

THE OUTCOMES IN WOMEN WITH NON-OBSTRUCTIVE URINARY RETENTION AND DETRUSOR UNDERACTIVITY TREATED BY SACRAL NEUROMODULATION

Hypothesis / aims of study

Evidence is scarce regarding the outcomes of sacral neuromodulation (SNM) in patients with non-obstructive urinary retention diagnosed with detrusor underactivity (DU). The aim of the study was to assess the outcomes of SNM for treating non-obstructive urinary retention (NOUR) in female patients with detrusor underactivity (DU) and the factors predictive of successful or unsuccessful SNM outcomes.

Study design, materials and methods

All female patients with DU treated by SNM between January 2011-July 2015 were retrospectively identified. The following data were assessed: patient demographics, past medical history, mode of voiding, urodynamic parameters, urethral pressure profilometry (UPP) parameters including actual and expected maximal urethral closure pressures (aMUCP/eMUCP). Patients were assessed for 4-6 weeks after tined lead insertion, with a bladder diary. The SNM test was considered successful if: catheter usage was reduced by 50%+; spontaneous voiding was restored or there was a patient-reported improvement by 50%+. Patients were followed up at 1, 3, 6 and 12 months.

Success, revision and explantation rates were reported. Potentially prognostic factors such as age, duration of lower urinary tract symptoms before SNM, maximum cystometric capacity, detrusor hypo/acontractility, aMUCP, ratio of aMUCP to eMUCP, bladder sensations during filling phase (normal or hyposensations) were investigated. Statistical analysis was performed using Mann-Whitney U, Chi-square and binary logistic regression analyses.

Results

Overall 45 patients mean age 37.8 years (± 15.2 ; 17-74) were included. All patients had a higher than expected aMUCP. The mean follow up was 15.5 months (2-62). Success rates after first and second stage were 68.9% and 77.4% respectively. After the second stage, the explantation rate was 2.2% due to pain. The revision rate was 12.9% due to pain or discomfort leading to resitting the battery. None of the potentially prognostic factors investigated were found to significantly correlate with successful outcomes (all $p > 0.05$).

Interpretation of results

To the best of our knowledge, this is the first report of outcomes of SNM specifically used in the treatment of NOUR and DU. Our results are in agreement with previous published series of SNM in chronic urinary retention in terms of success and complication rates (1,2). At the moment, only a two-stage procedure can help in the decision of permanent implantation.

Concluding message

SNM is a safe and efficient therapy for the treatment of NOUR and DU with a 77.4% success rate at a mean of 15.5 months. There was no significant positive or negative predictive factors for a successful outcome.

References

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Disclosures

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