

Management of Bladder Bowel Dysfunction in Children by Pelvic Floor Interferential Electrical Stimulation and Muscle Exercises: A Randomized Clinical Trial. Urology. 2020 July 12.

Objectives: To assess efficacy of combined pelvic floor interferential (IF) electrical stimulation and muscle exercises on bladder bowel dysfunction (BBD) in children.

Definition: BBD, previously referred to as dysfunctional elimination syndrome, is defined as concomitant bowel and bladder disturbances in children of all age groups. > 50% children with lower urinary tract dysfunction fulfil the diagnostic criteria for BBD. The symptoms include - holding maneuver, recurrent urinary tract infections (UTI), urgency, constipation, urinary incontinence.

ACADEMIC P.E.A.R.L.S

Pediatric Evidence And Research Learning Snippet



Management of Bowel-Bladder Dysfunction

Study design: Randomized control trial

Patients: 34 children with BBD (6 boys, 28 girls; mean age 7.4 ± 2.2)

Treatment groups: Random allocation into Group A (17) - IF electrical stimulation + Pelvic floor muscle (PFM) exercises; Group B (17) - PFM exercises alone

Treatment: Urotherapy - Education about diet and adaptive fluid intake, timed voiding, toilet training. Transcutaneous interferential electrical stimulation - 10 sessions of 20 mins each using four surface electrodes. PFM exercises -10 times, 15 mins, 6 months; contraction and relaxation of PFM, abdominal straining and bear-down maneuver.

Evaluation: Kidney and bladder ultrasounds, Uroflowmetry + Electromyography (EMG), Complete voiding + bowel habit diary.

Results: Improvement in -

- **Constipation:** Group A - 82%, Group B - 47% ($p=0.03$)
- **Day time incontinence:** Group A - 100%, Group B - 25% ($p=0.007$)
- **Urinary tract infection:** Group A - 80%, Group B - 38.4% ($p=0.02$), 6 months after treatment
- **Uroflowmetry measures:** No significant difference between two groups

Conclusion: Combination of interferential electrical stimulation and pelvic floor muscle exercises is an effective and safe modality for treatment of bowel - bladder dysfunction in children.

EXPERT COMMENT



“BBD plays a significant role in development of recurrent UTIs. It is more frequent in girls than in boys. A thorough clinical history, along with a high index of suspicion, help in establishing an early diagnosis. Neuromodulation increases the neuroplasticity of the central and peripheral nervous systems, giving potent long term outcomes.”

Dr Virender Sekhon, MS, MCh (Pediatric Surgery), PDF (Pediatric Urology), FSPU. Consultant, Pediatric Urology, Department of Urology, Renal Transplant and Robotics. Medanta – The Medicity, Gurugram, Haryana

DR MANINDER S DHALIWAL

Editor – Academic Pearls
pedpearls@gmail.com

DR BAKUL JAYANT PAREKH

President, IAP2020

DR PIYUSH GUPTA

President, IAP 2021

DR G.V. BASAVARAJ

Hon. Secretary Gen. 2020-21

Reference

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