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Case Report

Tale of spontaneous passage of large proximal ureteric calculus in a male patient

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ABSTRACT

Ureteric stones are very notorious. Sometimes a very small stone may require a surgical removal and sometimes a large stone might pass spontaneously. We report a case of a 43 years old male patient who presented to our department with complaint of right flank pain of 1-week duration. This patient was diagnosed with right proximal ureteric calculus (11×6 mm) at L3 level. He was planned for ureterorenoscopy lithotripsy (URSL)/push back percutaneous nephrolithotomy (PCNL). Patient needed time for getting financially prepared for the surgery. Meanwhile we prescribed him an alpha blocker once daily at bedtime, oral analgesia SOS and advised to take adequate hydration. On 10th day of first presentation, to our surprise, the patient came with a stone in his hand, which he has passed spontaneously, and was confirmed by a radiograph. The likelihood of a ureteric stone spontaneously passing during expectant treatment is influenced by various factors, including its size, location, and orientation within the ureter. 11×6 mm proximal ureteric stone is the largest stone passed spontaneously in a male patient in our institute and most probably in literature.

Keywords: Spontaneous passage of ureteric stones, Urolithiasis, Proximal ureteric calculus

INTRODUCTION

The estimated global occurrence of urolithiasis ranges from 2% to 20%, with a lifetime prevalence of approximately 5% to 12%.[1,2] Management strategies for patients with ureteric stones involve a spectrum from watchful waiting to active intervention, contingent on factors such as stone size, location, and orientation.[3] Although it is established that nearly 60% of ureteric stones have the potential to pass spontaneously, approximately 40% do not.[4] The duration until stone passage, anticipated to be around four weeks, may expose the patient to undesirable complications, such as recurrent bouts of renal colic or urinary tract infections (UTIs).[5] The decision to opt for expectant treatment is influenced by various factors, including the stone's size, location, and the patient's preference.[6]

The aim of this article is to report the case of spontaneous passage of large proximal ureteric calculus in a male patient.

CASE REPORT

A 43 years old male patient presented to our department with complaint of right flank pain of 1-week duration. As per the protocol of our hospital, a detailed medical history was taken, a thorough physical examination, urine analysis, a complete blood count, blood urea and serum creatinine measurement, a plain X-ray KUB (Figure 1), and NCCT KUB (Figure 2) was done.

Our patient was diagnosed with right sided proximal ureteric calculus 11×6 mm at L3 level with upstream moderate HUN and all blood parameters were within normal limits. He was advised to undergo ureterorenoscopy lithotripsy (URSL)/push back

percutaneous nephrolithotomy (PCNL). Patient needed time for getting financially prepared for the surgery. Meanwhile we prescribed him an alpha blocker once daily at bedtime, oral analgesia SOS and advised to take adequate hydration (2.5-3 l/day). On 10th day of first presentation, to our surprise, the patient came with a stone (Figure 4) in his hand which he has passed spontaneously in the morning. Complete passage of stone was confirmed with a plain X-ray KUB (Figure 3). Pain was subsided although he experienced mild dysuria.

Figure 1: X-ray KUB on admission showing radio opaque shadow at L3-L4 level on the right side.

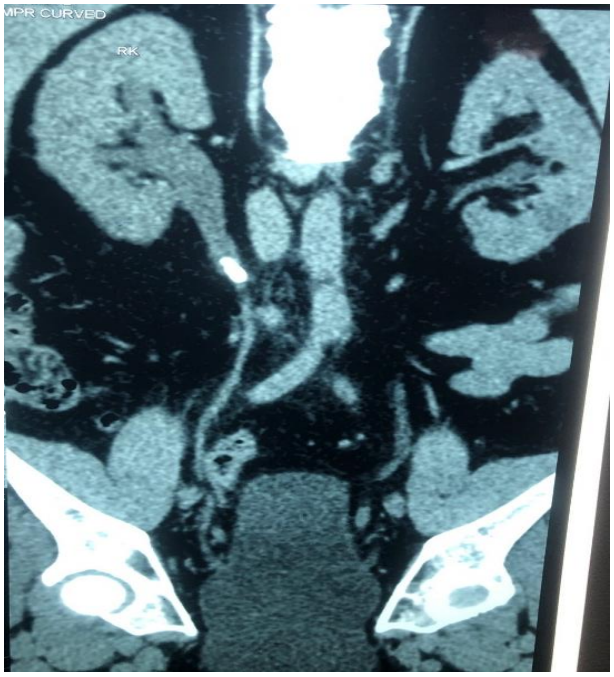

Figure 2: NCCT KUB on admission showing right proximal ureteric calculus measuring 11×6 mm.

Figure 3: Showing the stone which patient has brought after spontaneous passage.

Figure 4: X-ray KUB on 10th day of presentation after spontaneous passage of stone, confirming complete clearance.

DISCUSSION

Numerous therapeutic approaches exist for addressing ureteric stones, ranging from vigilant observation or minimally invasive care to open or laparoscopic procedures. Both the doctor and patient share apprehensions regarding avoiding surgical stress or strictly adhering to prescribed medications. The challenge, however, lies in determining the optimal timing for decision-making. Postponing this choice may elevate the likelihood of complications. Presently, a predominant method for managing ureteric colic involves endoscopic surgery (URSL). Ensuring ample hydration and administering an alpha blocker until the scheduled surgery date proves beneficial for both the patient and the performing surgeon. The factor most extensively researched concerning the natural passage of a ureteric stone is its size. Preminger et al established a consistent proportional correlation between the likelihood of stone passage and its size.[7] Additional research indicated a stone passage rate (SPR) ranging from 76% to 100% for stones with a diameter of 5 mm or less, while stones with a diameter of 5 mm or more exhibited SPRs between 0% and 60%.[8,9] Another variable investigated in various studies was the location of the stone. In 2002, Coll et al connected the natural passage of a ureteric stone to its position and documented a stone passage rate (SPR) of 48%, 60%, and 75% for the proximal, middle, and distal ureter, respectively.[8] Subsequently, in 2013, the European Association of Urology released guidelines indicating an SPR for ureteric stones as 25%, 45%, and 70% for the upper, middle, and lower ureter, respectively.[5]

CONCLUSION

The likelihood of spontaneous passage during expectant treatment for a ureteric stone is influenced by multiple factors. The chances of a ureteric stone passing without intervention depend on its size, location, and orientation within the ureter. 11×6 mm proximal ureteric stone is the largest stone passed spontaneously in a male patient in our institute and most probably in literature.

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