

GIANT BLADDER STONE IN A PATIENT WITH VESICOVAGINAL FISTULA CAUSED BY BLADDER WALL ISCHEMIA DUE TO UNASSISTED PROLONGED LABOR IN THE AMAZON JUNGLE

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ABSTRACT

INTRODUCTION: Bladder stones are the most common manifestation of lower urinary tract lithiasis, accounting for 5% of urinary tract stones and almost 1.5% of urological hospitalizations [1]. However, giant vesical stones - weighing more than 100g - are increasingly rare. **REPORT:** A 65-year-old woman, postmenopause, with no chronic diseases - neither congenital nor acquired, G5P5A0, developed a long term vesico-vaginal fistula due to unassisted labor in amazon jungle inlands. Later on, a failed surgical attempt to correct it ultimately led to the development of a giant bladder stone, weighing more than 270g in its larger fragment. **CONCLUSION:** Poor health care assistance was the main cause of each complication leading to another, as described. Though uncommon in females, giant bladder stones usually benefit from contaminated environments with altered urinary flow, conditions provided by the patients anatomy.

KEYWORDS Giant Bladder Stone; Vesico-vaginal fistula; Prolonged Labour;

INTRODUCTION

Bladder stones are the most common manifestation of lower urinary tract lithiasis, accounting for 5% of urinary tract stones and almost 1.5% of urological hospitalizations[1]. However, giant vesical stones - weighing more than 100g - are increasingly rare, and usually associated with urinary tract obstructions in male patients[2]. Still, giant stones are indeed more commonly seen in less developed regions, because of the higher prevalence of chronic urinary tract infections [3]. Vesicovaginal fistulas, on the other hand, are the most common type of urogenital fistula [7]. In the underdeveloped world, it is often the result of prolonged labor [8].

METHOD

The data described here were obtained directly from the patient, and through medical records. Both the hospital and the patient's written consent term were evaluated and approved by the research ethics committee of the Federal University of Amapá, under the number 2.743.894.

CASE REPORT

J.S.A., a 65-year-old woman, postmenopause, with no chronic diseases - neither congenital nor acquired, G5P5A0, developed post-term gestation at 24 years of age. And due to the lack of a health care unit available in the amazonic inland where she lived, J.S.A. could not give birth aided by any sort of health care professional, which ultimately led to fetal death in the birth canal. The prolonged compression of the cephalic pole in the bladder against the pubis for more than six hours - and consequent ischemia of the bladder wall, caused the patient to develop a significant number of urinary symptoms. J.S.A.'s condition presented itself initially with mild vaginal burning accompanied by urinary leakage through the canal, later presenting more significant dysuria associated with mild pain in the lower abdomen,

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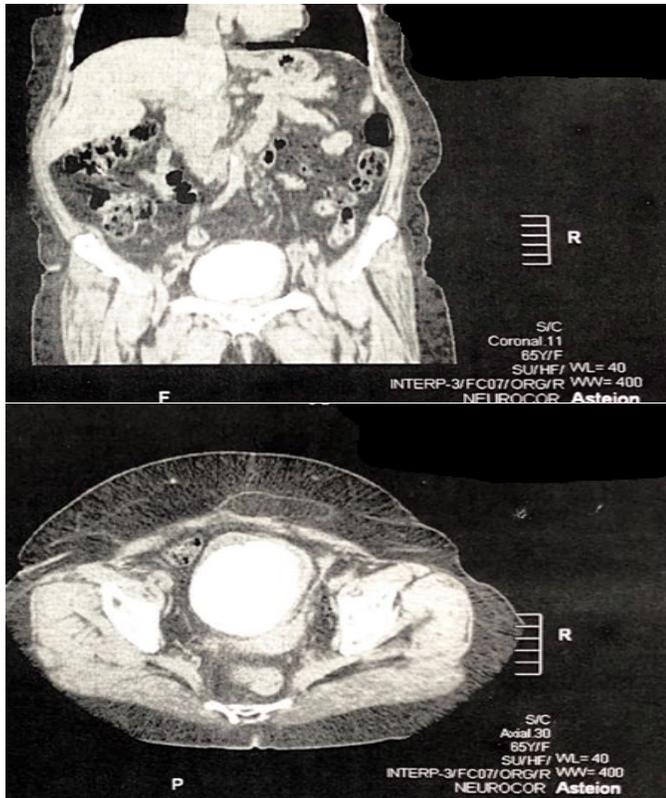


Figure 1-2: CT scan revealing a calcium formation in the bladder, with a density of 1171 HU, measuring in the most massive axes of the sagittal plane 10.5 x 4.7cm.



Figure 3: Intraoperative lithotripsy.

