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Case Report

A rare case of vaginolith, vesical calculus with vesicovaginal fistula in adolescent female

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ABSTRACT

A case of large dumbbell shaped stone involving both vagina and urinary bladder secondary to vesicovaginal fistulae is presented. Vagina is a rare site for urinary stone formation. Clinical presentation is variable like difficulty in micturation and dyspareunia. Proper vaginal examination can be helpful to make the diagnosis. Attention is paid especially in young gynecologists for the importance of 1st doing pelvic examination before carrying certain investigations and have a possibility of VVF with vaginal stone. We present a neglected case of vesicovaginal fistula with vaginolith and vesical calculus formation in a 15 year old girl with continuous dribbling of urine per vagina. Diagnosis was confirmed on ultrasonography CT IVU demonstrating exact site and size of vesical calculus. Vesical calculus was removed by combined suprapubic approach and repair of fistula was done after interval of 6 months by suturing urinary bladder and vagina defect and omentum interposition in between them.

Keywords: Vesicovaginal fistula, Vaginolith, VVF, Vesical calculus

INTRODUCTION

Vesicovaginal fistula with vaginal obstruction associated with vaginal calculus is an extremely rare medical condition.[1] Vaginal calculus acts as a foreign body and some time can grow larger enough to obstruct the whole vagina leading to profound pressure over the bladder resulting in urinary retention.[2] Vaginal calculi can be recognized as primary or secondary depending on the presence or the absence of a foreign body nidus. However primary vaginal stone are occasionally seen in gynecological practice and can be mistaken as large bladder calculi on plain radiograph.[3] Various etiological factors can be recognized which are responsible for primary vaginal calculi like vesicovaginal and urethrovaginal fistula, congenital anomalies of the genitourinary tract or pelvis radiotherapy, neuropathic bladder & vaginal outlet obstruction. Secondary vaginal stone found around foreign body nidus are not so frequent.[4] It was postulated that the vaginal calculus usually originated from the stasis of urine through the fistulous tract in the obstructed vagina.[3]

Here we describe the case of vesicovaginal fistula associated with vaginal stone formation.

CASE HISTORY

A 15-year-old female presented to the surgery outpatient department with complaints of lower abdomen pain and continuous dribbling of urine for the past 1 year. She had attained menarche at age of 12 years.

Examination

Her general physical examination was unremarkable. On local examination of the external genitalia, there was mild excoriation of the perineal and vulval skin, and

visible yellow color stone at vaginal opening (Figure 1). Foul smelling urine was observed coming out of the vaginal opening.

Figure 1: Visible stone a vaginal opening.

Investigations

Her routine laboratory investigations such as hemoglobin, total leukocyte count, differential leukocyte count, erythrocyte sedimentation rate, blood urea and creatinine were within normal limits. Based on the history and clinical examination, a provisional clinical diagnosis of vesical calculus was made and the patient was referred to the radiology department for USG of the kidneys, ureters and bladder.

USG was performed and revealed bilateral hydronephrosis. A curved echogenic focus with posterior acoustic shadow was seen within the lumen of the partially distended urinary bladder measuring approximately 45mm in size, suggestive of a vesical calculus. calculus encroaching vagina through vesicovaginal fistula.

When enquired, the patient and her parents denied the insertion of any foreign body into the vagina.

CT IVU was performed which revealed a calculus of 48x25x20mm in lumen of urinary bladder extending in vagina (Figure 2).

