Ureteric Valve as a Cause of Obstructive Uropathy

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Case Report

A five -year old boy, presented with pain on the left side of the abdomen. An ultrasound examination of the abdomen revealed a hydronephrotic left kidney with a dilated left upper ureter. The right kidney was normal. Intravenous pyelography revealed a hydronephrotic left kidney, with the ureter dilated and hold up of the dye at the level of L3-L4 intervertebral space [Figure - 1]. A pre-operative diagnosis of upper-ureteral obstruction was made. Intra-operatively, an abrupt change from dilated to normal ureter was found which was opened longitudinally to see the annular (single pleat ) valve which was resected, and ureteral anastomosis was done with a double J stent left in situ and Foley’s catheter left to ensure free drain of urine outside the body. A tube drain left near the anastomosis site. The patient had a smooth post operative period and discharged home with very well condition. Three weeks later the double J stent removed under general anesthesia.

Discussion

Ureteral valves together with stenosis and diverticula represent congenital malformations of the ureteral tract between the pyeloureteral junction and the ureterovesical junction(1). They are rare malformations with only 50 cases having been reported in pre-reviewed literature till 1998. (2) and even more rarely they cause an obstacle to urine flow(1). The most reliable pathogenetic hypotheses suggest a delay in the canalization of fetal ureter or an ischemic damage. The true ureteral valves should be distinguished from Ostling embryonic folds that can be documented in 5% of newborns and disappear with growth.(1)

Ureteral valves are a rare cause of congenital obstructive uropathy in pediatric age. Intravenous urography proved to be the most sensitive examination to confirm the diagnosis of suspected obstruction made on the basis of US findings, and to assess its precise location(3). The majority of cases are discovered only at surgery or autopsy(4). Segmental ascending pyelography may also employed, which allows the fluoroscopic visualization, both above and below the stricture, of the ureteral segments. The technique also allows the detection of other valves of the same ureter not otherwise recognizable(3,5). It may be also associated with pyeloureteral obstruction, and exhibited as fistula after pyeloplasty if the valve not recognized during the operation(6).

Treatment, when necessary, consists in the resection of the affected ureteral tract followed by ureteral or pelviureteral end-to-end anastomosis(1) or longitudinal ureterotomy with excision of valve leaflets(2). Ureteral valves should be included in the differential diagnosis of ureteral obstruction in children. Reconstruction is curative(2) some times patients present with severe kidney damage and underwent nephrectomy(7).

References
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Figure 1 : IVP film 60 minute after injection of the dye shows hold up of the dye at the level of L3-L4 disk space