Chowdhury S<sup>1</sup>, Jenks J<sup>1</sup>, Pakzad M<sup>1</sup>, Ockrim J<sup>1</sup>, Shah J<sup>1</sup>, Greenwell T<sup>1</sup>, Hamid R<sup>1</sup> 1. University College London Hospital

# SACRAL NEUROMODULATION FOR NEUROPATHIC BLADDER DYSFUNCTION

### Hypothesis / aims of study

Sacral neuromodulation is a recognised treatment modality for idiopathic detrusor overactivity. However, its efficacy in the management of neuropathic bladder dysfunction is not well established. We evaluated the outcome of this treatment in neuropathic group.

## Study design, materials and methods

We identified 13 patients from prospectively collected database that underwent a trial of neuromodulation over the last 4 yrs. All patients were refractory to anticholinergic medication. Five of these patients had additionally failed multiple injection of botulinum toxin A. The neurological diagnoses included incomplete spinal cord injury, multiple sclerosis and other confirmed neurological disease including poliomyelitis. All patients had urodynamically proven neurogenic detrusor overactivity. They were evaluated pre- and postoperatively with frequency volume charts (F/V), ICIQ and EQ5D. Success was defined as greater than 50% improvement. Follow-up information is available on all patients.

#### **Results**

There were eight females and the average age was 58yrs (range 31-78 yrs). All patients underwent percutaneous nerve evaluation (PNE) for initial evaluation. 5 out of 13 patients (38%) had a successful response to PNE. This included greater than 50% improvement in F/V and Quality of life scores. One patient with poliomyelitis also reported improvement in bladder empting. These five patients went on to have the permanent stimulator on a later date. All procedures were uneventful. None of the patients reported infection or significant pain at the implantation site. The mean follow-up on the successful patients is 18 months (range 5-32 months). Of the eight unsuccessful patients, one case is considering cystoplasty whilst the remaining seven do not want to undertake any further surgical intervention.

#### Interpretation of results

Sacral neuromodulation appears to be an effective treatment option for neuropathic bladder dysfunction albeit with a much lesser efficacy as compared to the idiopathic group. However, it seems reasonable to offer this treatment modality to patients with neuropathic bladder dysfunction who have failed other minimally invasive therapies. Our study result are limited by small numbers and a heterogeneous group of neuropathic diagnosis but we feel that they can be useful in discussing treatment options with patients who are not keen to undergo more invasive therapies.

#### Concluding message

Sacral Modulation could be regarded an effective option for NDO patients but much research needs to be done in this field.

#### **Disclosures**

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