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TRANSCUTANEOUS POSTERIOR TIBIAL NERVE STIMULATION (TPTNS) AS A CONSERVATIVE TREATMENT FOR OVERACTIVE BLADDER (OAB) – A RANDOMISED CONTROLLED TRIAL COMPARING HOME VERSUS HOSPITAL TREATMENT

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Introduction

Tibial nerve stimulation is a treatment option in patients with OAB(1). TPTNS uses surface electrodes and there is some evidence showing improvement in OAB symptoms similar to PTNS, with significant clinical(2-4) and quality of life improvements(5).

This study aimed to establish feasibility of home treatment with TPTNS for OAB in women and to compare home versus hospital-based treatment.

Methods

Participants were recruited from urogynaecology clinics and randomised to home or hospital management using computerised randomisation.

A programme of twelve stimulation sessions were delivered over a six-week period using a Neurotrac Continence machine NT4. Participants either received treatment twice week, delivered by a clinician in hospital or self-administered the intervention at home. Validated questionnaires were used to assess efficacy and quality of life at baseline, 3, 6 and 12 weeks.

Results

93 participants were randomised to the study (one withdrew prior to receiving treatment). An intention to treat analysis was conducted. Comparing the two groups, using unpaired t-test, there was no significant statistical difference found between scores of questionnaires at each time point (3/6/12 weeks) and bladder diary data.

Comparing baseline to 6 weeks, using paired t-test, there was a significant improvement overall in the primary outcome measure, ICIQ FLUTS LF, Mean Difference (MD) of 4.59 (CI 2.57 – 6.59, $p<0.001$), which was maintained at 12 weeks. This was also observed with ICIQ FLUTS SF, MD 1.64 (95% CI 0.57 – 2.72, $p<0.03$) and PPBC, MD 0.88 (CI 0.58 – 1.18 $p<0.001$).

Conclusion

An overall statistically significant improvement is noted in incontinence specific validated questionnaires suggesting TPTNS is an effective treatment for OAB. There were no significant

differences in mean scores between home and the hospital group suggesting home management of TPTNS is as effective as traditional hospital management but providing a convenient and cost-effective option for managing OAB.

References:

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