JOGECA Journal of Obstetrics and Gynaecology of Eastern and Central Africa

CASE REPORT

Gynecology

Post-coital urethrovesical rupture in a woman with congenital vaginal atresia and vesicovaginal fistula: A case report

Khalil Y.A[1,*], Mwangi C.M[1], Munene J.M[1], Khisa W[2]

[1] Department of Obstetrics and Gynecology, University of Nairobi, Nairobi, Kenya.
[2] Department of Obstetrics and Gynecology, Kenyatta National Hospital, Nairobi, Kenya.

***Correspondence**: Khalil Y.A, khalilyusufadam@gmail.com

Received: 24 January 2021; Revised: 18 March 2021; Accepted: 30 March 2021; Available online: April 2021

Abstract

Background: Congenital vaginal atresia coexisting with congenital vesicovaginal fistula is a rare occurrence. It could also lead to rare complications including urethral coitus that could result in urethrovesical rupture.

Case presentation: A 21-year-old female presented with a history of cyclic hematuria (menouria) to the urogynaecology clinic at the Kenyatta National Hospital. She gave a history of urine incontinence following her sexual debut. Examination under anesthesia revealed urethrovesical rupture and vaginal atresia. She was scheduled for a staged reconstructive surgery of the urethra and bladder and vaginoplasty.

Conclusion: Urethrovesical rupture is a possible complication of coitus in women with vaginal atresia. Since these women often present at an early age before coitus, early referrals and management could help avoid coital related complications like urethral coitus and urethrovesical rupture.

Keywords: Urethral coitus, congenital vesicovaginal fistula, vaginal atresia, urethrovesical rupture, urinary incontinence

Conflict of Interest: None
Funding: None

Introduction

Urethrovesical rupture is a rare complication that may result from pelvic trauma and rarely from urethral coitus (1,2). Urethral coitus has been reported in women with congenital vaginal atresia (3). Abnormal vaginal development may lead to rare congenital anomalies, including congenital vaginal atresia and congenital vesicovaginal fistula (4).Vaginal atresia results from the failure to canalize the vaginal plate, while congenital vesicovaginal fistula results from an abnormal connection between the vagina and the urinary bladder (5). The incidence of vaginal atresia is 1 in 4 500 female deliveries, while the incidence of the congenital vesicovaginal fistula is unknown, but it is rarer than vaginal atresia (4). This is a case of urinary incontinence secondary to urethrovesical rupture after urethral coitus in a woman with congenital vaginal atresia and congenital vesicovaginal fistula.

Case presentation

A 21-year-old woman presented to the urogynecology clinic at the Kenyatta National Hospital (KNH) with a one-month history of urinary incontinence, a condition that developed after her sexual debut. She reported difficult penetration, severe dyspareunia, excessive vaginal bleeding, vomiting, and urine leakage. She had coitus a few more times afterward but abandoned intercourse because of the extreme dyspareunia, difficult penetration, and bleeding. From age 14, she started experiencing monthly cyclic lower abdominal and back pain associated with haematuria (menouria) for 3 - 4 days. Her last episode of menouria was three weeks before her

presentation to the urogynecology clinic at KNH. She sought treatment at general practice clinics but was reassured that it was normal, and she eventually gave up consulting because of embarrassment.

On clinical examination, she appeared depressed, of average height and weight, fully developed sexual secondary characteristics. The abdominal examination was normal. Pelvic examination revealed normal-looking external genitalia with wet perineum due to continuous urinary leakage. The external urethral orifice was not seen. A gush of urine followed the insertion of Sims speculum, and the cervix was not visualized.

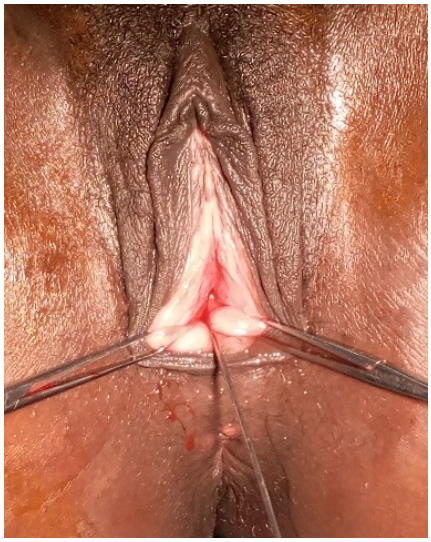

Figure 1: Normal external genital, external urethral orifice not visible, the two allis clamps holding the right and left cervical lips showing the anterior tears in between. A probe is in the cervical canal and goes about 7cms into the uterus.

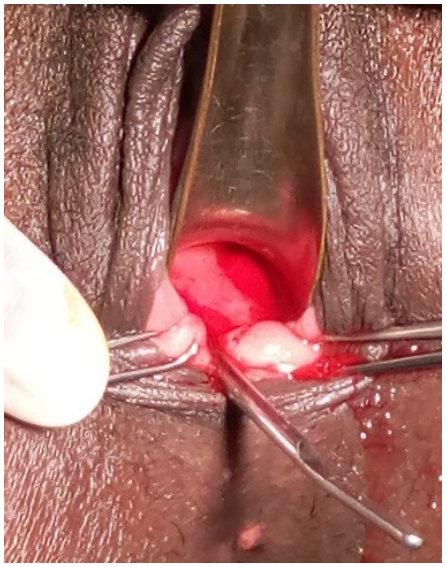

Figure 2: Anterior Sims speculum goes into the bladder; during this exam, urine can be seen leaking from the ureteral orifices

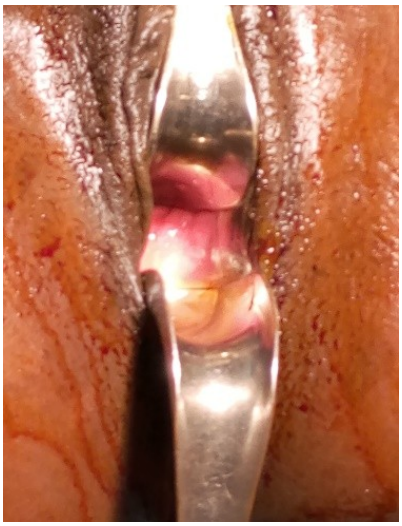

Figure 3: Anterior and posterior sims speculum inserted into the bladder; more urine is seen leaking directly from the ureteric orifices.

