

ENDOSCOPIC CORRECTION OF THE MOUTH OF THE URETER WHEN VESICoureTERAL-REFLUX IN CHILDREN

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ABSTRACT — Changes that occur in the renal parenchyma on the background of vesicoureteral reflux (VUR), occupies one of the first places among the various forms of pathology of the urinary tract in children, leading to the obstructive uropathy. To reduce the risk of reflux nephropathy may need to start surgical treatment of VUR in the early stages. At present methods of endoscopic correction of the mouth of the ureter in VUR are a priority at the expense of minimizing trauma, reduction of terms of deposits in hospital and decrease the number of complications.

KEYWORDS — children, vesicoureteral reflux, endoscopic correction of the mouth of the ureter, Vantris

Vesicoureteral reflux in children is one of the topical problems of pediatric urology. Detectability him, efficiency, conservative effective and operative treatment still remain an important task for pediatricians, nephrology, urology, pediatric surgeons. VUR is one of the most frequent forms of disorders of urodynamics and causes of chronic pyelonephritis in children. To date the wrong interpretation of these diagnostic or treatment led to late surgical intervention (1).

VUR is one of the most severe diseases of the urinary system. VUR very often progresses latent, which can cause arose breath of pyelonephritis, resistant to antibiotic therapy and often receiving chronic. However, the VUR may have a latent period without clinical and laboratory signs of urinary tract infection. In its initial stage of development of reflux-nephropathy in VUR has the character of clinical picture, appear-

ing only symptoms of urinary tract infection. Early detection of changes in the renal parenchyma may define further tactics of treatment of patients with this disease and prevent further development of secondary wrinkling kidneys.

Children with this pathological condition after liquidation reflux by surgical correction, i.e. after elimination of pathological effect on the kidney parenchyma, in the next 6–8 months notice significant improvement of its functions (2, 3). Selection of optimal method of treatment of VUR in children acquires a special urgency due to the high prevalence of this disease, rapid progression of complications leading to severe and irreversible morphofunctional changes of the upper urinary tract.

Remain disputable questions of a choice of methods of treatment of VUR in children depending on the degree of functional disorders in combination with other pathological processes.

OBJECTIVE

Optimization of surgical treatment of VUR in children with the use of endoscopic correction methods.

METHODS

the Main indications for carrying out endoscopic correction in VUR can be considered primary VUR 3–5 degrees, flowing with impaired kidney function, the presence of reflux-nephropathy, acute RAS disorders of urodynamics with exacerbations of

secondary pyelonephritis in history. Also indications for endoscopic intervention is VUR 1–2 degrees in the absence of effects from the conservative therapy for 1 year with occasional outbreaks of secondary chronic pyelonephritis. To reduce the efficacy of endoscopic correction pour ureters may complete a doubling of the upper urinary tract, as well as the recurrence of the VUR after re the mouth of the ureter. Methods of endoscopic correction have different technical features, so the results vary considerably. Efficiency of different methods, according to various authors, is common from 30% to 90%.

Currently, the most popular and proven methods are STING, HIT, characterized by the insertion of the needle relative to the mouth of the urine-source. In our clinic is successfully used the method STING (Suburethral transurethral injection). For endoscopic correction of the mouth of the ureter at the VUR used cystourethroscopy company Storz barrel No. of 9,5–10 ch. Now the surgeons used a huge range of products for the correction of reflux. Himself drugs must meet the following requirements: to be biologically compatible with tissues of the organism and not to migrate to succeeding in other tissues or organs, and to be safe. Used implants are divided into two groups — unstable (absorbable) and stable (non-absorbable). As implantat we use the hydrogel synthetic origin, Vantris. Once introduced 0,2–0,3 ml of the preparation to closing the mouth of the ureter and create a bolus (Fig. 1, 2).

RESULTS

In the surgical Department of the Regional child's clinical hospital of Astrakhan for the period from 2010 to 2013 was on treatment 72 children with VUR 2–5 degrees, of which the boys were 30, girls — 42 patients. Age received surgical treatment of children ranged from 1 to 17 years old. The distribution of VUR by degrees was as follows: grade 2 — 20 (28%) children, grade 3–4 — 40 (55%) children, 5 degree — 12 (17%) patients. In 25 patients VUR was bilateral, 47 — sided. The duration of the observation of the children ranged from 6 months to 1 year. Control urological examination in these terms include obligatory holding of ultrasound with Doppler and miccion cystography. Analysis of the results of endoscopic correction of the VUR showed that 68 (95,7%) cases with a positive result endoscopic correction — reflux was not determined (Fig. 3, 4), in 2 (2,8%) cases decreased reflux to 1–2 degree, that was regarded as an improvement. A relapse was detected in 1 observation (1,4%), which required repeated endoscopic manipulation. Complications are not registered. Exacerbations secondary chronic pyelonephritis not been identified. Assessment of renal hemodynamics with the definition of the

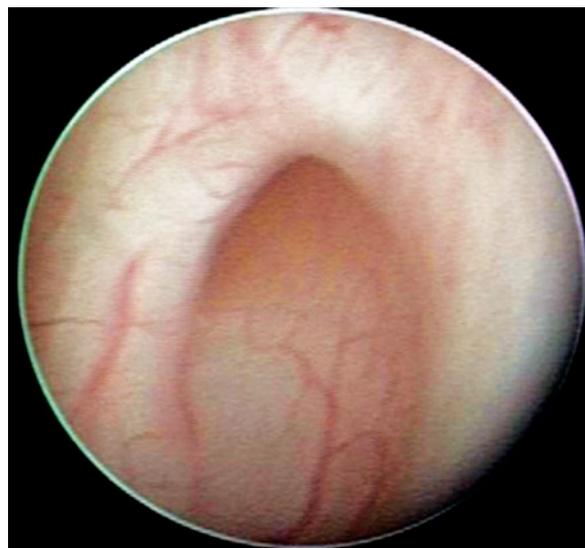


Fig. 1. The mouth of the ureter prior to the introduction of the gel VANTRIS



Fig. 2. The mouth of the ureter after the introduction of the gel VANTRIS

industry of water indexes pulsational (P_i) and resistance (R_i) showed numbers not exceeding the norm: $P_i 1,11 \pm 0,26$, $R_i 0,68 \pm 0,13$. Depletion of intrarenal vascular figure as one of the signs of the secondary wrinkling of the renal parenchyma was not observed.

CONCLUSIONS

Thus, the good results of endoscopic correction of the mouth of the ureter at the VUR in children can be obtained in case of strict observance of technology of procedure of this method STING. The efficacy of



Fig. 3. Miction cystogramma patient m., 2 years 11 months. Is an active 2-way VUR III-V



Fig. 4. Miction cystogramma the same patient after 6 months after surgery. VUR is not defined

endoscopic correction depends on the degree of reflux and primary treatment. The application of endoscopic correction methods allows to achieve a positive result of treatment of VUR in 95,7% of the cases, that allows to consider them to be the method of choice for carrying primary surgical treatment of this pathology.

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The article is devoted to endoscopic correction of the mouth of the ureter when vesicoureteral-reflux in children. At present methods of endoscopic correction of the mouth of the ureter in VUR are a priority at the expense of minimizing trauma, reduction of terms of deposits in hospital and decrease the number of complications. The research was conducted in a *careful* and *objective* way and can be recommended for publishing in the medical Journal *Archiv Euromedica*.

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