

Concurrent Deflux® & Botulinum Toxin Type A Injections Can Improve Quality of Life & Voiding Parameters in Children with Non-Neurogenic Dysfunctional Voiding.

Introduction

The role of pelvic floor Botulinum Toxin Type A (BTX-A) injection in pediatric patients with neurogenic and non-neurogenic bladder dysfunction remains limited. Moreover, the therapeutic management of **non-neurogenic dysfunctional voiding (NNDV)** is particularly challenging in the presence of concurrent **vesicoureteral reflux (VUR)**.

Methods

Twenty-nine pediatric cases with **NNDV** and **VUR** were included in our study. All cases underwent inter-sphincteric and pelvic floor BTX-A injection. Deflux® injection was performed in renal units with VUR. This prospective cohort evaluated post- and pre-operative outcome in terms of :

- ① Dysfunctional Voiding Scoring System (DVSS)
- ② Pediatric Incontinence Questionnaire (PinQ)
- ③ Uroflowmetric parameters
- ④ Micturating Cystogram



Fig1. Schematic figure of concurrent surgical approach. The hydrodistension implantation technique for VUR treatment. The peri-urethral BTX-A injection for decreasing inappropriate muscle contraction.

Results

- ① **VUR resolved** in all participants except 5 cases, in which the VUR grade was either reduced or remained unchanged.
- ② **Near-bell shaped Voiding pattern** was achieved in all cases except 5 patients with staccato or interrupted voiding pattern.
- ③ Significant improvement at 6-month follow-up compared to pre-operative DVSS index.

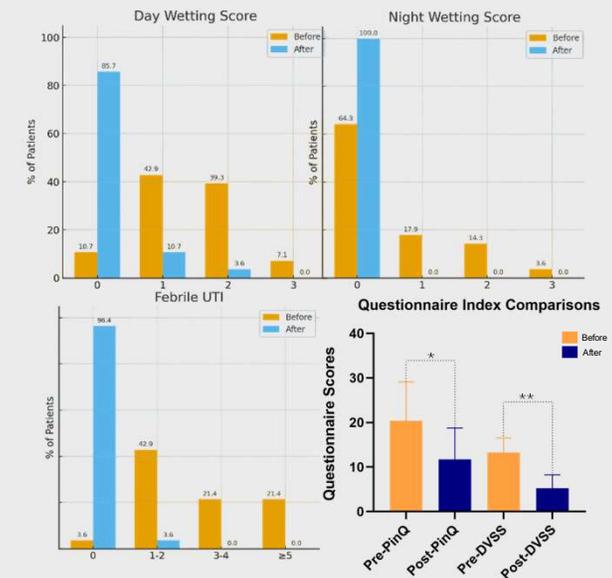


Fig2. Evaluating pre-operative and six-month follow-up outcomes of voiding diary, febrile UTI, and questionnaire assessment.

Conclusion

Simultaneous Deflux® and BTX-A injection could be an optimal approach in pediatric cases with **NNDV** and **concurrent VUR**.

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