rectovaginal fistula, measuring 5 x 4 cm, is located just proximally to the anal verge (Fig. 3). No vaginal openings were identified, and the findings were documented photographically after the patient consented to take pictures. A metallic catheter was introduced through the urethra and hymenal fenestration to further delineate the anatomy.

Diagnosis was easily made with physical examination. She was prepared for surgery to do hymenoplasty and rectovaginal fistula repair. She put on a low fiber diet (pasta and macaroni) for 48 hours, two enemas were given a day before surgery, and preoperative ceftriaxone 1 gram IV and Metronidazole 500 mg IV were given while administering Spinal anesthesia. Spinal anesthesia was administered and put in the lithotomy position. Surgical intervention was undertaken, involving hymenotomy to visualize the vaginal canal. The cervix appeared normal, and the vaginal length was normal (Fig. 4). Vaginal mucosa was dissected from the rectovaginal septum, scar on the fistula margin was trimmed to have well-vascularized tissue, rectal mucosa, rectovaginal septum, and vaginal mucosa were closed separately with 2/0 Vicryl. Finally, the rectovaginal fistula was successfully repaired (Fig. 5). The patient remained hemodynamically stable postoperatively, with normal vital signs during the postoperative period. Postoperatively, the patient started sips on the same day, a low fiber diet after 24 hours, and resumed normal diet at 48 hours; and antibiotics, ceftriaxone 1gram IV BID and Metronidazole 500mg IV TID were given for 48 hours. And advised to cleanse the perineum 4–6 times per day.

On discharge, she was counseled to avoid sexual intercourse for six weeks, to have follow-up at two months, and to have a cesarean delivery in the future pregnancy. Follow-up visit was at the third month, after one month of the appointment date, and she reported that she had resumed sexual intercourse and was continent to flatus and feces. Then, after eight months of the procedure, she was called on the phone and reported that she was continent and satisfied with the intervention. She is sexually active with no pain, and she had a pregnancy of six months.

Discussion

Rectovaginal fistula (RVF) is a devastating condition predominantly associated with obstetric trauma, particularly in low-resource settings(5). RVF following consensual sexual intercourse is rare and remains poorly documented in the literature(3). This is the first case report of rectovaginal fistula (RVF) occurring with an intact hymen and seven years of infertility after consensual penetrative intercourse. This case demonstrates that significant anatomical injury can occur even in the absence of hymenal rupture.

The pathophysiological sequence in this case is illustrative. The initial traumatic penetration at the time of first intercourse likely created a fistulous tract between the rectum and the posterior vaginal fornix. The patient seven years history of primary infertility was explained mechanically by this altered anatomic pathway, which inhibited normal intravaginal semen deposition(7). The anatomical basis of the infertility

was confirmed when a spontaneous pregnancy resulted from the restoration of normal vaginal anatomy through surgical repair.

Despite long-standing, classical symptoms, the presence of an intact hymen obscured the underlying genital injury, and this patient presented with these symptoms of prolonged duration, yet the diagnosis was delayed. Previous reports show that up to 50% of coital injuries occur in adolescent girls, and an imperforate or thick hymen may provide false reassurance to clinicians, which results in underreporting of sexual trauma(7). This case highlights the importance of maintaining a high index of suspicion, a focused history of sexual trauma, and simple bedside tests (e.g., dye or tampon test) are essential for early diagnosis in similar clinical contexts.

For simple low-type RVF, a transvaginal approach with three-layer closure of the rectal mucosa, rectovaginal septum, and vaginal mucosa remains the preferred technique, which resulted in an excellent outcome in this patient(6). The patient's complete recovery of symptoms, successful resumption of sexual activity, and subsequent pregnancy highlight the importance of a comprehensive surgical approach that addresses both the fistula and any concomitant anatomical barriers to reproduction.

Conclusion

This case demonstrates that a rectovaginal fistula (RVF) can occur following consensual sexual intercourse despite an intact hymen, leading to prolonged fecal incontinence and infertility. Surgical repair successfully resolved both conditions, resulting in continence and spontaneous pregnancy.

Abbreviations

BID Bis in die (twice a day)

IV Intravenous

RVF Rectovaginal fistula

TID Ter in die (three times a day)

Declarations

Ethics approval and consent to participate:

Not Applicable

Consent for publication:

Verbal and written consent was obtained to be published as a case report

Conflicts of Interest:

The authors declare that they have no conflicts of interest related to this case report.

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The authors did not receive support from any organization for the submitted work.

Author Contribution

W.D. and M.G. both wrote the main manuscript text. M.G and G.B prepared the figures. M.G and G.B reviewed the case report.

Data availability:

No datasets were generated or analysed during the current study.

