Pelvic Ectopic Kidney with Contralateral Obstructive Uropathy and Acute Pyelonephritis

YI-HSIEN HUANG1, YUAN-HUI WU1, WING-KEUNG CHEUNG2, KAUNG-CHAU TSAI1, MIN-PO HO1

A 37-year-old woman presented to our emergency department with fever and right side abdominal pain for 6 days. She denied a family history of congenital anomalies. Her initial vital signs were within normal limits except for a mild fever (body temperature of 37.8℃). A kidney, ureter, and bladder (KUB) radiograph showed a suspected right ureteropelvic stone (white arrow) and no visible left renal shadow at the normal position (Fig. 1). Her serum creatinine was 0.7 mg/dl. Computed tomography (CT) of the abdomen showed the rare findings of left pelvic ectopic kidney with an aberrant blood supply associated with contralateral obstructive uropathy and acute pyelonephritis complicated by a ureteropelvic stone. The left ectopic kidney which had a supplying artery from the distal abdominal aorta and a drainage vein to the left gonadal vein was incidentally disclosed to be located in the lower abdomen in front of the L5 vertebra (Fig. 2).

Pelvic ectopic kidney, usually opposite the sacrum and below the aortic bifurcation, has been estimated to occur in 1 in 2100 to 3000 autopsies. There is no difference in incidence between the sexes(1), but ectopia has been more readily recognized in females because they have a higher frequency of uroradiological investigation. Its incidence in screening studies is approximately 1 in 5,000 patients(2). It must to be carefully differentiated from nephroptosis (floating kidney),
in which the kidney initially is located in its proper place and has normal vascularity but moves downward in relation to its primary site\(^{(3)}\).

Most patients with ectopic kidney are clinically asymptomatic. Vague abdominal complaints of frank ureteral colic secondary to an obstructing stone are still the most frequent symptoms leading to discovery of a displaced kidney\(^{(3)}\). Unilateral ectopic kidney is more common than bilateral. A congenital pelvic kidney is more common on the left side than on the right\(^{(4)}\). Although a simple KUB radiograph cannot confirm the diagnosis, contrast-enhanced CT of the abdomen is a reliable tool for confirmation of the unusual finding of a pelvic ectopic kidney, as in our case.

References