CASE REPORT

Vesicovaginal fistula following insertion of a foreign body in the vagina for sexual gratification: could it be catastrophic?

Ankur Bansal, Manoj Kumar, Sunny Goel, Ruchir Aeron

Department of Urology, King George's Medical University, Lucknow, Uttar Pradesh, India

Correspondence to

Dr Ankur Bansal,
ankurbansaldmc@gmail.com

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SUMMARY

In developing countries such as India, the vesicovaginal fistula (VVF) is a commonly found entity in urogynaecology. VVFs secondary to obstructive labour still remain the most common cause in these countries. We report a very unusual case of a VVF in a young woman that developed due to self-insertion of a plastic box for sexual gratification.

BACKGROUND

A vesicovaginal fistula (VVF) can make a great impact on the physical, psychological and social life of a woman. VVFs may result from iatrogenic injury during pelvic surgeries, obstructed labour, malignancies, radiation therapy and infection. Unrelieved obstructed labour has been reported as the most common cause of VVFs in developing countries. We report an unusual case of a 26-year-old married woman who presented with pain and fainting episodes during sexual intercourse, with foul smelling vaginal discharge, following self-insertion of a plastic box into her vagina for sexual gratification.

CASE PRESENTATION

A 26-year-old illiterate, newly married woman from a village presented with a history of pain and

fainting episodes during sexual intercourse for the past 6 months. She also reported of high-grade fever with foul smelling vaginal discharge. There was no history of continuous leakage of urine per vaginum. Her menstrual history was normal. There was no associated psychiatric illness. There was no history of physical abuse by her partner. She initially concealed the history of insertion of a foreign body.

INVESTIGATIONS

General physical examination was normal. There were no signs of physical abuse (such as bite marks, labial bruises and vaginal lacerations). On vaginal examination, a stony hard object was felt at the anterior vaginal wall. It had impacted and forcible movement was painful. There was no continuous leakage of urine from the vagina. Speculum examination revealed a large plastic foreign body protruding through the anterior vaginal wall, with purulent vaginal discharge ([figure 1](#)). Digital rectal examination was normal. Once the patient became comfortable and gained confidence in us, she revealed the history of self-insertion of a plastic

Figure 1 Speculum examination revealed a large plastic foreign body (marked with red arrow) protruding through the anterior vaginal wall.

Figure 2 Plain X-ray of the pelvis showed a large rectangular object (approximately 6×5 cm) lying in the pelvis.

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Figure 3 (A–C) Contrast-enhanced CT (axial and coronal section) showed a 6.3×5.2 cm hyperdense object (marked with red arrow) lying in the vagina and protruding into the bladder lumen through the posterior bladder wall.

box intravaginally for sexual gratification 6 months prior, which she was unable to remove as attempting to do so was painful. Plain X-ray of the pelvis showed a large rectangular object (approximately 6×5 cm) lying in the pelvis (figure 2). Contrast-enhanced CT showed a 6.3×5.2 cm hyperdense object lying in the vagina and protruding into the bladder lumen through the posterior bladder wall (figure 3), with normal upper tracts, uterus and ovaries. Vaginoscopy and cystoscopy showed a plastic box lying, for the most part, in the vagina and protruding into the bladder through the posterior bladder wall (figure 4). The box was extracted transvaginally under regional anaesthesia (figure 5). Following transvaginal removal, repeat cystoscopy and vaginoscopy revealed a trigonal VVF with inflamed vaginal mucosa. The patient reported of continuous leakage of urine per vaginum in the postoperative period.

TREATMENT

Three months later, the patient underwent reassessment with cystoscopy and vaginoscopy, which revealed a 4×3 cm trigonal VVF with adequate vaginal capacity and healthy vaginal mucosa. She underwent transvaginal VVF repair with Martius flap interposition. There were neither intraoperative nor postoperative complications. The patient was discharged on postoperative day 5 with a urethral catheter and a suprapubic catheter (SPC) in situ. She was advised to follow-up after 2 weeks.

