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Visual Diagnosis in Emergency Medicine

A MALE WITH INTERMITTENT FLANK PAIN

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CASE REPORT

A previously healthy 26-year-old man presented to the Emergency Department with intermittent left flank pain for several months, which was exacerbated by alcohol intake. The patient's vital signs were within normal limits, and the physical examination revealed only mild left lower back tenderness. Computed tomography scan of the abdomen and pelvis showed severe left hydronephrosis and parenchymal thinning without distal hydroureter or renal calculus (Figures 1 and 2).

DISCUSSION

Dietl crisis is a clinical syndrome of episodic abdominal or flank pain in the setting of a ureteropelvic junction (UPJ) obstruction. The pain is classically exacerbated when increased fluid intake or brisk diuresis, such as with alcohol or caffeine consumption, causes build-up of fluid proximal to the site of the blockage. Dietl crisis has been predominantly attributed to an aberrant crossing vessel, although associations have been made with other congenital anomalies such as high ureteral insertion. Such cases of congenital UPJ obstruction are usually identified in the neonatal period and can even be seen on antenatal ultrasound screening (1). Although acquired causes of mechanical obstruction due to trauma or scarring from infection may also result in the episodic symptomatology of Dietl crisis, stones are not a cause, as they would be detected and treated appropriately on initial evaluation. It should be noted that, as with any condition that causes urostasis, UPJ obstruction increases the risk

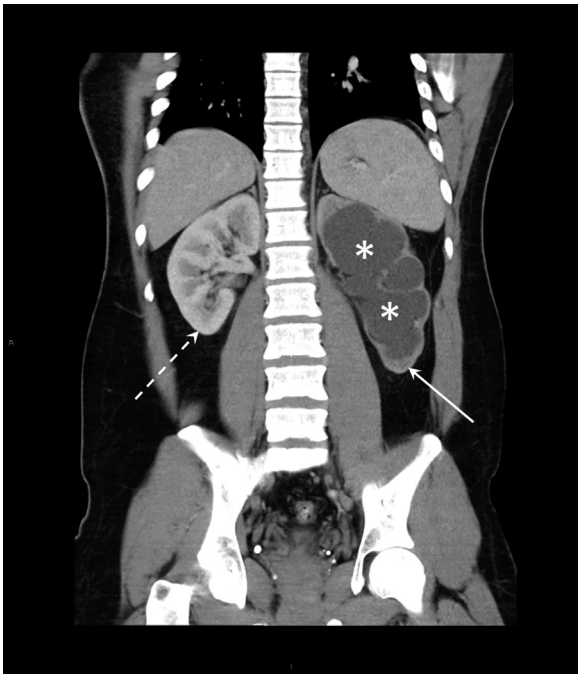

Figure 1. Computed tomography of the abdomen and pelvis (coronal view) demonstrating severe left hydronephrosis (asterisk). Also shown is asymmetric contrast enhancement of the kidneys with delayed uptake of contrast in the hydronephrotic kidney (solid arrow) relative to the normal right (dashed arrow).

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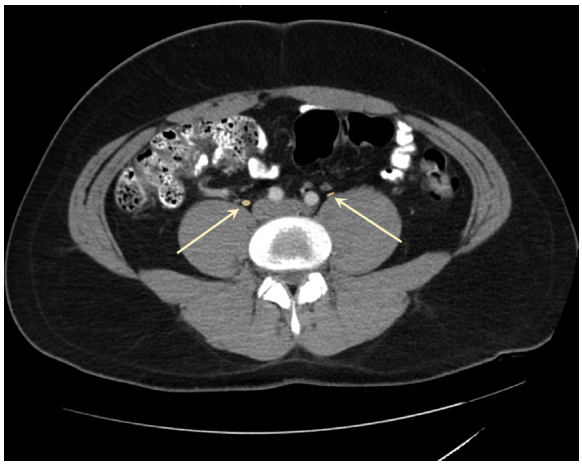

Figure 2. Computed tomography of the distal ureters (axial view) showing decompression of the left ureter relative to the right (highlighted and indicated by arrows), suggesting obstructed flow upstream at the ureteropelvic junction.

for stone formation and thus, calculi may be present as a consequence of the underlying etiology.

Ultrasonography is often the initial modality that demonstrates hydronephrosis, though further imaging is needed to differentiate UPJ obstruction from other etiologies of hydronephrosis. Computed tomography, magnetic resonance imaging, diuretic renography, and angiography can all play a role in further delineating the cause of obstruction, as well as approaches to management (2).

Definitive management of UPJ obstruction is surgical, with symptomatic patients requiring pyeloplasty. However, in asymptomatic patients with preserved kidney function, conservative management with monitoring and serial ultrasounds may also be appropriate (3). The patient was discharged from the ED with Urology follow-up.

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