

ISOTOPE RENOGRAM IN ECTOPIC KIDNEY

Dr. M.A. Taher

ABSTRACT

Ultrasonography (USG) may provide some clue to the diagnosis of an ectopic kidney. However, functional confirmation is best to be done by isotopic renogram, as depicted by a rare case reported below.

CASE REPORT

A young man of age 17 years complained of pain in left loin. Ultrasonography (USG) done elsewhere reported 'normal kidneys', but intravenous urography (IVU) revealed ectopic (pelvic) left kidney with mild hydronephrosis. Isotope renogram

with technetium 99m DTPA (diethylenetriamine pentaacetic acid) showed normal right kidney and small ectopic left kidney just at the pelvic brim on the right side with mild obstruction (Fig. 1)

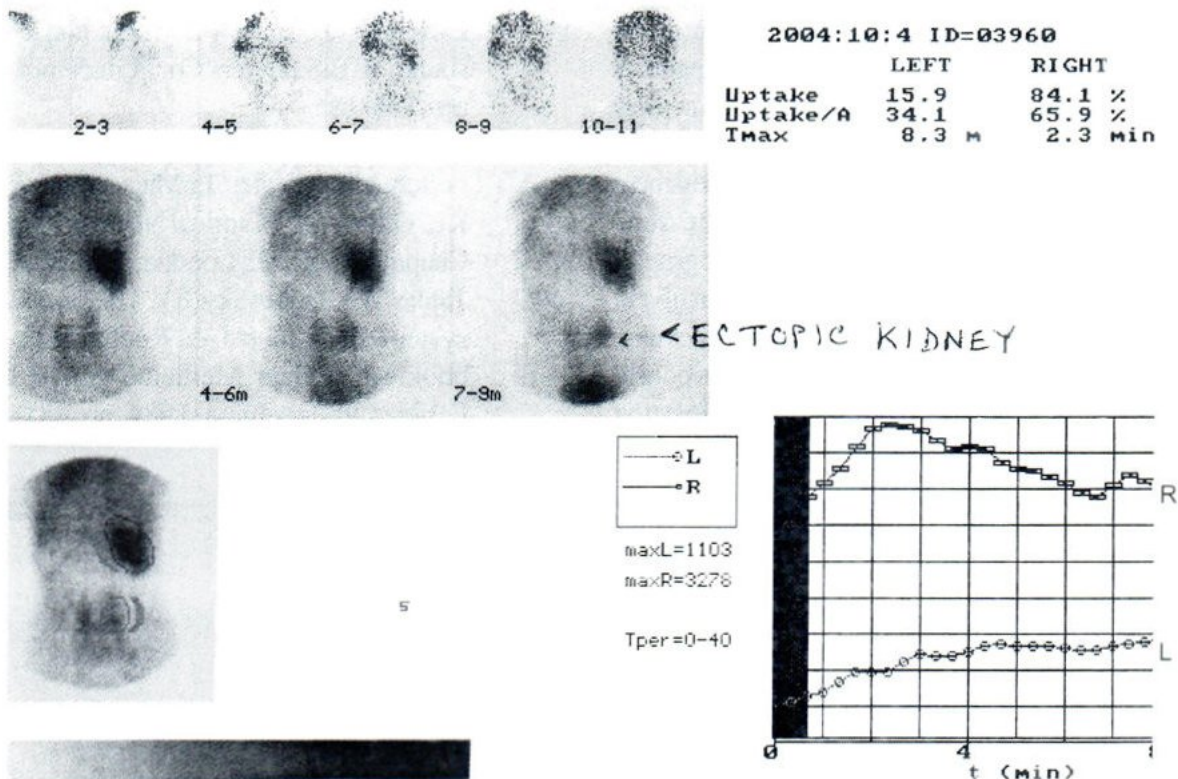


Fig.1 DTPA RENOGRAM

DISCUSSION

Ectopic kidney may be presented due to failure of the complete ascending migration of the kidney from its primitive location at the 1st or 2nd sacral body level or excessive cranial migration beyond its normal location. Crossed renal ectopia is a condition in which the affected kidney is located entirely or primarily on the opposite side of the abdomen.¹ The ectopic kidney lies below the normal contralateral kidney, and the two organs are almost always fused. Approximately 50 cases of intrathoracic kidney have been reported. Usually a mass is seen on chest X-ray and USG or CT demonstrates it to be a kidney.² A colonic flexure or loop of small bowel may occupy the empty renal fossa mimicking a mass or kidney (pseudokidney sign).³ Apart from being displaced, most pelvic kidneys are normal. Occasionally, however, a pelvic kidney is grossly abnormal in appearance because it is affected by dysplasia, duplication, anomalies, vesicoureteral reflux and/ or hydronephrosis. Diagnostic error may be avoided if the ipsilateral renal fossa is examined routinely in patients with pelvic pathology.⁴ Radionuclide renal scan is valuable for the proper assessment of many congenital anomalies affecting the renal tract. The assessment of horseshoe kidney or ectopic kidney can be done much more easily than with intravenous urography (IVU), because once the radioisotope has been given, a whole-body search can be undertaken if necessary, whereas a small pelvic kidney, especially if it is poorly functioning, cannot always be seen against the

background of the pelvic bones.⁵ The spinal column may significantly attenuate low-energy gamma rays, so that anterior view of the kidneys may be wise to be taken.⁶

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