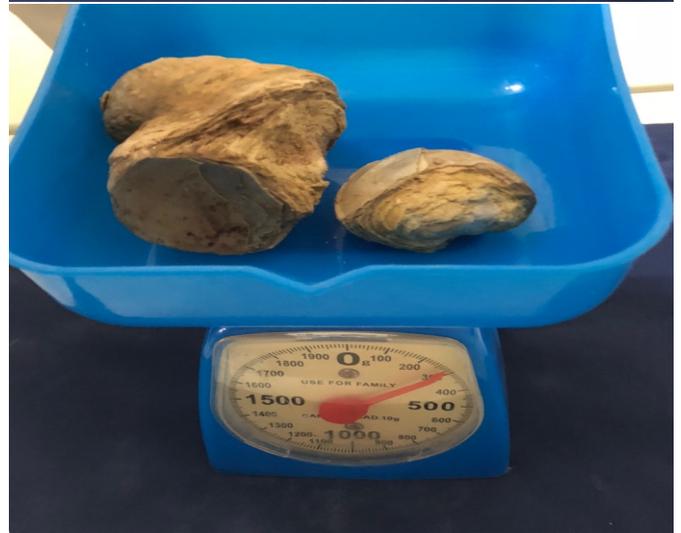


Figure 4-6: A stone weighing more than 270g and measuring more than 9 cm – in its larger fragment – was removed from the urinary tract.

as well as rare episodes of dyspareunia. For approximately 34 years the patient lived with the symptoms, being prescribed with antibiotics for Urinary Tract Infection (UTI) in every occasion she had access to medical care, until seeking Urological care at Amapá State's largest public hospital, Hospital de Clínicas Dr. Alberto Lima - HCAL.

At the age of 58, she underwent her first radiological exam to investigate the condition, the excretory urography, which identified a complex vesico-vaginal fistula. Still at 58 the first surgical procedure to correct the fistulous orifice happened. After the procedure - although less intense and more sporadic - complaints of dysuria accompanied by small urinary leakage through the vagina persisted, and the infections did not completely cease, suggesting recurrence. In 2017, six years after the first surgical intervention, a single episode of hematuria preceded a constant state of hyperemia and heat in the lower abdomen, where the bladder is located. The area also became extremely painful, with the pain spreading to the dorsal region. Characteristics of the history and physical examination identified at that occasion were little compatible with the previously described situation. This time analgesics were prescribed, and further investigation was undertaken. Urinary tract ultrasound was inconclusive, blood cell count, serum urea and serum creatinin were all normal, but urine analyzes were significant, with an expressive *Escherichia coli* growth, and 5 to 6 red cells per urine field. After these poor inconclusive results, investigation proceeded with the requisition of a tomographic scan, however the patient did not return in 2017. Only in 2018 we had access to the scan revealing a calcium formation in the bladder, with a density of 1171 HU, measuring in the largest axes of the sagittal plane 10.5 x 4.7cm. (Figures 1-2) She was then submitted to cystolithotomy, and - due to the size of the calculus - intraoperative lithotripsy with orthopedic instruments - chisel and hammer.(Figure 3) A stone weighting more than 270g and measuring more than 9 cm - in its larger fragment - was removed from the urinary tract. (Figures 4 - 6) The patient progressed well and did not present postoperative complaints.

DISCUSSION

In the PubMed database, less than 15 publications associating fistulas and giant vesical stones were found in the last 100 years. In addition, bladder stones of any size are commonly associated with nephrolithiasis and rarely occur in patients without upper urinary tract stones, yet another peculiarity found in J.S.A.'s case, that did not presented with renal lithiasis [4]. Isolated vesical lithogenesis in old vesicovaginal fistulas happen usually due to unabsorbable wires used during cesarean sections - an absent factor in the case - and urinary tract infection, a significant factor in this medical history here described [9,10]. As they develop over some years, this type of stone is almost non-existent in Western Europe, since fistulas are rapidly corrected [11]. Medical care in the Brazilian Amazon, however, is vastly less efficient, which enables the development of large stones such as found. The preferred method for diagnosis is cystoscopy, but sometimes x-rays and ultrasound may be enough. The correct therapeutic management, however, due to the size of the stone, is very well established as the cystolithotomy [4,5,6]. In this particular case, ultrasound was not helpful, whilst the tomography, besides establishing a diagnosis, was able to measure the stone, helping to plan the surgical course of action. Surgical intervention was performed as medical literature recommends, with intraoperative cystolithotomy.

CONCLUSION

Poor health care assistance in labor more than 30 years ago, and subsequent lack of Urologists available were the main causes of most complications presented in this case. Besides that, not all diagnostic methods were promptly available for her, mainly because of social and financial matters. Although uncommon in females, giant bladder stones usually benefit from contaminated environments with altered urinary flow, conditions provided by both repeated urinary tract infections and the fistula's relapse after the first surgical intervention.

PATIENT CONSENT

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

COMPETING INTERESTS

The authors declare that they have no competing interests.

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