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Cas Cliniques

Vaginal Stones in a 5-Year-Old Girl. Case Report

Lithiase Vaginale chez une fille de 5 Ans. A Propos D'un Cas

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Abstract

Background :

Primary vaginal stones in children are extremely rare and removal can be difficult, due to the under development of the external genitalia and the existence of the hymen which should be maintained intact.

We describe a case of vaginal stone discovered during exploration for a recurrent urinary tract infection.

Case :

A 5-year-old, well-being girl was referred to the urologic department with recurrent febrile urinary tract infection for 6 months, which not responded to antibiotic therapy.

Ultrasound of the kidneys showed no abnormalities.

The bladder appeared to contain a large stone.

On urethro-cystoscopy no stones were seen.

Pelvic CT-Scan identified vaginal stone.

Conclusion :

Primary vaginal stones are a rare entity, probably related to urinary stasis, fecal contamination, and chronic infection, there treatment still a challenge for the urogynecologist.

Keys words : stone • vagina • childhood • Mauritania

Résumé

Contexte :

Les calculs vaginaux primitifs chez les enfants sont extrêmement rares et leur élimination peut être difficile en raison du sous-développement des organes génitaux externes et de l'existence de l'hymen, qui doit être maintenu intact.

Nous décrivons un cas de calculs vaginaux découverts lors d'une exploration pour une infection récurrente des voies urinaires.

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Cas :

Une fillette de 5 ans en bonne santé a été référée au service urologique avec une infection (avec une fièvre récurrente) des voies urinaires, pendant 6 mois, qui n'a pas répondu à l'antibiothérapie.

L'échographie des reins n'a révélé aucune anomalie.

La vessie semblait contenir une grosse pierre.

Lors de l'urétro-cystoscopie, aucune pierre n'a été vue.

Le TDM pelvien a identifié une lithiase vaginale

Conclusion :

Les calculs vaginaux primaires sont une entité rare, probablement liée à la stase urinaire, à la contamination fécale et aux infections chroniques. Le traitement reste donc un défi pour l'urogynécologue.

Mots clés : lithiase • vagin • enfance • Mauritanie

Introduction

The occurrence of vaginal stones in a child is extremely rare [1] Primary vaginal stones, originating from urinary stasis in the vagina, may be due to abnormal anatomic vaginal outlet, infection, or vesico-vaginal fistulae. Secondary vaginal stones result from crystallization of urinary constituents around a foreign body in the vagina. The formation of a vaginal stone secondary to a self-introduced object has been reported before[2].

The removal of these vaginal stones can be difficult, especially in young girls. We describe a procedure for safe extraction of vaginal stones, without damaging the bladder, vaginal mucosa, or hymen.

Case :

A 5-year-old girl was referred to the urologic department with recurrent febrile urinary tract infections. She was born full term at a gestational age of 40 weeks and was known to have no past medical or surgical history.

During the past 6 months, the girl suffered from recurrent urinary tract infections, abdominal pain, and fever, successfully treated with antibiotics. On physical examination no abnormalities of the vagina or vulva could be detected. Ultrasonography showed no dilatation of the kidneys and an empty bladder. However, the bladder appeared to contain a large stone.

Consequently, the girl was listed for a laparotomy with bladder incision for removal of these stones. Surprisingly, on the urethro-cystoscopy no bladder stones were seen. Upon rectal examination the stones were palpable in the vagina and appeared to be mobile. During the examination the anatomy of the vulva and hymen appeared to be normal. When performing a pelvic CT-Scan, a large stone was identified (**Fig.1**).

The procedure was performed via a vaginal approach. Anesthesia was

provided using a laryngeal mask size 2.5, with the patient breathing spontaneously on a mixture of oxygen, air, and sevoflurane. We excluded a vesicovaginal fistula, because no blue dye appeared intravaginally when the bladder was filled with indigo blue. To start, a Virgo speculum was used to visualize the stones in the vagina. Destruction of the stone using hemostatic forceps was achieved (***fig. 2 and 3***).

Subsequent inspection indicated that the vaginal wall was unharmed and that the vagina was completely stone free. A small opening in the vaginal vault was identified

as the cervix (**Fig. 4**) which remained intact. So was the hymen. The total duration of the operative intervention was forty minutes. Analysis of the stones showed the presence of 100% bone like compositions.

Discussion and **Conclusion** :

We report a case of a primary vaginal stone, found in a 5-year-old girl. Different causes for the formation of primary vaginal stones are known, such as: vesicovaginal fistula, neurogenic disorders, vaginal stricture, vaginal septum, vaginal cystocele, urethral diverticulum, ectopic vaginal ureter, or in association with a pyometrocolpos. [1,3-5]

Physical examination of the child revealed no genito-urinary tract abnormalities, but the definite

diagnosis was only based on CT-Scan examination. The urethro-cystoscopy and infusion of the bladder with indigo blue excluded vesicovaginal fistulae [6,7].

Due to the intact vaginal hymen a previously inserted foreign body was unlikely. The girl showed fecal and urinary continence. A relative lack of estrogens in young girls and postmenopausal women causes the vaginal pH to be alkaline due to the lack of lactic acid, which could predispose for urease-producing bacterial infections. [8]

In conclusion, the finding of primary vaginal stones is a rare entity, probably related to urinary stasis, fecal contamination, and chronic infection. In this report we present the disintegration and removing of the vaginal stones without hymenal lesion or destruction.



Figure 1 : CT-Scan showsVaginal stone



Figure 2 : intra operative images



Figure 3 : post-operative images



Figure 4 : Intact vaginal wall and cervix.

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