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CASE REPORT

Primary anterior vaginal wall pure ammonium acid urate stone. Case report

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KEYWORDS

Vaginal stones;
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Abstract Vaginal stones are extremely rare and are classified as primary and secondary. A 45 year-old female presented with an unexplained dyspareunia and vaginal discomfort for 2 years unresponsive to traditional treatment. Vaginal examination revealed no prolapse or vaginal fistula. Digital examination revealed multiple small rounded firm to hard or tender masses varying in size from 0.5 to 1.5 cm anterior to the vagina. Patient was treated with midline anterior vaginal wall incision with the extraction of eight smooth surfaced stones with uneventful postoperative course. Stone analysis revealed that they were composed of pure ammonium acid urate (AU). We recommend that for any patient with unexplained dyspareunia or vaginal discomfort that has proved to be unresponsive to traditional treatment, the possibility of anterior vaginal wall stones should be kept in mind.

1. Introduction

Vaginal stones are extremely rare and are classified as primary and secondary stones (1,2). Anterior vaginal wall, as in the present case, is exceptional. We recently treated a 45-year-old woman with dyspareunia caused by primary anterior vaginal wall stones.

2. Case report

A 45-year-old multiparous woman presented at our private clinic with complaints of dyspareunia and non specific vaginal discomfort for 2 years. Her past medical history was completely free. She was on no home medications. The patient did not report any urinary symptoms suggesting incontinence, infection, hematuria or stones. There was no history of pelvic trauma, bone injury, or something coming out of her vaginum. Physical examination revealed that the labia majora, minora and clitoris were normal. Vaginal examination revealed no prolapse or vaginal fistula. Digital examination revealed multiple small rounded firm to hard or tender masses varying in size from 0.5 to 1.5 cm anterior to the vagina. There was no leakage of any discharge at the step of compressing. Urinary culture and sensitivity were normal. A provisional diagnosis of periurethral gland abscesses (skinitis) or urethral diverticulum

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with fibrosis was made and broad spectrum antibiotics and NSAID analgesics were provided for 7 days without improvement. On admission, vital signs were all normal and laboratory tests demonstrated no urinary tract infection. General anesthesia was used for the surgery. Before initiating the procedure, an 18Fr Foley catheter was placed to isolate the urethra. A 3-cm incision was made in the median anterior vaginal wall. The vaginal flaps were dissected widely and eight smooth surfaced stones were extracted (Fig. 1). After surgery the Foley catheter was kept in place for 24 h. Within the postoperative indications, intravenous antibiotic therapy with 3rd generation cephalosporin was added and continued for 24 h to prevent infections. Stone analysis revealed that they were composed of pure ammonium acid urate (AU).

3. Discussion

To the best of our knowledge, this is the first case of primary anterior vaginal wall stone reported in the literature. Vaginal stones are very rare and most gynecologists may never see a vaginal stone case throughout their career. The earliest reported case was in 1900, in which a stone formed in a vaginal cystocele (1). Primary vaginal stones form from the deposition of urinary salts as a result of urinary leakage in association with a urethrovaginal fistula that developed after trauma, vaginal stenosis, or scarring after trauma or surgery; ectopic vaginal ureter; neurogenic bladder; hypospaidias, urethral diverticulum or vaginal outlet obstruction (2–9), whereas secondary vaginal stones are the result of crystallization of urinary constituents around a foreign body in the vagina (2). Because of the rarity of the condition and the lack of specific symptoms and signs or any associated conditions, in our case, early diagnosis was difficult. Most of the cases reported in the literature presented with vaginal stones either associated with a fistula or diverticulum plus suggestive manifestations of urinary involvement.

Imaging techniques such as X-ray, intravenous pyelography (IVP), cystourethrography, CT or magnetic resonance imaging technique could help to detect urinary tract abnormalities such as vesicovaginal, urethrovaginal fistulae, ectopic ureter or urethral diverticulum which could be a source of either urinary leakage into the vagina predisposing to salt deposition and stone formation, or the origin of migrating stones from the urinary tract to the vagina. Different treatment approaches for vaginal stones are available as follow: (1) open surgical procedure; (2) stones were disintegrated with extracorporeal shock wave lithotripsy and (3) endoscopic interventions (10). In our case examination under anesthesia with surgical stone extraction approach was the most ideal because it is associated with accurate diagnosis, less operation time and rapid relief of symptoms.

Chemical analysis of the extracted stones revealed that they were composed of pure ammonium acid urate (AU). Urinary pure ammonium acid urate (AU) stones are very rare in women with an incidence of 18% in the Mediterranean region (11). AU is always associated with either poor nutrition or dehydration as with Crohn's disease (12), anorexia nervosa and laxative abuse (13) and low caloric diet (14). Our patient did not suffer from any of the above mentioned predisposing factors which complicated the condition and made the determination of the cause so difficult. Moreover, urate stones are radiolucent and so do not appear on plain X-ray, and thus their presence must be diagnosed by ultrasound for these reasons.

In conclusion, we recommend that for any patient with unexplained dysparunia or vaginal discomfort that has proved to be unresponsive to traditional treatment, the possibility of anterior vaginal wall stones should be kept in mind and a plain X-ray of the pelvis and ultrasound are to be done for confirming the diagnosis.

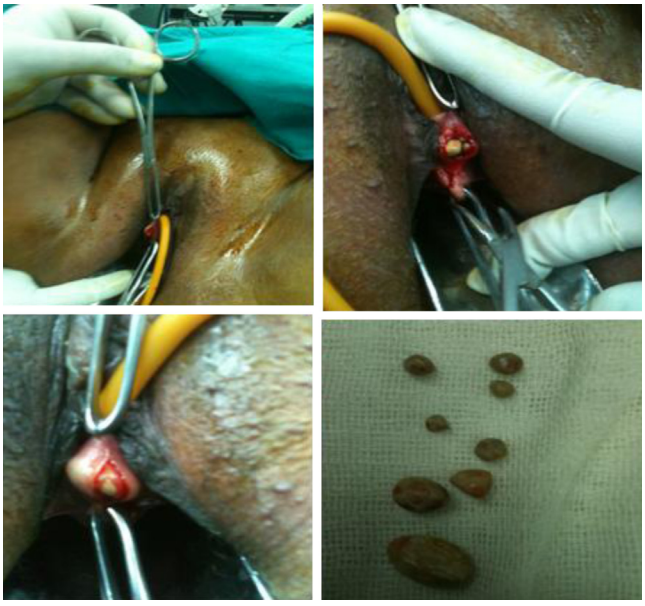

Figure 1 Showing the extraction of stones from the anterior vaginal wall (vesicourethrovaginal) space.

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