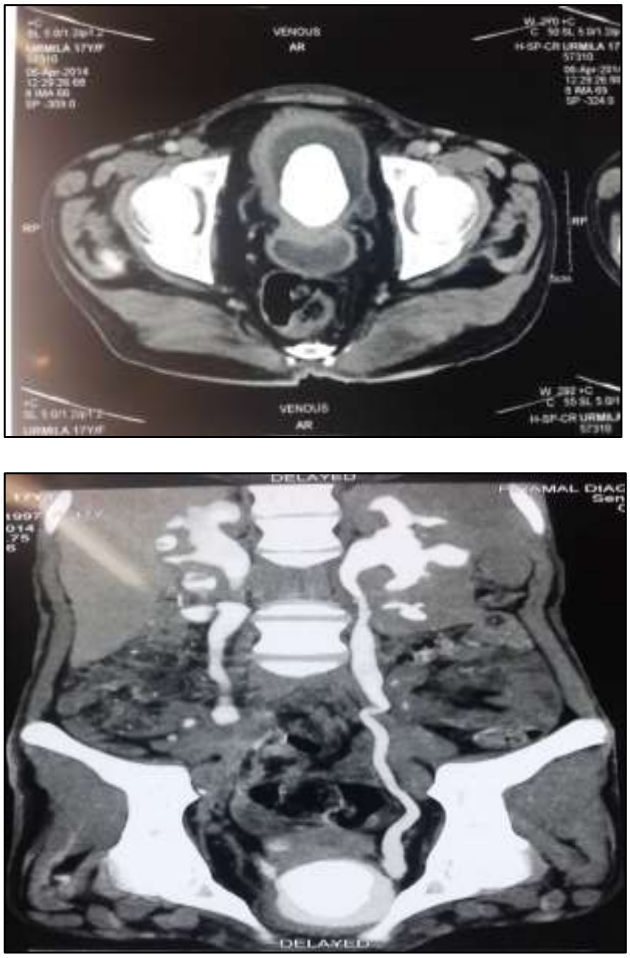

Figure 2: CT IVU showing large calculi involving urinary bladder and vagina.

Based on the radiological findings and history, a diagnosis of vesical calculus extending up to vagina with VVF was made.

METHOD

The patient was given antibiotic cover. The vaginal foreign body and the vesical calculus were removed via a suprapubic approach under general anesthesia.

A dumbbell shape calculi removed from bladder involving part of vagina (Figure 3). After removal inner side of vagina was examined whole vaginal mucosa was very unhealthy due to pressure effect. Owing to the big size of the defect and unhealthy mucosa she was schedule for VVF repair after an interval.

After 6 months patient came for follow up. RGU and MRI was done and a diagnosis of vesicovaginal fistula made with collapsed and fibrosed bladder and fistulous

tract communicating bladder neck and proximal urethra to vaginal orifice and absent distal urethra (Figure 4).

Figure 3: Dumbbell shape calculi removed from suprapubic approach.

Figure 4: RGU fibrosed bladder and fistulous tract communicating bladder neck and proximal urethra to vaginal orifice and absent distal urethra.

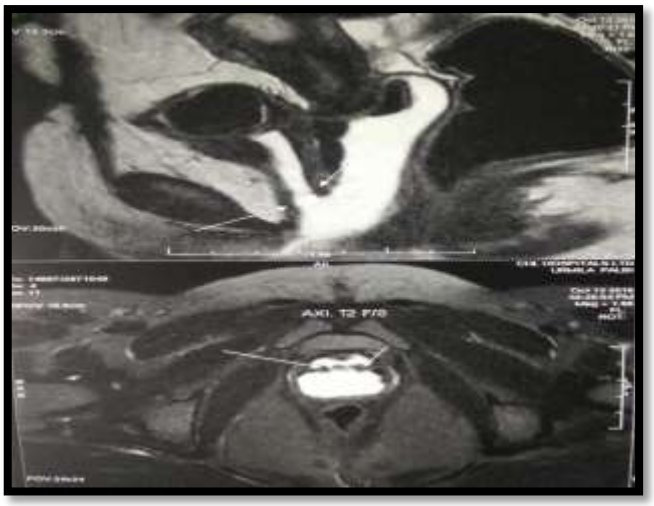

Figure 5: MRI Showing fibrosed bladder and fistulous tract communicating bladder neck and proximal urethra to vaginal orifice and absent distal urethra.

Patient was taken in OT and explored by combined suprapubic and transvaginal approach. Thickened fibrosed small volume bladder with incidental finding of left ovarian chocolate cyst seen and removed in same sitting (Figure 6). The VVF was repaired by suturing the vaginal and bladder wall defect and omental graft was placed in between.

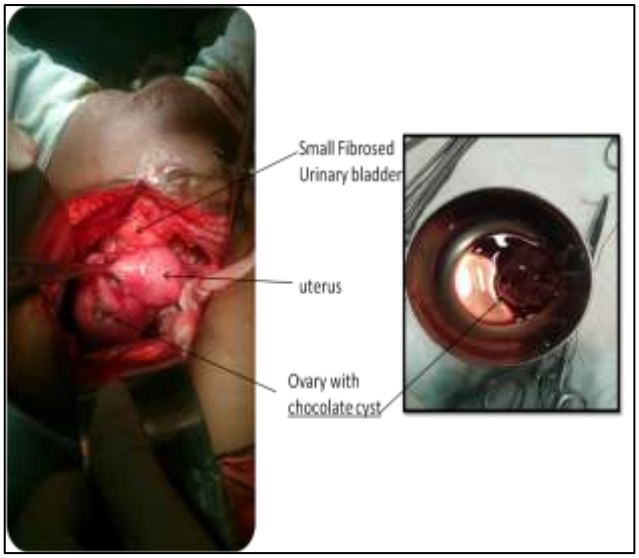

Figure 6: Intraoperatively small thickened fibrosed urinary bladder with incidental chocolate cyst.

