Huge Primary Vaginal Stone in a Recumbent Woman

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SUMMARY

Objective: Vaginal stones are rare and primary vaginal stones are extremely rare. A primary vaginal stone originating from urinary stasis in the vagina may be due to anatomic abnormalities, vaginal outlet obstruction, infection, or vesicovaginal fistulae, while secondary vaginal stones result from crystallization of urinary constituents around a foreign body in the vagina.

Case Report: This 43-year-old female had cerebral palsy due to tuberculosis meningitis when she was 3 years old. She had been bedridden with urinary and fecal incontinence since then. She was admitted to our medical ward due to acute abdominal distension with poor appetite and weight loss. On arrival, leukocytosis with dehydration was noted and medical treatment was given initially. Imaging studies showed stool impaction with abdominal ileus and a huge calcified density measuring 10 cm in diameter in the pelvis. Exploratory laparotomy showed that the mass was in the vagina. A laminated and pear-shaped mass was removed through an incision in the anterior vaginal cuff. Pathologic examination showed lithiasis composed of calcification mixed with fibrinous exudates and fragments of reactive squamous epithelium. The postoperative course was smooth with uneventful convalescence and she was discharged and doing well at the time of writing.

Conclusion: Although vaginal stones are very rare, they may be formed in recumbent women due to urinary stasis, and the calculi may cause obstruction of the bowel or urinary tract. [Taiwanese J Obstet Gynecol 2005; 44(1):80–82]

Key Words: calculi, vaginal foreign body, vaginal stone

Introduction

Vaginal stones are rare and primary vaginal stones are extremely rare. A primary vaginal stone originating from urinary stasis in the vagina may be due to anatomic abnormalities, vaginal outlet obstruction, infection, or vesicovaginal fistulae, while secondary vaginal stones result from the crystallization of urinary constituents around a foreign body in the vagina [1]. Here, we report a case of huge primary vaginal stone in a recumbent female.

Case Report

This 43-year-old female had cerebral palsy due to tuberculosis meningitis when she was 3 years old. She had been bedridden with urinary and fecal incontinence since then. She was admitted to our medical ward due to acute abdominal distension with poor appetite and weight loss. On arrival, leukocytosis with dehydration was noted and medical treatment was given initially. Plain X-ray showed stool impaction with abdominal ileus and a huge calcified density measuring 10 cm in diameter located in the pelvis (Figure 1). Computed tomography (CT) thereafter revealed a huge pelvic calcification between the bladder and rectum (Figure 2). Gynecologic consultation was requested and transabdominal sonography showed a calcified mass below the uterus, measuring 10 cm in diameter; the appearance of the ovaries and uterus was unremarkable.
During exploratory laparotomy, the mass was found to be in the vagina. A laminated and pear-shaped mass was removed through an incision in the anterior vaginal cuff (Figure 3). It measured 10 × 8 × 4.5 cm and weighed 935 g and was grossly laminated with a bad odor (Figure 4). Microscopically, the section showed lithiasis composed of calcification mixed with fibrinous exudates and fragments of reactive squamous epithelium. The postoperative course was smooth with uneventful convalescence, and she was discharged. At the time of writing, she was doing well.

Discussion

Vaginal stones are extremely rare [1–3]. To date, only 15 cases including this one have been reported [1]. Vaginal stones may be divided into primary and secondary types [4], depending on the absence or presence of a foreign body in the vagina [3].

Secondary vaginal stones are formed around foreign bodies in the vagina, such as non-absorbable suture materials after vesicovaginal surgery or induced objects in the vagina [5–8]. These foreign bodies can lead to chronic inflammation and/or genital fistulae that result in the formation of a vaginal stone [6].

In primary vaginal stones, no foreign bodies are encountered [3]. The continuous presence of urine inside the vagina is a prerequisite for formation of
vaginal stones, and this may be due to anatomic abnormalities, vaginal outlet obstruction, infection, or vesicovaginal fistulae [3]. The deposition of urinary salts day after day will form calculi. For example, anatomic abnormalities, such as a hypertrophied clitoris, ectopic ureters, neuropathic bladder with incontinence, vaginal strictures, and septal vagina, which causes overflow urine with retention in the vagina, have been reported [3,9]. Primary vaginal stones are always of urinary origin and result from chronic pooling of urine in the vagina. Thus, urinary stasis is an important factor in the formation of these stones [1,10].

Another factor apparently contributing to stone formation is the presence of urease-producing bacteria (e.g. *Proteus mirabilis* and *Escherichia coli*), which are frequently found in alkaline urine [4].

In the present case, there was no evidence of vesicovaginal fistula or vaginal stenosis. Urinary incontinence, lack of rehabilitation care, and the long-term recumbent position may have caused the urinary stasis and formation of the vaginal stone. Plain X-ray of the pelvis, CT scan, and abdominal sonography are helpful for the detection of such calculi. However, it is not easy to determine the exact location of the stone in the pelvis with these methods. Vaginoscopy at cystoscopy is reported to be helpful in detecting stones in the vagina [1].

The large size of the vaginal stone in our case may be due to the advanced age and prolonged recumbent position. Stone formation takes a long time. Although vaginal stones are very rare, they may be formed in recumbent women due to urinary stasis, and the calculi may cause obstruction of the bowel or urinary tract.

References