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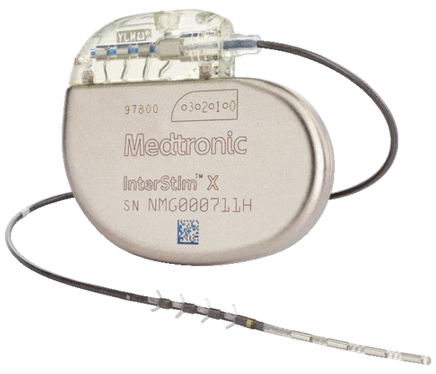
One-year outcomes of Interstim X recharge-free Sacral Neuromodulation (SNM) device: Results from a UK centre

Ong K, Jenks J, Toia B, Mercado-Campero A, Nobrega R, Noah A, Gresty H, Ockrim J, Greenwell T, Pakzad M

University College London Hospital (UCLH), London

Hypothesis / aims of study

- This is the first study reporting the outcomes of Interstim X (Medtronic™) recharge-free sacral neuromodulation (SNM) device.
- It was approved for use in the UK in January 2023.



- We report our 1-year experience of using this device in the treatment of overactive bladder (OAB) and chronic urinary retention (CUR).

Study design, materials and methods

- Prospective observational study was conducted between January 2023-January 2024
- Consecutive patients who underwent implantation of Interstim X device in a tertiary referral centre.

Primary outcome:
- Efficacy data including quality of life measures and symptom severity scores were recorded.
- Successful outcome was defined as ≥50% reduction in urge urinary incontinence (UUI)/ urinary-frequency episodes for OAB and ≥ 50% reduction in need for self-catheterisation for CUR.

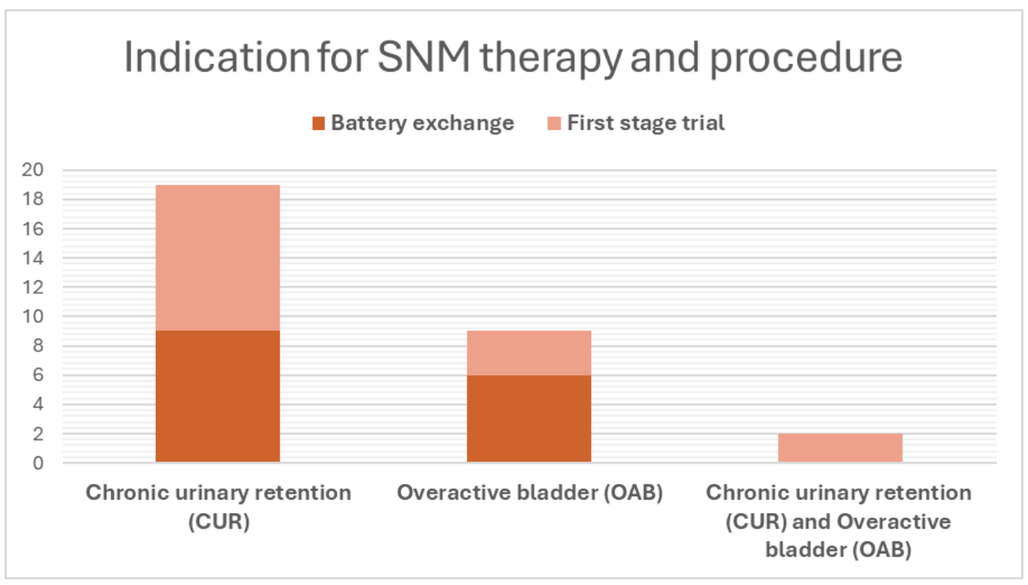
Secondary outcome:
- Adverse events and device-related complications were also collected.

Results: Demographics and indications

- There were a total of 31 patients (25 females, 6 males; mean age 46.4, range 23 -78 years)

Indications for implant :
- CUR (n=19, 61%)
- Refractory OAB (n=10, 32%) or
- Both (n=2, 7%).

- 16 patients (52%) patients had exchange of Interstim II battery to Interstim X (for depletion) and 15 patients (48%) underwent a first stage trial (FST).