Transvaginally catheterization done from fistulous tract and urethroplasty done using vaginal flap, a suprapubic cystostomy done using 14 french Foleys catheter (Figure 7).

The patient is healthy and asymptomatic after 3-month follow-up.

Figure 7: Reconstruction of urethra using vaginal flap.

DISCUSSION

Vaginal calculus originates after urinary stasis in the vagina and concomitant infection.[5] The 1st case of vaginal calculus was reported by Halban in 1900 in patient with vaginal cystocele, since then lots of cases of vaginal lithiasis has been reported nationally and internationally.[6] The association of vaginal stone with vesicovaginal fistula is not uncommon these stone are commonly associated with urinary symptoms like dysuria and urinary retention and vaginal outlet obstruction.[7]

Here in our case poor girl has large urinary fistula since 2 yrs, due to true incontinence she developed a habit to hold urine inside the vagina which acts as a reservoir for urine stasis more over fragile infected tissue of the bladder and the vagina may have been a possible etiological factor for vesico-vaginal stone formation. It has been found in literature that Vaginal stone is always associated if vesicovaginal fistula is found at supratrigonal part of bladder similarly in our case VVF is located at urethrovesical junction involving the neck of bladder.[8] Other association of primary vaginal stones reported includes in a unmarried women with congenital vaginal septum as well as in disable children's having neurological problems.[9,10] They have also been reported after abdomino- perineal resection for carcinoma of rectum.[11] Primary vaginal stones are often mistaken for bladder calculi on plain radiography. However, intravenous pyelography and sonography can help differentiate between the two.[12] Emphasis should be taken in every VVF patient for through pelvic examination before necessary investigations and VVF repair in order to prevent recurrence.

Our patient had made smooth post-operative recovery on follow up visit.

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REFERENCES

1. Chen S, Ge R , Zhu L,Yang S, WuW, YangY, Tan J. Giant primary vaginal calculus secondary to vesicovaginal fistula with partial vaginal outlet obstruction in a 12- years old girl. Urology. 2011;78:908-10.
2. Heintz J, Chason J, Kramer A. Bilateral urethral caused by vaginal foreign body: a case report. Can J Urol. 2009;16:4870-2.
3. Oguzkurt P, Ince E, Ezer SS, Demir S, Hicsonmez A. Primary vaginal calculus secondary to urethrovaginal fistula with imperforate hymen in a 6 year old girl. J Pediatr Surg. 2009;44:11-3.
4. Ligero G. Primary vaginal lithiasis associated with urethrovaginal fistula. report of a case and review of the literature. Actas Urol Esp. 2001;25:582-5.
5. Raghavaiah NV, Devi AI. Primary vaginal stones. J UROL. 1980;123:771-2.
6. Navani S, Tessier PA. A primary vaginal stone. Br J Radiol. 1970;43:222-3.
7. Moshe OB, Obay G, Assi J. Vaginal Calculi in a Young Woman case report. Eur Urol. 2000;37:505-7.
8. Kobayashi K, Otoshi T, Manono K, Momohara C, Imamura R, Takada S. A case of urethrovaginal fistula caused by a foreign body in the vagina. Hinyokika Kiyo. 2010;56:389-91.
9. Pang MW, Lok H, Tsui HY, Wong WS, Yip SK. An unusual case of a vesicovaginal stone. Gynecol Obstet Invest. 2002;54:56-7.
10. Cetinkurşun S, Surer I, Demirbag S, Oztürk H. A primary vaginal stone in a disabled child. Obstet Gynecol. 2001;98:978-9.
11. Malhotra N, Kumar S, Roy K K, Agarwal R, Verma V. Vaginal calculus secondary to vaginal Outlet obstruction. J Clin Ultrasound 2004; 32:204-6.
12. Arshad J, Sultana S, Mahmood F. Giant Vaginal Phlebolith - Lesson Forgotten. A.P.M.C. 2008;2:61-3.

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