Sacral Neuromodulation in Non-Neurogenic Lower Urinary Tract Symptoms: Clinical Efficacy and Safety

SNM is a safe, effective, and clinically meaningful option for both OAB and CNOUR, with particularly important benefits in reducing CIC dependence.

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To evaluate the effectiveness of SNM on clinical symptoms, lower urinary tract function, and objective measurements in patients with OAB and CNOUR, and to identify factors affecting treatment response.

Materials & Methods

- Multicenter retrospective chart review
- Patients with OAB or CNOUR treated with SNM between 2015 and 2025
- Four tertiary referral centers
- Standard two-stage SNM protocol
- Clinical evaluation at the 1st and 3rd postoperative months after stage II implantation
- Outcome measures: urinary incontinence status, clean intermittent catheterization (CIC) requirement, bladder diary data, and uroflowmetric parameters
- Demographic and technical factors affecting success were analyzed

Study Population

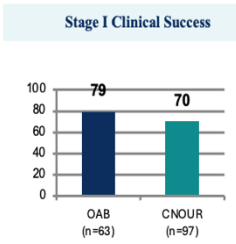
Total patients 160

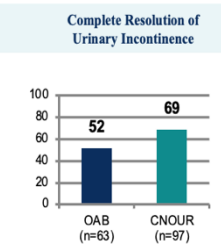
Female 113 (70.6%)

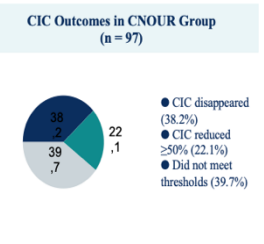
Mean age 41 years

OAB 63 (39.4%)

CNOUR 97 (60.6%)







Clinical Interpretation

- SNM showed high clinical success in both storage and emptying dysfunction phenotypes.
- Benefit was especially meaningful in chronic urinary retention due to reduced catheterization burden.
- Objective uroflowmetric improvement supported clinical benefit in CNOUR.
- Technical optimization during the test phase appears important for success.

Conclusion

- ✓ SNM is an effective and safe treatment option for patients with OAB and CNOUR.
- ✓ Its ability to reduce the need for catheterization and improve voiding function is of great clinical importance, especially in CNOUR.
- ✓ Treatment success can be enhanced by appropriate patient selection, careful evaluation during the testing phase, and optimal technical application.