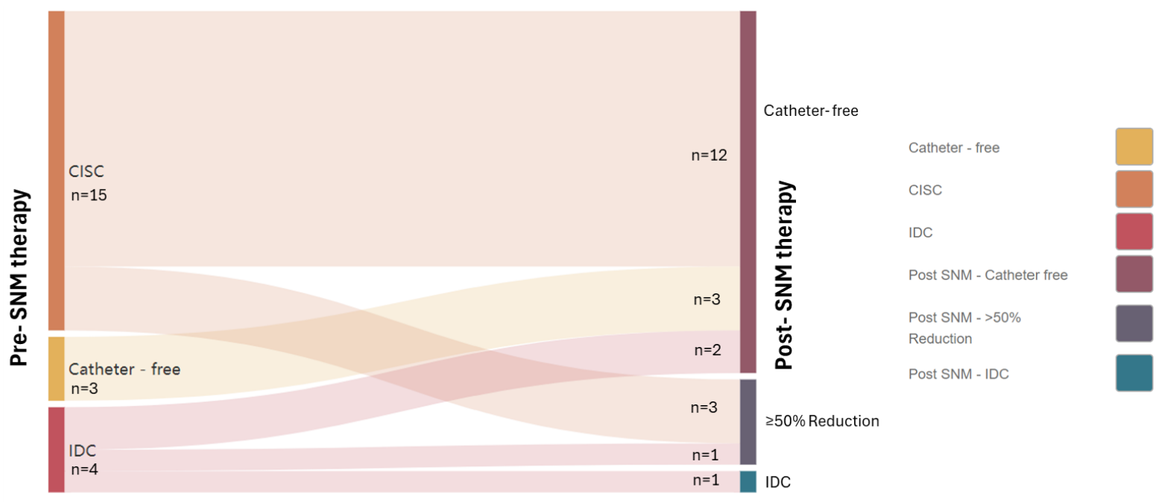


Results: Outcomes

- Overall, 29 of patients (93.5%) responded to SNM therapy. One patient underwent explantation after FST due to inefficacy.
- One patient had a depleted Interstim II battery (implanted in South Africa) with return of OAB symptoms, chose Interstim X for battery exchange but remained wet post-procedure.
- In the OAB cohort, 11 (92%) had ≥50% reduction in UUI episodes/urinary frequency.

Results: CUR cohort

- 19 (86.4%) patients were catheter dependant pre- SNM therapy.
- 2 (9.1%) patients were catheter dependent post- SNM therapy.



Results: CUR cohort

- There was no significant difference in their symptom severity score including urinary symptom profile (USP) (p=0.09).
- However, there was a significant difference in their urethral pain score on the visual analogue scale (p= 0.024) and quality of life measures (p<0.001).

	Pre- SNM therapy	Post – SNM therapy	P- value
Urinary Symptom Profile (USP)	9.27 (range 0 – 35)	4.81 (range 0 -33)	p = 0.09
International Prostate Symptom Score (IPSS)	6.7 (range 0 -32)	4.81 (range 0 – 34)	p = 0.5
IPSS – Quality of life score	5.73 (range 4 – 6)	1.5 (range 0 -5)	**p <0.05**
Urethral pain Visual Analogue Scale (VAS)	5.73 (range 0 – 10)	1.67 (range 0 -7)	**p = 0.024**

Results: Satisfaction and complications

- The mean Patients Global Impression of Improvement (PGI-I) score was 1.57 (range 1 – 3).
- There were no reported intra-operative or device-associated complications/compatibility issue.
- Post-operatively, 1 patient (3%) had a superficial wound infection, and 2 patients (7%) reported stimulation-related discomfort.

Conclusion

- The Medtronic™ Interstim X device provides safe and effective SNM therapy for patients with both OAB and CUR.
- There were no device-related complications.
- There were no incompatibility issues identified for patients who attended for battery exchange with a pre-existing Medtronic™ lead in-situ.
- The high therapy response rate observed requires further evaluation through longer follow-up to ensure longevity.

References

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