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Case Report

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Kuss-Anderson Pyeloplasty for Horseshoe Kidney

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Introduction
Horseshoe kidney is a congenital malformation characterized by the fusion of the lower poles of both kidneys. It is frequently associated with urological anomalies, notably ureteropelvic junction obstruction (UPJO), observed in approximately 15 to 35% of cases.

Treatment is based on surgical correction of the obstruction, with Kuss-Anderson type pyeloplasty being the reference technique.

Observation (Clinical Case)
This is a 12-year-old male child, with no significant past medical history, in whom a left ureteropelvic junction obstruction was discovered incidentally during an emergency abdominal ultrasound.

Clinical Examination
Good general condition
Normal external genitalia
Positive left lumbar tenderness (+++)

Radiological Investigations
Renal Ultrasound
Left hydronephrosis in a horseshoe kidney
Renal pelvis measured at 38 mm

Renal Scintigraphy
DMSA: Hypofixation of the left kidney with estimated relative function of 55% on the left and 45% on the right.
DTPA: Plateau curve on the left, uncorrected after furosemide (Lasix) injection, suggestive of obstruction.

Therapeutic Management: After a complete preoperative assessment, surgery was indicated.

Surgical Technique
General anesthesia
Left lateral decubitus position
Burst catheterization

Approach
Left anterolateral extraperitoneal incision

Exploration
Poorly rotated kidney
Significantly dilated renal pelvis
Fusion of the lower poles by a fibrous isthmus

Procedure Performed
Resection of the stenosed ureteropelvic junction
Kuss-Anderson pyeloplasty
Placement of a double-J stent
Drainage with a Delbet drain

Postoperative Course
Uncomplicated
Discharge on postoperative day 4
Removal of the double-J stent at 2 months

Results
Ultrasound improvement
Satisfactory follow-up scintigraphy

Discussion
A horseshoe kidney results from a defect in renal migration and rotation during embryogenesis. This anomaly predisposes to several urological complications, including:
Ureteral junction obstruction
Lithiasis
Urinary tract infections

URT obstruction in this context is favored by:
High ureteral implantation
An anomaly in rotation
The presence of aberrant vessels

Kuss-Anderson pyeloplasty remains the gold standard technique, even in cases of horseshoe kidney, with results comparable to those observed in normal kidneys.
However, the anatomical particularities necessitate:
Careful dissection
Accurate identification of the isthmus
Adaptation of the surgical procedure

Conclusion
A horseshoe kidney constitutes a distinct anatomical entity that can be the site of malformative uropathies. Ureteral junction obstruction is common in this area.

Early and appropriate management, based on well-performed pyeloplasty, leads to satisfactory functional outcomes.

Methods
This concerns a 12-year-old male child in whom left ureteropelvic junction obstruction was discovered incidentally during an emergency abdominal ultrasound

Clinical examination revealed a child in good general condition, with normal external genitalia and a positive lumbar palpation.

Renal Ultrasound: Revealed left-sided hydronephrosis in a horseshoe kidney with a renal pelvis measuring 38 mm.

Renal Scintigraphy
DMSA Scan: Decreased uptake in the left kidney with a horseshoe kidney appearance, with left renal function estimated at 55% and right renal function at 45%.

DTPA Scan: Plateau curve on the left, uncorrected after injection of lasix.

Management
After preoperative biological and radiological assessment, the decision was made to operate on the patient.

Patient in the operating room under general anesthesia, left sphincter decubitus, bladder catheterization. Left anterolateral extraperitoneal incision. Access to the left renal fossa.

Identification of a malrotated kidney... severely dilated renal pelvis with fusion of the lower pole of the kidney to its right counterpart via a fusion bridge.

The left ureteropelvic junction was severely narrowed; a resection of the junction was performed.

A ureteropelvic anastomosis was performed using the Kuss-Anderson technique over a double-J stent. Drainage of the renal fossa with a Delbet drain.

Postoperative Course
Patient discharged postoperative day 4.
Double-J stent removed 2 months later.
Satisfactory ultrasound and scintigraphy control.

Conclusion
The horseshoe kidney is an anatomical entity that can be the site of malformative uropathies, the prognosis of which will depend on the quality and promptness of treatment [1-14].

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