Magnetic Resonance Imaging (MRI) of the pelvis revealed a uterus with normal shape, size, and orientation measuring 6.8 X 3.4 X 5.5 cm with a volume of 64.9cc. Endometrial thickness and cervix were normal. Both ovaries were normal with multiple follicles. A normal urinary bladder was seen. A small vesical vaginal fistula was noted between the anterior vaginal wall and posterior bladder wall measuring 2 X 2 X12 mm.

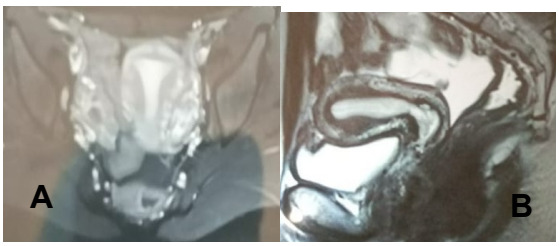

Figure 4: MRI A: Coronal section of a normal uterus. B: Sagittal section of a normal uterus and cervix; the vagina is short. The urinary bladder is visible as the patient was continent when the thighs were adducted.

Examination under anesthesia (EUA) revealed the absence of the urethra, open posterior urinary bladder wall revealing the trigone and ureteric orifices that urine was leaking from. The vagina was noted to be short and hypoplastic. There were two bulbs seen, a right and a left one, and were thought to be urethral bulbs. A small hole was seen at the vaginal apex and probed to a depth of 8 cm (Figures 1 - 4). The anal orifice was normal. A diagnosis of urinary incontinence due to coital urethrovesical rupture with vaginal hypoplasia and the congenital vesicovaginal fistula was made. The bladder was visible during the MRI but was open during speculum examination. However, the patient reported she was fully continent when her thighs were adducted. Consultation with the

urology team was made. The patient was scheduled for a staged reconstruction surgery of the urethra and bladder then vaginoplasty to allow coitus. The patient underwent the first session of the surgery but was lost-to follow-up.

Discussion

Congenital vaginal atresia commonly coexists with congenital vesicovaginal fistula (6). Vaginal obstruction due to these conditions result in sexual dysfunction, and in rare cases lead to urethral coitus (3), which could have severe complications like urethrovesical rupture as in this case. A similar case of primary menouria due to congenital vesicovaginal fistula with distal vaginal agenesis has been reported. However, this was managed early enough before coital complications were reported (7). History of the patient, thorough clinical examination, and imaging studies: ultrasonography and MRI are essential for the diagnosis and classification of urethrovesical rupture (4). Surgical management is usually undertaken to restore urinary continence, reconstruct the vaginal canal to allow normal menstrual flow, coitus, and even pregnancy (8).

Conclusion

Urethrovesical rupture is a possible complication of coitus in women with vaginal atresia. Since these women often present at an early age before coitus, early referrals and management could help avoid coital related complications like urethral coitus and urethrovesical rupture.

References

1. Tazi K, Moudouni S, Koutani A, Ibn Attya A, Hachimi M, Lakrissa A. [Severe injury of the female urethra resulting from pelvic fracture. Report of a case]. Prog en Urol J l'Association Fr d'urologie la Soc Fr d'urologie. 1999 Dec;9(6):1123–6.
2. Eke N. Urological complications of coitus. BJU Int. 2002;89(December 2000):273–7.
3. Uçar MG, Tuyan T, Kebapçilar AG, Tosun Z, Çelik Ç. Urethral Coitus in a Case of Vaginal Agenesis - Is Only Vaginoplasty Enough to Treat the Urinary Problems? 2016;10(8):10–2.
4. Slaoui A, Benzina I, Talib S, Etber A, Zeraidi N, Lakhdar A, et al. Congenital vaginal atresia: About an uncommon case. Pan Afr Med J. 2020;37(69):1–7.
5. Moore K, Parsaud T, Torchia M. The Developing Human. Clinically Oriented Embryology. 9th Ed. Clinical Anatomy. Elsevier Press; 2013. 271–273 p.
6. Wong YS, Tam YH, Pang KKY, Chan SSC, Chu WCW. Robotic repair of congenital vesicovaginal fistula masquerading as a ureterocele in a 10-year-old girl. Urol Case Reports [Internet]. 2018;20(June):48–50. Available from: https://doi.org/10.1016/j.eucr.2018.06.013
7. Singh V, Sinha RJ, Mehrotra S. Primary menouria due to a congenital vesicovaginal fistula with distal vaginal agenesis: a rarity. Int Urogynecol J. 2011 Aug;22(8):1031–3.
8. Erman-Akar M, Ozkan O, Ozkan O, Yucel S, Dolay K, Ertugrul F, et al. Uterine preservation and vaginal reconstruction in a patient with congenital vaginal agenesis presenting with cyclic menouria. J Minim Invasive Gynecol. 2011;18(5):682–5.