OUTCOME AND FOLLOW-UP

During the first follow-up after 2 weeks, the urethral catheter was removed and the patient was voiding well with no symptom of leakage of urine per vaginum. The SPC was removed after 2 days. Follow-up was carried out every 3 months in the first year and every 6 months in the second year. The patient was advised sexual abstinence for at least 6 months following repair. She conceived 1½ years after the surgical repair and elective lower segment caesarean section was performed.

DISCUSSION

VVF is a common disease in developing countries, especially those of sub-Saharan Africa and Southeast Asia.¹ The most common cause of VVF in developing countries is obstructive labour, whereas iatrogenic injury, for example, hysterectomy, remains the most common cause in developed nations.² Acquired VVFs resulting from a vaginal foreign body are very rare, with around 20 cases reported in the literature. The most common foreign bodies resulting in acquired VVF are aerosol caps.^{3–5}

Goldstein *et al*⁶ reported a VVF in an 82-year-old woman following intravesical migration of a foreign body (Gellhorn pessary), which was placed intravaginally for a cystocele. It was removed through a suprapubic transvesical approach with simultaneous repair of the VVF. Siddiqui and Paraiso⁷ reported a VVF in a 16-year-old girl, due to a 6×4 cm plastic cup in the vagina, which was extracted transvaginally followed by VVF repair 3 months later. Our case is unique by virtue of its unusual presentation (fainting episodes during intercourse). Intravaginal foreign bodies of long duration can also lead to recurrent purulent vaginal discharge, vaginal stenosis, pelvic inflammatory disease and rectovaginal fistulas.^{6,8}

Illiteracy, poverty and lack of awareness in women in developing countries are the major contributing factors for these types of cases. In our case report, the traumatic insertion of a foreign body inside the vagina for sexual gratification might have led to a severe inflammatory reaction further progressing to VVF. These patients usually conceal the history of insertion of a foreign body for sexual gratification. Hence, a thorough examination using a vaginal speculum is important for diagnosis. Irregular objects may require removal under anaesthesia, to prevent further injury to the vaginal walls. The resultant VVF should not be repaired immediately as severe inflammation may lead to recurrence. A waiting period of 3–6 months has been recommended, allowing resolution of inflammation and

Figure 4 (Vaginoscopy (A) and cystoscopy (B) showed a plastic box lying, for the most part, inside the vagina (marked with red arrow) and protruding into the bladder through the posterior bladder wall (marked with yellow arrow).

Figure 5 (A and B) The foreign body (plastic box filled with debris) was extracted transvaginally.

maturation of the fistula. Surgeons usually favour an abdominal route for large fistulas (>4 cm), high fistulas, fistulas involving ureteric orifices, or when there is a need for concurrent intra-abdominal surgery. A transvaginal approach is preferred in low-lying fistulas with adequate vaginal capacity, and is associated with decreased morbidity, faster healing rates and a better cosmetic result, hence it is increasingly preferred these days. However, surgeons should use the approach they feel most comfortable with, since the first operation gives the best results. We approached this case transvaginally as the fistula was low lying with adequate vaginal capacity. The Martius flap was placed to add integrity to the repair as the most dreaded complication is breakdown of repair causing recurrence. Our case achieved excellent functional results using the transvaginal approach.

Eilber *et al*⁹ achieved a 97% success rate repairing VVF via the transvaginal route using a Martius flap. In all cases, the urethral catheter was left for a long time to decompress the bladder continuously and to keep the site dry. However, there is no uniform consensus on the duration of leaving the urethral catheter in place. Usually, catheters are left for 14 days during primary repair, and 21 days in cases of bladder neck involvement, cases requiring urethral reconstruction and in cases with pericatheter urine leakage in the postoperative period.¹⁰ Lastly, we want to emphasise the need for sexual education in developing countries in order to prevent such incidents.

Learning points

- ▶ Although careful history taking and examination generally reveal the presence of a foreign body, imaging techniques such as X-ray of the pelvis, contrast-enhanced CT and cystovaginoscopy may also be helpful.
- ▶ The ideal management of an uncomplicated foreign body is its complete removal.
- ▶ A vesicovaginal fistula can be the most dreaded complication of an intravaginal foreign body, and should be repaired once inflammation settles down.
- ▶ Sexual education should be imparted in developing countries.

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Competing interests None declared.

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