Case Report

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Nephrology/Renal Section

Simple Renal Ectopia with Chronic Kidney Disease

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ABSTRACT

An ectopic kidney is described as an abnormal localization of a kidney due to a developmental anomaly and it occurs as a result of a halt in the migration of the kidneys to their normal locations during the embryonic period. The asymptomatic, non-complicated cases are managed conservatively, but nephrectomy may be necessary if there are otherwise untreatable complications such as stones, infection, failure or trauma.

Key Words: Ectopic kidney, Chronic kidney disease

INTRODUCTION

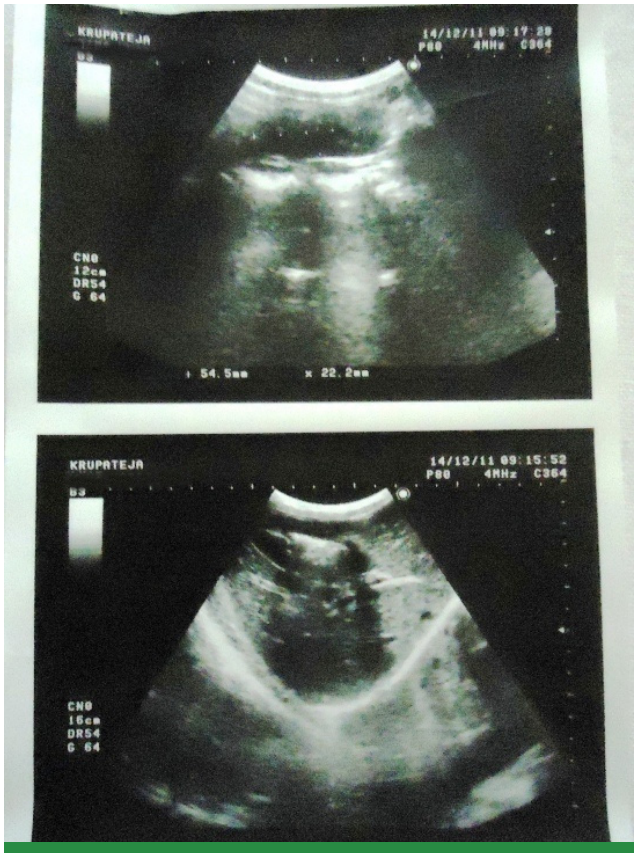
An ectopic kidney occurs as a result of a halt in the migration of the kidneys to their normal locations during the embryonic period [1]. The incidence of an ectopic kidney, 1 normal and 1 pelvic kidney is approximately 1:900 [2]. It may be on the same side as the ureteral orifice (simple ectopia) but it may occasionally cross over (crossed ectopia). Various congenital anomalies such as multicystic dysplasia in a fused or an unfused crossed kidney [3, 4], ureterocoele, a patent urachus [5], hydronephrosis, an ectopic ureteric orifice, a vesicoureteric reflux, hypospadias, etc are associated with it. It has no adverse effect on the blood pressure or the kidney function. The renal ectopia may present a diagnostic problem when an acute disease develops in the kidney and there is always a danger [1]. I am presenting 1 case of a simple renal ectopia with stage-iii chronic kidney disease.

CASE REPORT

A 12 years boy presented with a history of vomiting for 1 month, loss of appetite, anaemia, hypertension and growth retardation, with skin disease all over body and with a prior history of fever and decreased and red coloured urination 4 months back. He was diagnosed to have Acute glomerulonephritis. He was a full term, normal weight baby with no history of birth asphyxia or renal failure in the perinatal period and with a normal motor development. His family history was normal.

On physical examination, he was found to have pallor, a dry, scaly, diseased skin and a thin body which was built with bony prominences [Table/Fig-1]. His general examination revealed a pulse rate of 84/min, blood pressure of 102/60mm of Hg and an oral temperature of 98 degree OF. His height was 125 centimetres against 149 centimetres, weight 19kg against 34 kg and Sexual maturating rate in stage iii. is urine examination and other investigations revealed-albumin-++, RBCs-68/HPF, RBC casts-+, S.urea-62mg/dl, S.creatinine-2.0mg/dl, S. Na-138meq/l, K-5. 2meq/l, Ca-6mg/dl, Po_4 ->3mg/dl, 1,25(oH)D3 –low and GFR-34.37ml/min/1.73$m^{2.}$

[Table/Fig-1]: Scaly, healed skin lesion over abdomen and thin body built with bony prominences



[Table/Fig-2]: US scan showing Rt kidney in Rt iliac fossa with size 54.5x22.2mm

Ultrasonography of his abdomen showed an empty right renal fossa, with the kidney being at the right iliac fossa and of size 54.5x22.2mm^2. It was superficially placed with a hyperechoic cortical texture and a normal corticomedullary differention [Table/Fig-2].The Doppler study showed multiple vessels-two arteries and three veins.

DISCUSSION

An ectopic kidney is described as an abnormal localization of a kidney due to a developmental anomaly and it occurs as a result of a premature halt in the migration of the kidney to its normal location during the embryonic period [1]. The incidence of ectopic kidney which has been reported in the literature is 1:500 to 1:110 [2]. The incidence of one normal and one pelvic kidney is 1:800 to 1:3000 [2]. Various congenital anomalies in the urogenital system have been described. These are: multi-cystic dysplasia in a fused or an unfused crossed kidney [3,4], ureterocoele, a patent urachus [5], hydronephrosis, an ectopic ureteric orifice, a vesicoureteric reflux, hypospadias etc. An ectopic kidney may not cause any symptoms and it may function normally, even though it is not in its usual position. Sometimes, it may cause abdominal pain or urinary problems. When a kidney is out of its normal position, urine may get trapped in the ureter or in the kidney itself. The urine that remains in the urinary tract gives bacteria a chance to grow and spread. Total renal failure happens only when both the kidneys are damaged. One ectopic kidney, even when it has no function, won't cause renal failure, if there is an additional normal kidney.

Contrast-enhanced CT scan can clearly differentiate the vascular and the non-vascular structures and it has remained the diagnostic method of choice [6]. A thorough knowledge on the vascular tree is important when operations are done on anomalously placed kidneys. The treatment options vary with the presence of the symptoms or the complications. If the urinary function is normal, with no evidence of urinary tract blockage, no treatment is needed for the ectopic kidney. If an extensive renal damage has occurred, nephrectomy is indicated.

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