Revolutionizing Pediatric Voiding Dysfunction:

The Promising Role of Sacral Neuromodulation

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Background

SNM is a validated treatment for dysfunction voiding (DV) and non-obstructive urinary retention (NOUR) in adults. These conditions also affect adolescents, impairing quality of life and increasing the risk of renal failure.

Aim of the study is to retrospectively assess clinical and functional outcomes of SNM in children and adolescents with DV or NOUR.

Methods

Retrospective review (2018–2023) SNM implantation,

with ≥ 1 year follow-up.

The procedure consisted of the implantation of Medtronic Interstim II devices, using a 2-stage technique; electrodes were placed at S1-S3, under fluoroscopic guidance.

***Outcomes*:**
1. Urodynamic
2. Patient satisfaction
3. Complications

Results

A total of 21 patients (pts) were enrolled (11 XX, 10 XY); average age of implantation 13.76 years (range 7–17).

1. Urodynamic (UD/flw):

14 pts (66.6%) improved post-void residual

5 pts (23.8%) no change

2 pts (9.5%) worsened

2. Patient satisfaction: 20 pts (95.2%)

3. Complications:

2 pts early (9.5%): infection and device extrusion.

4 pts explants (19%) due to clinical inefficacy or intolerance

Implications

SNM is a promising option for pediatric DV/NOUR, with most patients benefited from SNM implantation and a high satisfaction rate.

Complications emphasize the need for proper candidate selection.