

Photo Quiz

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A 9 Month-old male with First Attack of Urinary Tract Infection

A 9 month-old male with history of first time urinary tract infection, normal physical examination and renal function tests underwent kidney ultrasonography. The ultrasound report showed kidney anomalies. He underwent abdominopelvic computed tomography (CT) (Figure 1A and B) and Voiding cystourethrography (VCUG) (Figure 2 A and B) due to abnormal findings in sonography.

What is your diagnosis?

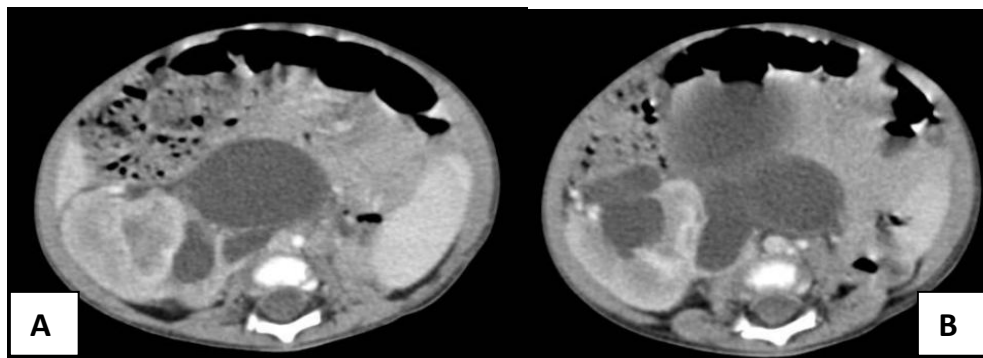


Figure 1.A and B. Axial plane abdominopelvic computed tomography(CT)

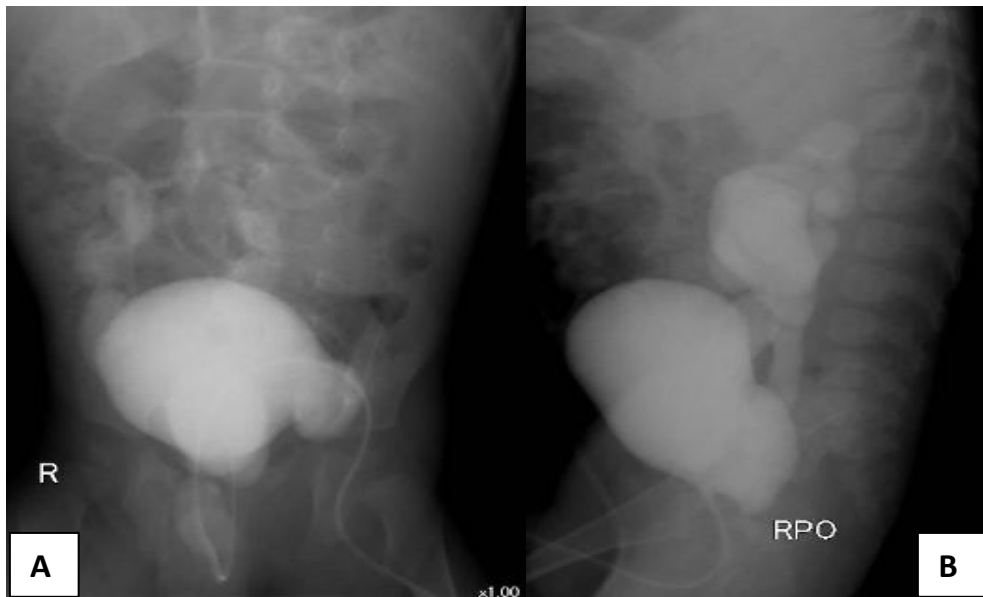


Figure 2. A and B Voiding cystourethrography

Photo Quiz Answer

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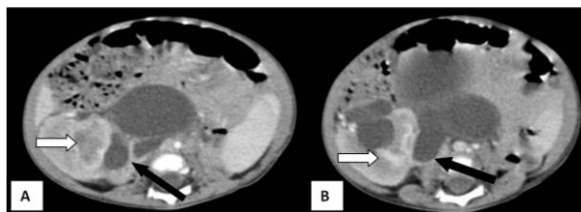


Figure 1.A and B. Axial plane abdominopelvic computed Tomography (CT)

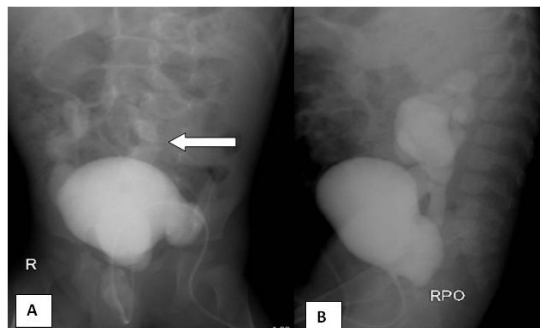


Figure 2. A and B Voiding cystourethrography

In abdominopelvic CT scan with contrast, (Figure 1) left kidney is not seen in left flank. Right kidney which is moderately hydronephrotic is seen in its normal position (white arrow). Another kidney is adherent to the right kidney which has severe hydronephrosis and shows parenchymal thinning (black arrow).

In VCUG (Figure 2), the bladder is vertical shaped and bilateral grade 4 reflux is seen. Note that the left ureter inserts to the bladder in normal position at left ureterovesical junction, but shows deviation to the right side more proximally (white arrow). Crossed ectopic fused kidney with bilateral reflux and a possible neurogenic bladder was diagnosed for the patient. The anomaly of crossed renal ectopia is a rare condition in which both kidneys lie on the same side of the body, while their ureters are normally situated at ureterovesical junction [1]. Most patients have concomitant urinary pathology which makes the kidney susceptible to infection and obstruction which ultimately dictate its management. Cystourethrography should be done routinely in all children with renal anomalies of fusion or position. The theory of ureteric bud migration implies abnormality at the lower which gives rise to a high incidence of reflux [2].

References

1. Rubinstein Z, Hertz M, Shahin N, Deutsch V. Crossed renal ectopia: angiographic findings in six cases. American Journal of Roentgenology. 1976;126(5):1035-8.
2. Birmole B, Borwankar S, Vaidya A, Kulkarni B. Crossed renal ectopia. Journal of postgraduate medicine. 1993;39(3):149.