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Polycystic horseshoe kidney

Rapur Ram, Gudithi Swarnalatha, Santosh Pai Bantwal Hebbalsinhakatte and Kaligotla V. Dakshinamurty

Nizam's Institute of Medical Sciences, Punjagutta, Hyderabad, India

Correspondence and offprint requests to: Rapur Ram; E-mail: ram_5_1999@yahoo.com

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A 32-year-old man was examined for primary infertility. Ultrasound and computed tomography (CT) abdomen scans showed the presence of polycystic horse shoe kidney (Figure 1). CT abdomen revealed cysts in liver and seminal vesicles (Figure 2). There were bilateral ureteric calculi. There were no cysts in the pancreas or spleen. His serum creatinine level was 0.9 mg/dL (79.6 mmol/L). The patient has a younger brother and a sister. Ultrasound abdomen of his father of age 62 years and mother of age 60 years did not reveal the presence of either horseshoe kidney or polycystic kidney. Polycystic horseshoe kidney is thought to represent two separate renal diseases. Horseshoe kidney is a renal fusion anomaly during embryogenesis; autosomal dominant polycystic kidney disease (ADPKD) is a hereditary disorder due to mutations in the genes responsible for the expression of the proteins polycystin 1 (ADPKD1) and polycystin 2 (ADPKD2). Horseshoe kidney occurs in one per 400–800 live births and ADPKD in one per 400–1000 live births. Polycystic horseshoe kidney occurs 1 in 134 000 to 1 in 8 000 000 live births [1]. To date, no genetic association has been described between the ADPKD loci (PKD1 on chromosome 16 and PKD2 on chromosome 4) and horseshoe kidneys. Necros-

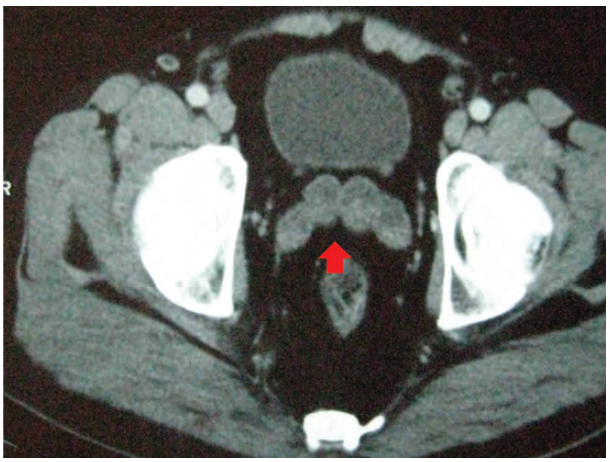

Fig. 2. Seminal vesicle cysts (arrow).

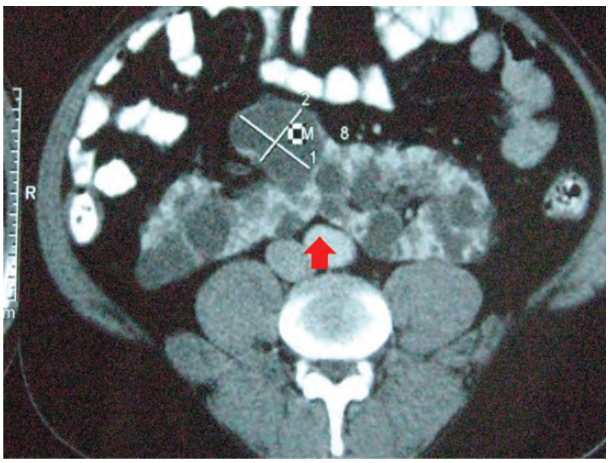

Fig. 1. Polycystic horseshoe kidney (arrow: isthmus).

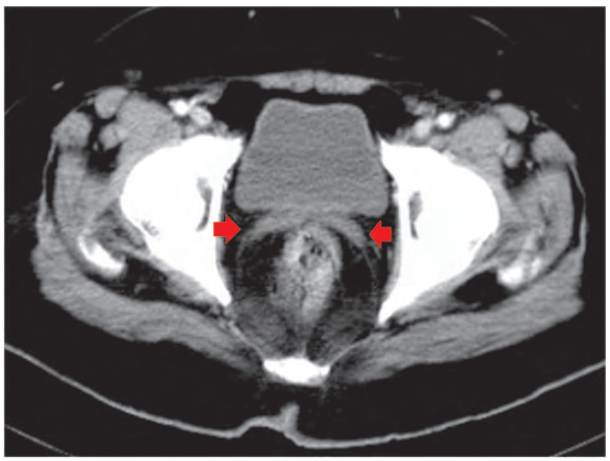

Fig. 3. Normal seminal vesicles (arrows).

permia or low sperm motility with a high proportion of dead sperm, ultrastructural flagellar defect, immotile sperm and seminal vesicular and ejaculatory cysts are reported to be causes of infertility in male ADPKD patients [2]. The reported prevalence of seminal vesicle cysts was 39% [3] to 43.47% [4]. The cysts of seminal vesicles in ADPKD are due to pathological dilation of the normally tortuous vesicles. The infertility is not due to obstruction, but a failure to propel the contents of seminal vesicles (Figure 3).

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Conflict of interest statement. None declared.

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