

MINIMALLY INVASIVE TECHNIQUE WITH TINED LEAD INCREASED SCREENING SUCCESS RATE FOR SACRAL NEUROMODULATION IN PATIENTS WITH REFRACTORY INTERSTITIAL CYSTITIS (IC)

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INTRODUCTION & OBJECTIVES: Our IC clinic in the Bernhoven hospital serves as a national reference centre for IC patients. We employ sacral neuromodulation since December 2001, in a prospective open study in patients with refractory IC. When using a percutaneous nerve evaluation test (PNE), 52% (n=35) of patients were eligible for sacral neuromodulation. However, after permanent implant, 35% failed treatment during the first year follow-up. We investigated the data from these 35 patients who underwent a trial stimulation (PNE) to define clinical parameters that can assist in (IC) patient selection.

MATERIAL & METHODS: Data were available from all 35 IC patients that underwent PNE between December 2001 and July 2004 in prospective study. We performed PNE's with temporary uni-polar lead under local anaesthesia. From October 2003 we used the quadripolar Tined Lead under general anaesthesia. Motor reflexes and fluoroscopy were used for correct lead placement. If $\geq 50\%$ of improvement occurred in analogue pain- and urgency scales, the O'Leary-Sant IC Symptom index (ICSI) and key voiding parameters, PNE was considered successful. These patients received a permanent Interstim device. We divided implanted patients in 3 groups based on their outcomes. **Group I** consisted of patients with $\leq 50\%$ improvement, **Group II** patients with $\geq 50\%$ improvement but failure to maintain remission after permanent implant and **Group III** patients with $\geq 50\%$ improvement who continued remission with the permanent Interstim device.

RESULTS: Mean follow-up was 19.2 (3-26) months. The 35 IC patients consisted of 31 female and 4 male. Only one male patient had successful PNE. We compared different clinical parameters at baseline: average age in years, av. pain score on analogue scale 0-10, av. nocturia, bladder capacity under anaesthesia¹, positive Potassium test (in %)¹, disease history of >10 years (in %) and screening with the Tined Lead (in %). The numbers did not have enough power (yet) to allow statistical analysis.

	Age (y)	Pain	Nocturia	Capacity	Potassium Test (+)	Disease >10 yrs	Tined Lead
Group I, n=17	54	8.4	3.4x	532cc	60%	47%	23%
Group II, n=5	49	8.2	3.2x	522cc	80%	80%	0%
Group III, n=13	49	7.0	4.0x	671cc	70%	38%	46%

CONCLUSIONS: Application of minimally invasive technique with Tined Lead apparently increased the number of positive screenings. Male gender, a higher age and prolonged disease history reduced the chance of a positive screening outcome. Both observations are in line with the literature on neuromodulation for other indications including urge incontinence.

1. J. Nordling, F.H. Anjum, J.J. Bade, et al. Primary evaluation of patients suspected of having IC. *Eur. Urol.* 45 (2004): 662-669.