

SVI4: ENDOSCOPIC BALLOON DILATATION OF PRIMARY OBSTRUCTIVE MEGAURETER: PREDICTIVE PARAMETERS IN THE OPERATIVE ENDOSCOPY

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Background Usually the management of primary obstructive megaureter (POM) is conservative, especially in the first year of life. In the last years with the improvement of endoscopic instruments, there is a growing interest in minimally invasive treatment of POM in children. The absence of long-term follow-up data, makes difficult to establish the correct indication for an endoscopic approach. In our study we want to analyze and define the prognostic factors in endoscopic treatment of POM.

Materials and methods We retrospectively reviewed the clinical records of patients studied for POM between 2005–2016 in our Department. We have followed 25 patients with primitive obstructive worsening megaureter. The disease was assessed by ultrasonography, cystography and MAG3-lasix (furosemide) dynamic scintigraphy. We have performed 25 cystoscopies to evaluate the characteristics and morphology of ureteral orifice (UO) to measure the length and the diameter of the stenotic tract (retrograde pyelography) in order to select correctly the patients for a balloon pneumatic dilatation. Endourologic dilatation of the vesicoureteral junction (VUJ) was performed with a semicompliant high-pressure balloon with a minimum balloon size of 2 mm, followed by placement of a Double-J stent.

Results We have treated 25 children with a diagnosis of POM within this period. In 5 patients the ureteral orifice (UO) was not patent for his point-like morphology and/or for its position within the bladder diverticulum. All have required open vesicoureteral reimplantation.

In 19 patients, the UO was patent: 6 patients showed no stenosis at the passage of ureteral catheter. 4 of them evolved to complete resolution, while 2 cases for associated VUR, were treated with vesicoureteral reimplantation.

In 14 patients, the distal ureter was stenotic: 5 patients have the stenotic tract in length <5 mm; in 4 patients, a single pneumatic dilatation has allowed significant improvement without the need for further procedures while in one case it was necessary to repeat the dilatation.

In 5 patients, the stenotic tract length was between 5–10 mm: 3 required 2–3 pneumatic dilations before resolution, 1 required open ureter reimplantation after balloon dilatation, 1 patient showed improvement without requiring other interventions after 8 months follow-up.

4 patients presented a stenotic tract >10mm and despite pneumatic dilations it was necessary to proceed to vesicoure-

teral reimplantation in a short time (in one case was necessary a temporary ureterocutaneostomy).

Conclusions Endoscopic evaluation with pneumatic dilation when possible represents a valid diagnostic and therapeutic solution for the treatment of POM especially in the first year of life. On our preliminary experience, it seems possible to identify characteristics associated with a poor prognosis: punctiform ureteral orifice and/or its location site inside a bladder diverticulum, stenotic tract with length greater than 1 cm. According our experience endoscopic dilatation is more effective if performed earlier (between the 1–5 months of life) and in the short stenotic sections. It can be performed and/or repeated with good results even in the intermediate portions (5 mm–1 cm).

Key words primitive obstructive megaureter, endoscopic balloon dilatation