

THE VALUE OF COMBINING LOW DOSE TROSPIUM CHLORIDE WITH TRANSCUTANEOUS POSTERIOR TIBIAL NERVE STIMULATION IN THE TREATMENT OF OVERACTIVE BLADDER IN FEMALES

Hypothesis / aims of study

This study was done to verify whether the combination of transcutaneous posterior tibial nerve stimulation (TPTNS) with low dose trospium chloride in the treatment of females with idiopathic overactive bladder (OAB) would be more effective than TPTNS alone after failure of behavioral therapy.

Study design, materials and methods

We randomized 30 women with OAB, in two groups: G I (15 patients) received 30 minutes TPTNS, three times a week; GII (15 patients) received TPTNS plus Low dose trospium chloride (20 mg once daily); all for 8 weeks. Patients were evaluated using Overactive Bladder Symptom Score questionnaire (OABSS), Incontinence Impact Questionnaire-short form 7 (IIQ-7), 3 day voiding diary and urodynamics at weeks 0 and 8.

Results

The groups were similar before treatment. After treatment both groups improved regarding all the parameters, however group II showed more significant improvement. The OABSS was reduced from 13.0 ± 1.31 to 8.53 ± 1.30 ($p < 0.001$) and from 12.67 ± 1.95 to 10.0 ± 2.0 ($p < 0.001$) in GII and GI respectively. Improvement (change from one category to a better one) occurred in 8 (53.3%) and in 14 (93.3%) patients in GI and GII respectively. The mean IIQ-7 was reduced from 63.38 ± 8.81 to 31.99 ± 9.26 ($p < 0.001$) for GII vs. 64.33 ± 8.57 to

51.86 ± 17.26 (0.002) for GI. Before treatment, 11 (73.3%) and 4 (26.7%) patients in each group had moderate and poor quality of life respectively. After treatment, 6 (40%) and 14 (93.3%) had good quality of life, 7 (46.7%) and 1 (6.7%) had moderate quality of life in GI and GII respectively. Two (13.3%) in GI had poor quality of life. The mean frequency for GII after treatment was 8.60 ± 0.83 instead of 12.87 ± 1.85 ($p < 0.001$) before treatment, while it was reduced from 13.13 ± 1.64 to 10.60 ± 2.32 ($p = 0.003$) in GI. The cystometric capacity improved from 263.40 ± 50.45 ml to 377.80 ± 112.92 ml ($p = 0.001$) for GII Vs. 250.13 ± 56.24 ml to 296.40 ± 99.0 ml ($p = 0.026$) for GI.

Interpretation of results

Since the success rate of Transcutaneous posterior tibial nerve stimulation is lower than the Percutaneous tibial nerve stimulation in the literature (48-68% Vs 60-80%), we combined low dose anticholinergic (20 mg Trospium chloride) with it to enhance the success rate. Our aim was to save the patients from side effects of full dose anticholinergics. Trospium chloride is considered as one of 3 agents (Trospium chloride, Darifenacin, Solifenacin) with fewer side effects. Our patients did not report in side effects related to the drug.

Concluding message

Transcutaneous posterior tibial nerve stimulation combined with low dose trospium chloride proved to be more effective than TPTNS alone in the treatment of OAB in females.

Disclosures

Funding: None **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics Committee:** Alexandria University ethics committee **Helsinki:** Yes **Informed Consent:** Yes