

Obstructive uropathy: Is it always urolithiasis?

Sir,

A 54-year-old diabetic female was admitted with left flank pain and high grade fever since 4 days. Ultrasonography showed left hydronephrosis with proximal ureteric dilatation. The patient was treated with intravenous broad spectrum antibiotics and her sugar levels optimized. Urinalysis showed field full of pus cells. The renal function tests were deranged (blood urea 84 mg/dl, serum creatinine 2.1 mg/dl). Total leukocyte counts were 18,000/mm³. Noncontrast computed tomography (CT) scan KUB showed a radiodense shadow at the level of L3 vertebrae in left ureter causing proximal hydroureteronephrosis [Figure 1]. The patient was posted for uretero-renaloscopic lithotripsy of the calculus. However, on ureteroscopy a necrosed renal papilla was found impacted in the proximal ureter [Figure 2a]. It was removed and a Double J stent was placed. The necrosed papilla with calcification was confirmed on histopathologic examination [Figure 2b]. The total white blood cells counts reduced to normal limits on 1st postoperative day (POD) and she was discharged on POD 2 on oral antibiotics.

Renal papillary necrosis (RPN) is a clinical condition that arises due to impairment of blood circulation to papillary tip of renal medulla due to diabetes mellitus, sickle cell disease, pyelonephritis, renal vein thrombosis, analgesic abuse, genitourinary tuberculosis and obstructive uropathy. In many situations, these clinical conditions might be found in isolation or in combination with each other. Renal allograft (cadaver donor more than live donor) after kidney transplantation is also prone to this condition^[1,2] owing to acute rejection due to fungal infections.^[3,4]

The diagnosis of RPN remains challenging. Previously, intravenous urography was commonly performed in such situation. In recent times, CT urography has proved to be much more informative in diagnosing RPN. Thinner sections, and reconstructed imaging with multidetector row CT has further taken us a step closer in documenting this condition.^[5,6] Necrosed renal papilla might get calcified prior to detachment and subsequently lead to obstructive uropathy after getting impacted anywhere in ureter. Ultrasound at this point,



Figure 1: A coronal image showing a radio dense shadow in left proximal ureter

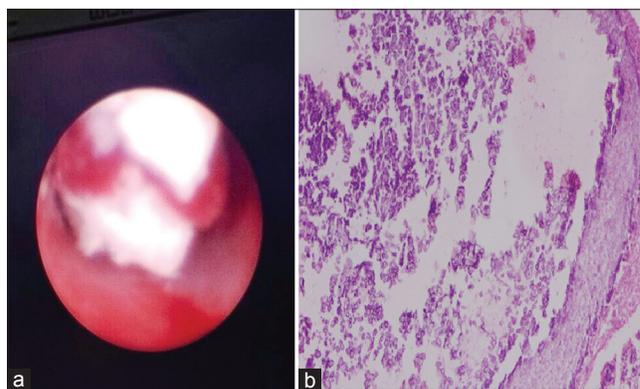


Figure 2: (a) An endo-urologic view of the necrosed papilla in ureter. (b) A microscopic view of papilla showing crystalline material embedded in amorphous background tissue

followed by CT KUB might easily give a false impression of a ureteric calculus causing obstruction, as presented in a given scenario.

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