45 Surgical treatment of combined ureteral obstructions in children with non-duplicated kidneys

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Introduction & Objectives: It is a known fact that the diagnosis of hydronephrosis and primary obstructive megaureter (POMU), and the choice of management of each of these disease conditions in most cases pose no difficulty. At the same time, coexistence of obstructions in both junctions in one ureter significantly complicates not only the diagnosis, but, also the choice of adequate management.

Materials & Methods: Results of a long-term studies of surgical management of 35 children with combined ureteral obstructions of non-duplicated kidneys operated from 1980 – 2004.

Results: Males were 27 (77,1%), females – 8 (22,9%). The age of the patients on their first examination range from one day old to 12 years (M±m = 23,54±2,15 months). Combined anomalies were found on the left side in 26 children, right sided – in 7, in 2 cases - on both sides. In 18 (51,4%) patients, various degrees of upper urinary tract enlargement were identified prenatally. In no case was a diagnosis of combined obstructive uropathy established before the birth of the child: hydroneprosis was observed in 13 children, and megaureter in 5.
Only in 13(37,1%) children, that the diagnosis of combined ipsilateral ureteric obstruction was made without doubts prior to admission into the hospital. In 17(48,6%) children, a diagnosis of obstruction in the ureteropelvic junction (UPJ) was made following investigations, and at the same time obstruction in the vesicoureteral junction (VUJ) was suspected. Diagnosis of POMU was made in the remaining 5 children prior to surgery.
The treatment program depended on the functional state of the kidney and complications. In particular, 4(11,4%) children were admitted in a critical state, and treatment was commenced with a puncture nephrostomy. In no case did we perform simultaneous correction of the UPJ and VUJ with resection of sites of ureteral obstruction. In 29 children correction was started at the UPJ. In five patients, treatment started with ureteral reimplantation. According to results of the study, residual renal function observed on the side of the anomaly in one child was less than 10,0%. He underwent nephrureterectomy.

Conclusions: 1. The most crucial stage in establishing the diagnosis was the decision: is enlargement of the renal cavity a consequence of POMU or is there a coexisting of hydronephrosis and POMU. Correct diagnosis was established in only 13 children prior to hospital admission.
2. The success of surgical management depended on the severity of obstruction in the UPJ and VUJ, the degree of preserved renal function, and the degree of urodynamics re-established.
3. Surgical management when there is ipsilateral combination of hydronephrosis and POMU, should begin with a correction at the UPJ.