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Title: EVALUATION OF THE EFFECT OF POSTERIOR TIBIAL NERVE STIMULATION IN WOMEN WITH INTRACTABLE URGE URINARY INCONTINENCE

Aims of study:

Percutaneous stimulation of peripheral S2 and S3 afferents via the posterior tibial nerve has also been shown to modulate unstable detrusor activity. This study evaluates the effect of percutaneous posterior tibial nerve stimulation in women with intractable detrusor instability.

Methods:

16 women with intractable urge incontinence (≥ 5 years) and detrusor instability at urodynamics were recruited. Posterior tibial nerve stimulation was performed using a 34-gauge needle inserted 5cm cephalad to the medial malleolus. Stimulation was performed weekly for 30 minutes over 12-weeks. A 24 hour pad test, 7 day urinary diary and QOL(SF36) assessment were performed at 0, 8 and 12 weeks. Satisfaction was assessed by both visual analogue score (VAS) (0-100%) and QOL(GUTSS) at 12-weeks.

Results:

16 women completed 8-weeks and 11(69%) the 12-week treatment period. Mean age was 60(41-84 yrs). Mean day-time frequency was 12(7-15) pre-treatment, 9(6-15) at 8-weeks ($p=0.003$) and 8(5-11) at 12-weeks ($p=0.1$). Mean night-time frequency was 3(1-7) pre-treatment, 2(1-5) at 8-weeks ($p=0.01$) and 3(1-4) at 12-weeks ($p=0.4$). The mean 24-hour pad weight was 137(12-286 mls) pre-treatment, 145(25-290 mls) at 8-weeks ($p=0.8$) and 146(46-321mls) at 12-weeks ($p=0.7$). The mean number of daily incontinent episodes was 4(1-8) pre-treatment, 4(1-8) at 8-weeks ($p=0.2$), and 4(2-6) at 12-weeks ($p=0.2$). Mean voids were 126(70-400mls) pre-treatment, 135(40-338mls) at 8-weeks ($p=0.5$) and 141(78-220mls) at 12-weeks ($p=0.03$). No changes were observed in QOL assessed by the SF36 or GUTSS and VAS for satisfaction was low, mean 53(20-70%).

Conclusion:

Posterior tibial nerve stimulation was associated with a significant reduction in urinary frequency and nocturia at 8-weeks but no further reduction at 12-weeks. There was no reduction however, in the number or severity of incontinent episodes.