

CASE REPORT

Giant vesical calculi: experience with management of two Nigerians

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Abstract

Two cases of Giant Vesical Calculi were encountered in a semi-urban health facility (Nakowa Hospital, Yauri, Nigeria). careful clinical evaluation and investigation is important in the work up of the patients. surgical technique and accurate diagnosis are essential in their treatment.

Introduction

In Nigerians bladder calculi account for 44.4%² while in North America, they account for 5%¹ urinary calculi ². Infection and bladder foreign bodies seem to be predisposing.

Giant vesical calculus may be defined as a stone in the urinary bladder weighing more than 100g. Giant vesical stones are universally not very common and fewer than 30 reports are available in the English literature . We report two cases of Giant vesical calculi seen in Nigerians in a semi-urban health Hospital and discuss the management.

Case Report

Case 1

M. A., a 62 year old farmer presented at Nakowa Hospital, with 6 hours history of urinary retention. This was antecedent history of irritative and obstructive lower urinary tract symptoms of 5 years duration There was no weight loss and no haematuria. He was married with children . On examination patient was not pale; he was febrile but anicteric and the urinary bladder was

distended to above the umbilicus. On digital rectal exam the prostate felt benign. External genitalia was essentially normal. His cardiovascular system was normal with a BP of 130/80mmHg . All other systems were normal. An attempt at urethral catheterization failed. Complete Blood Count, serum Electrolyte urea and creatinine were essentially normal. He was planned for suprapubic cystostomy. At operation, immediately the urinary bladder was incised, a huge stone encountered (Fig.1)., The median lobe of the prostate was prominent. There was no diverticulum or ulceration seen. Patient also had transvesical prostatectomy. He did well postoperatively .Prostate gland weighed 150 g while the stone weighed 790g.The histology report of the prostate benign hypertrophy. Follow-up abdominal and pelvic ultrasound showed the upper urinary tracts were essentially normal. Patient was followed-up for 5 years with no incidence.Stone analysis was not done as the stone was misplaced in transit from the peripheral hospital to Teaching Hospital.

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CASE 2

Mr. A. A. is a 60 year old nomadic cattle rarer. He reported at Nakowa Hospital, Yauri, Nigeria with a 6 months history of irritative and obstructive bladder symptoms. There recent onset of strangury but no haematuria an no weight loss. On examination he was not pale; afebrile, anicteric. There suprapubic tenderness External Genitalia was essentially normal. His blood pressure was 110/80 mmHg and his pulse rate was 80/min regular and full volume. Digital rectal examination revealed a benign prostate. Plain Abdominal X-Ray showed a densely radio-opaque shadow in the pelvis His complete Blood count, serum Electrolyte and urea and creatinine were essentially normal. An ultrasound could not be done



Fig 1: Wedge shaped multi faceted Giant stone.

immediately. An impression of bladder calculus was made and he had a cystolithotomy for a huge stone Fig.2. There no other intravesical pathology and the prostate was not enlarged. Postoperative period was uneventful. A repeat serum electrolyte, urea and creatinine as well as abdominal ultrasound and intravenous urography were all normal. He was followed up for a year and he stopped coming to clinic perhaps he must have relocated to another part of the country. The stone weighed 197.4gm. (Fig.2)

The stone was whitish looking with a rough surface.. The cut surface showed it was laminated. (Fig.3). It contained triple phosphaite – Calcium, Magnesium, Phosphate and Carbonate



fig 2 Huge Laminated stone.

Discussion

Urolithiasis is a disease that varies from one part of the world to the other. Some areas are grouped as high incidence areas while others are grouped as low incidence areas. The incidence of vesical calculi has been decreasing since the 19th Century. This decrease has been attributed to dietary and nutritional factors. Nigeria, and many other subsaharan African countries belong to the low incidence area. However, in the last 10-15 years, there are reported cases of rising incidence of renal urinary stones in Nigerians^{5,6}.

Vesical stones are more common in the adult. In children primary vesical stones occur commonly in northwest India, Indonesia and the Middle East and part of China. It appears that the affected children have diets low in protein and phosphate. Most of these stones are composed of ammonium acid citrate⁹. Secondary vesical stones develop as a complication of other urologic diseases, and 95% occur in adult men¹⁰ In his report, Thompson found that only 2 per cent of vesical stones

occurred in women¹¹. Vesical calculi appear to be definitely associated with obstruction of the bladder neck due to bladder neck contracture, prostatic enlargement, stricture of the urethra or diverticulum of the bladder. This may be as a result of urinary retention and stasis which is associated with stone formation. This will likely explain the high incidence in the males. In one of the cases presented, there loer urinary tract obstruction was evident from Benign Prostatic Hypertrophy. The finding of no identifiable etiological factor case 2 is not unusual, this has been reported previously¹².

The diagnosis of the vesical calculi require a high index of suspicion history of suprapubic pain aggravated by exercise, interruption of urinary stream and terminal hematuria are helpful but not pathognomonic of the disease for they may be produced by other lesions in the bladder. Physical examination is rarely of value in establishing a diagnosis, but instances have been cited in which a large stone was palpable on rectal, vaginal or

abdominal examination. Sensing the bladder stone by feeling it "clink" on a urethral sound is an age-old technique of detecting bladder stone^{13, 17}. Roentgenographic and sonographic studies can be helpful but the most accurate and certain means of diagnosis is cystoscopic examination¹³. Nichols and Lower reported that cystoscopic examination was the surest method for detecting vesical calculi, whereas roentgenography was the most reliable procedure for detecting calculi in a bladder diverticulum¹⁸. Immediate treatments of urolithiasis include specific measures, general measures and treatment of complications. Recurrence is however prevented or minimized if primary cause is identified and successfully treated. Two surgical methods of treatment are available – litholapaxy and suprapubic lithotomy. The choice of operation

is influenced by the age and physical condition of the patient, the size and hardness of the calculus and the presence or absence of coexisting pathologic lesion involving the urethra, the bladder neck, or the bladder itself. Cystoscopic removal is mainly useful for small stones. One of the stones was analyzed and found to contain calcium, magnesium, phosphate and carbonate. It is important to have a urinary stone analyzed for its chemical composition. Stones from the kidney tend to be primary and made of oxalate. Since obstructive lesions and infection seem to play a role in the formation and growth of vesical calculi, their eradication will minimize the occurrence of stone

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