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White star in the black sea: An unusual stone associated with ureteropelvic junction obstruction

K Kiryluk¹ and M Gupta²

¹Department of Medicine, Division of Nephrology, Columbia University, College of Physicians and Surgeons, New York, New York, USA; and
²Department of Urology, Columbia University, College of Physicians and Surgeons, New York, New York, USA

Correspondence: K Kiryluk, Columbia University, College of Physicians and Surgeons, Division of Nephrology, 622 West 168th Street, PH4 Stem, Room 124, New York, New York 10032, USA. E-mail: kk473@columbia.edu



Figure 1 | Abnormal computed tomography scan. The left renal collecting system is massively dilated. An unusual calculus in the shape of a star is present within the collecting system.

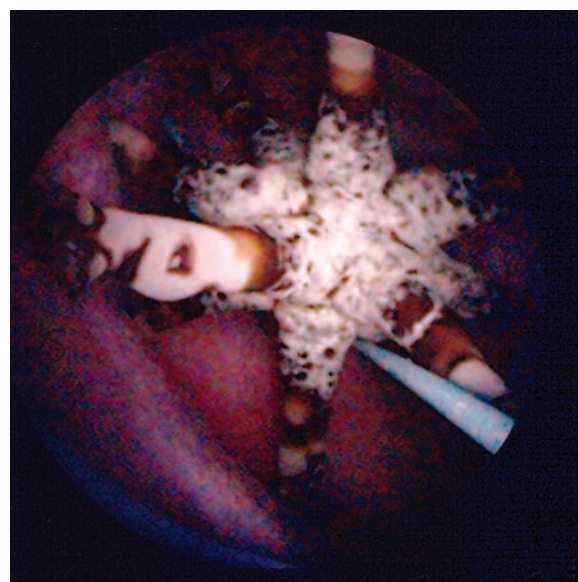


Figure 2 | Intraoperative endoscopic view of the stellate calculus.

An asymptomatic 59-year-old man was referred to our medical center for evaluation of an incidental computed tomography scan abnormality (Figure 1). The patient denied flank pain, fevers, chills, dysuria, and hematuria. Physical examination was unremarkable. On laboratory evaluation, his creatinine level was 1.2 mg per dl (normal 0.6–1.2 mg per dl), and his blood urea nitrogen level was 20 mg per dl (normal 7–20 mg per dl). Other electrolytes were within normal limits. Urinalysis revealed a pH of 5.0, 2+ blood, and no protein. Urine microscopy showed many red blood cells per high power field, but no crystals.

The patient underwent ureteroscopy. A 5-French catheter was successfully passed through the area of the left

ureteropelvic obstruction. Retrograde pyelogram demonstrated a massively dilated renal pelvis, upper-pole hydrocalyx, and an enormous stellate calculus within the renal pelvis (Figure 2). A percutaneous nephrolithotomy with nephrostomy tube placement was performed successfully. The retrieved calculus was sent for analysis, which revealed that it was composed primarily (90%) of calcium oxalate monohydrate with 10% contribution of calcium phosphate (hydroxy- and carbonate apatite). The patient was discharged home in excellent condition. A postoperative computed tomography scan 1 month later revealed complete resolution of hydro-nephrosis and no residual calculi.