



Endoscopic treatment of VUR

Ricardo A. Arceo-Olaiz, Hal C Scherz, Andrew J Kirsch*

Pediatric Urology, Children's Healthcare of Atlanta and Emory University School of Medicine, Atlanta, GA, United States

Objective

Endoscopic treatment of a bulking agent was first used in 1981 as an alternative to conservative treatment and surgical reimplantation of vesicoureteral reflux. This technique has evolved over time, being the double HIT the most popular technique used nowadays. The objective of this video is to show our technique for endoscopic correction of VUR using the double hit method.

Patients and surgical procedure

The procedure is done under general anesthesia, and the child is placed in a lithotomy position. Cystoscopy is performed with a pediatric cystoscope (9.5 Fr size), and the injectable agent used is dextranomer/hyaluronic acid copolymer (Deflux®). Deflux gel is injected using the Deflux metal needle. Hydrodistention (HD) of the ureteral orifice (UO) is done, and the needle is placed into the UO and inserted in the mid-ureteral tunnel at the 6 o'clock position. During the injection process, blanching and mounding of the tissue should occur. Bulking agent is injected until a sufficient bulge is produced and a second injection at the distal-most aspect of the intra-ureteral tunnel results in coaptation of the orifice.

Results

The Double-HIT method currently achieves the highest radiographic and clinical success rates of 93% in experienced hands. Deflux injection therapy is well tolerated. The most significant aside from transient

adverse events such as flank pain or emesis, were new contralateral VUR and treatment failure. Rare cases of ureteral obstruction have been reported with a risk of 0.5%.

Conclusions

Endoscopic correction of VUR is a safe minimally invasive procedure with a high success long-term results comparable to other more invasive treatment options, such as ureteral reimplantation. Its very low complication rate and the fact that can it be done as outpatient, makes endoscopic treatment of VUR a widely accepted option according to parents and amenable as first line treatment.

The video related to this article can be found online at: doi:[10.1016/j.urolvj.2022.100163](https://doi.org/10.1016/j.urolvj.2022.100163).

CRediT authorship contribution statement

Ricardo A. Arceo-Olaiz: Writing – original draft, Writing – review & editing. **Hal C Scherz:** Writing – review & editing. **Andrew J Kirsch:** Writing – review & editing.

Declaration of Interests

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:

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* Corresponding author.

E-mail address: akirsch@emory.edu (A.J. Kirsch).

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