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## **CURVED OR STRAIGHT STYLET FOR ACCURATE PLACEMENT OF THE QUADRIPOLEAR TINED LEAD FOR SACRAL NERVE NEUROMODULATION? AN AUDIT OF CHANGE IN PRACTICE**

### Hypothesis / aims of study

Sacral neuromodulation (SNM) is well established in the management of refractory urge incontinence and voiding dysfunction. Accurate placement of the quadripolar tined lead in close proximity to the S3 nerve has been shown to improve efficacy and battery life. It has been suggested that use of a curved stylet guides the tip of the lead so that it curves laterally within the nerve sheath so that all four electrodes remain in close proximity to the nerve. We recently changed our SNM practice to using a curved stylet for all quadripolar lead placements. Prior to this, a straight stylet had been used. This study compares sensory threshold voltages before and after this change in technique.

### Study design, materials and methods

Sensory threshold voltages were recorded and stored in a secure database. We compared voltages for the monopolar settings stimulating each of the 4 electrodes for a cohort of 18 patients before and after this change in technique. The null hypothesis was tested via the [R] project for statistical computing using the Mann Whitney test. All patients were followed up at six months and completed Incontinence Impact Questionnaire (IIQ 7), Urogenital Distress Inventory (UDI 6), International Consultation on Incontinence Questionnaire (ICIQ-SF) and International Prostate Symptom Score (IPSS).

### Results

A total of 36 patients (92% female, median age 34, range 19-77 years) were analysed. Indications for SNM were: detrusor overactivity (N=22), and dysfunctional voiding (N=14). Lead insertion with a curved stylet had a lower median sensory threshold voltage for all 4 electrodes compared with the straight stylet. Differences were statistically significant for electrodes 0 and 2. No difference in patient outcomes between the two groups was identified at six months following SNM.

### Interpretation of results

Quadripolar tined lead insertion with a curved stylet is associated with a significant decrease in sensory threshold voltages. The use of a curved stylet has led to equivalent patient outcomes at six months as judged by post-SNM quality of life questionnaires.

### Concluding message

We present here a change of practice in our SNM technique. How this translates into long-term patient outcomes is eagerly awaited.

### Disclosures

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