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Journal article

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A Giant Bladder Calculus with a Synchronous Giant Secondary Vaginal Stone: A Case Report

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Key Words

Bladder calculus • Vaginal calculus • Renal failure

Abstract

Giant bladder calculi are rare and giant vaginal stones are an exceptional finding. We report the case of a 76-year-old female who presented with bilateral hydronephrosis and was discovered to have giant bladder calculus with a synchronous giant vaginal stone. The vaginal stone was broken into fragments and removed with the discovery of a copper intrauterine contraceptive device at the core whilst the bladder calculus required a planned open cystolithotomy. Subsequently two cystograms were conducted with the initial one not showing any vesico-vaginal communication however the second cystogram showed the contrary and subsequently the patient underwent further surgery to correct this fistula.

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culus and a synchronous giant vaginal calculus, with a vesico-vaginal fistula.

Case Report

A 76-year-old admitted under the medical team with a urinary tract infection, renal failure (urea: 21 mmol/l, creatinine: 304 μmol/l) and what was thought to be a mass on the anterior aspect of the rectum on digital rectal examination. An ultrasound of the abdomen demonstrated marked bilateral hydronephrosis and renal cortical thinning. Further assessment with MRI confirmed the bilateral hydronephrosis and a 6-cm calculus occupying the majority of the bladder (extending caudally and prolapsing into the pelvic floor). The patient was therefore transferred to urology.

A cystoscopy was arranged but we were unable to complete this as there was no room for the instrument because of the bladder calculus. On examination under anesthesia a large vaginal stone was palpable and we were unable to feel the cervix. The vaginal stone was broken into segments digitally and removed with the discovery of a copper intrauterine contraceptive device (IUCD) in the core of the stone (fig. 1). The size of the stone prior to fragmentation was 5 × 5 cm. A planned open cystolithotomy was carried out with the removal of a giant calculus filling the whole of the bladder sized 9.5 × 6 cm (fig. 2). On inspection of the bladder on this occasion there was no evidence a vesico-vaginal connection. A suprapubic catheter and a urethral catheter were left in-situ.

Postoperatively, a cystogram was conducted on day 7 with no evidence of a vesical leak or vesico-vaginal communication. However, the patient continued to experience continuous incontinence of urine and a repeat cystogram was conducted on day 18, which demonstrated a wide mouthed vesico-vaginal fistula arising from the posterior wall of the bladder. This vesico-vaginal fistula was repaired via an open operation 25 weeks following the open cystolithotomy.

Introduction

Vaginal stones are rare and can be subdivided into primary or secondary depending on the presence or absence of a foreign body.

Although the finding of a giant bladder calculus is not as rare as large vaginal stones we describe the case of a female who was discovered to have a giant bladder cal-

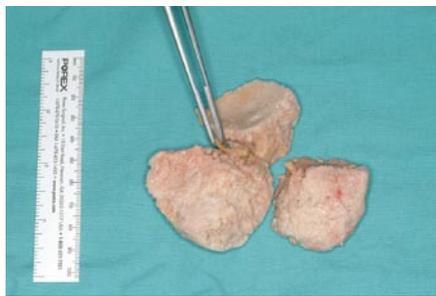


Fig. 1. Vaginal calculus.



Fig. 2. Bladder calculus.

Discussion

Vesical stones in the adult population are primarily found in men with bladder outlet obstruction [1]. Typical presentation of a bladder calculus is an intermittent, painful voiding with terminal hematuria. There can be a dull or sharp sudden suprapubic pain aggravated by exercise and sudden movement with severe pain usually reserved for the end of micturition. Vesical stones are generally managed with an endoscopic approach however an open surgical removal may be required in many instances.

Vaginal stones are rare in occurrence. They can be subdivided into primary, attributed mainly to vaginal outlet obstruction [2, 3] or secondary, depending on the presence or absence of a foreign body. This foreign body has mainly been attributed to surgical material such as medical gauze [4, 5]. Atypical items such as a cylindrical tin container have also been reported [6].

There have been 2 reports in literature of synchronous bladder and vaginal stones which were associated with a

vesico-vaginal connection and the stone were of a continuous nature occupying the bladder and vagina [7, 8].

The present case had a separate vaginal and vesical stone which were not of a continuous nature. The 2 separate stones led to necrosis of tissue between the bladder and vagina leading to fistula formation therefore explaining the vesico-vaginal leak in the second postoperative cystogram. The patient presented with renal failure due to obstruction of the ureters between the stones. The vaginal stone was secondary to a copper IUCD. Copper IUCD have been reported to cause secondary calculus formation presenting as a vaginal stone [9] and as a vesical calculus [10]. It appears that in the present case the vaginal stone formed first due to encrustation on the retained IUCD. This may have resulted in bladder outlet obstruction and a subsequent formation of a bladder stone.

To our knowledge this is the first documented case of a synchronous giant bladder and giant vaginal calculi which were not of a continuous nature.

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