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Figures



Figure 1

Thick hymen after an incision was made on the imperforated hymen



Figure 2

Intact hymen with two pinhole fenestrations

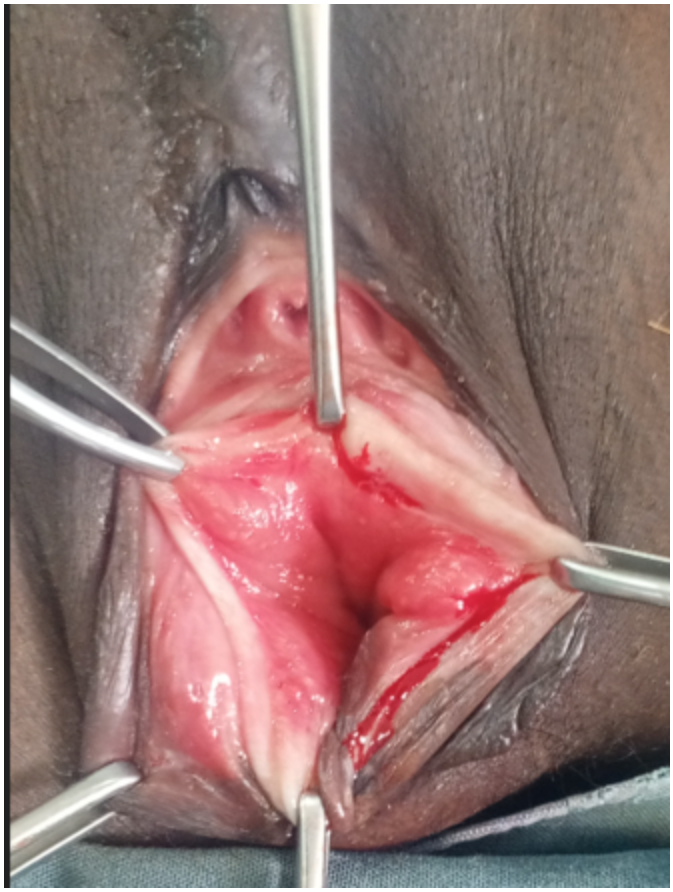


Figure 3

Large rectovaginal fistula located proximally to the anal verge

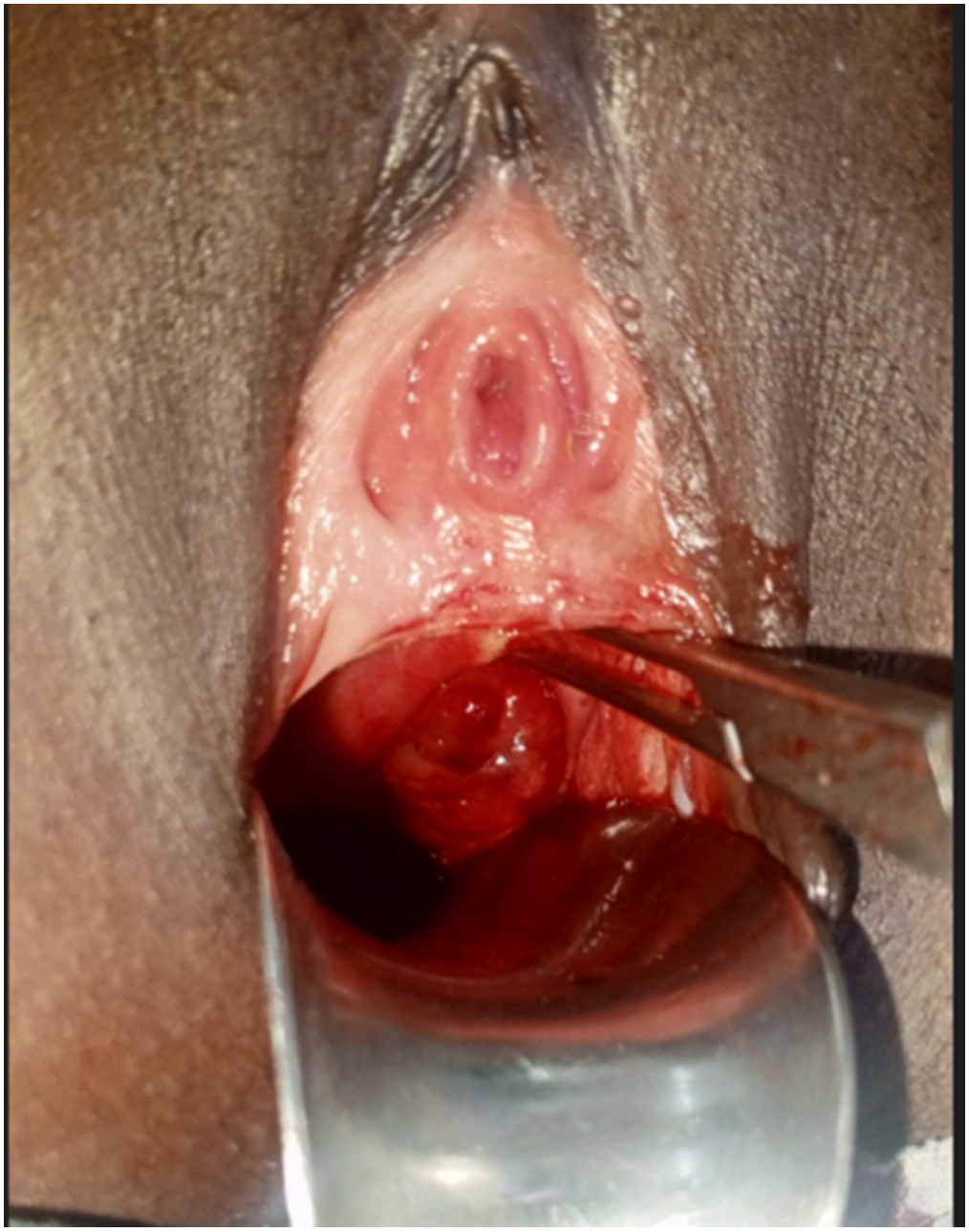


Figure 4

After a hymenectomy, the appearance of the cervix and vaginal length



Figure 5

After rectovaginal fistula repair