

Ureteropelvic junction obstruction and calyceal diverticulum in a child with Turner syndrome and horseshoe kidney

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Corrected Proof

Abstract

Laparoscopic dismembered pyeloplasty for ureteropelvic junction (UPJ) obstruction is considered to be a routine procedure in many pediatric surgical centers. UPJ obstruction is known to be associated with horseshoe kidney and several reports on successful laparoscopic repair in such cases exist. The case of a 9-month-old girl with Turner syndrome is reported. A horseshoe kidney with grade 4 hydronephrosis on the left side was diagnosed by ultrasound during the neonatal period. MAG3 diuretic renography and dynamic magnetic resonance imaging nephrography revealed a differential renal function of 31% and 69% on the left and right side, respectively. No drainage from the left renal pelvis could be demonstrated.

Laparoscopy showed a combined UPJ obstruction and a calyceal diverticulum with a narrow infundibulum of the upper pole calices on the left side of the horseshoe kidney. Laparoscopic dismembered pyeloplasty and an additional infundibulopelvic anastomosis was performed. No intraoperative complications occurred. The immediate postoperative course was uneventful. Unobstructed drainage and stable differential renal function on the left side could be demonstrated on MAG3 diuretic renography 6 weeks postoperatively.

In conclusion, laparoscopic repair of complex malformations of the upper urinary tract is feasible and leads to good functional outcome in selected cases.

Keywords: Horseshoe kidney, Calyceal diverticulum, Ureteropelvic junction obstruction, Laparoscopy

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