An Unusual Presentation of an Uncommon Renal Disease

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CASE PRESENTATION
A 59-year-old man presented with non-specific right flank pain two years earlier. Ultrasonography and intravenous urography revealed right staghorn renal calculi. Thereafter, he underwent right open nephrolithotomy and stone-free condition was confirmed by follow-up imaging.

Figure 1. Intravenous pyelogram demonstrating no excretion on the right side.
After 18 months, the patient presented with the same chief complaint. Small size (10 mm) stone of the right side of the pelvis was diagnosed, which was treated with extracorporeal shockwave lithotripsy at one session. Two weeks later, he developed chills, high fever, and severe flank pain. Ultrasonography showed right pyonephrosis, which was drained as an outpatient surgery by placing untrasound-guided nephrostomy catheter. A large amount of pus was drained and the patient became symptom-free. Intravenous urography revealed non-functional right kidney (Figure 1), which was confirmed by diethylene triamine pentaacetic acid (DTPA) scan (split function of 11.6% and 88.4% for the right and left kidneys, respectively). Right side ureteral obstruction was also demonstrated in DTPA scan (Figure 2).

With the suspicion of obstruction made by small particles of fragmented stones, ureteroscopy was performed, which was unremarkable. Double-J stent was inserted and nephrostomy tube was removed 2 days later. The patient became symptomatic again after double-J stent insertion and experienced several episodes of urinary tract infection, following which double-J stent was removed.

Follow-up computed tomography scan showed severe right upper pole caliectasis and moderate right hydronephrosis with deformation of the pyelocalyceal system suspicious for xanthogranulomatous pyelonephritis (Figure 3). Due to frequent relapses of symptoms and signs, the patient underwent right simple nephrectomy.

![Figure 2. Poor perfusion and function of the right kidney in renal DTPA scan.](image-url)
Figure 3. Abdominal computed tomography scan with intravenous contrast suspicious for xanthogranulomatous pyelonephritis.

QUIZ
Do you agree with the approach chosen for the diagnosis or do you recommend other imaging studies or procedures?

What do you think the final pathology report of the specimen might be?

The answers will be discussed in the next issue of Urology Journal.