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POSTERIOR TIBIAL NERVE STIMULATION IN THE TREATMENT OF LOWER URINARY TRACT SYMPTOMS AND ITS IMPACT ON QUALITY OF LIFE IN PATIENTS WITH PARKINSON'S DISEASE: RANDOMIZED PILOT STUDY

Hypothesis / aims of study

Evaluate the efficacy of transcutaneous posterior tibial nerve stimulation (PTNS) on treatment of lower urinary tract symptoms (LUTS) in patients with Parkinson's disease (PD).

Study design, materials and methods

Randomized controlled trial, twenty three patients with a diagnosis of PD and LUDS, were randomized in two groups: PNTS group (GI) (n=8) and group sham (GII) (n=5). Evaluation included, urinary symptoms, UPDRS, scale, ICQ-SF, OAB V8 questionnaire and the urodynamic study, all evaluation were performed pre and post PNTS. GI intervention consisted on PNTS and GII received a sham treatment with effective stimulation

Results

At the end of the treatment the GI present's significant improvement in storage and voiding symptoms than GII. There were significant differences on the symptoms of urgency (p=0.0047) between group (100.0% GI, 12.5% GII). In nocturia occurs an improvement pre and post PNTS in GI (p=0.0156) (4.0 pre - 2.0 post). Quality of life (QoL) analyses there were significant differences on questionnaire, ICIQ-SF, GI pre and post PNTS (p=0.0191) (7.0 pre – 4.0 post) and OAB V8, GI pre and post PNTS (p=0.0144) (29.0 pre - 21.5 post) (fig1). There were statistical difference in the urodynamic study pre and post PNTS in group I in volume stronge desire (VSD) (median 150 pre -185ml post) (p=0.0056) and volume urgency (VU) (Median 200 pre-285 ml post) (p= 0.0014) (table 1).

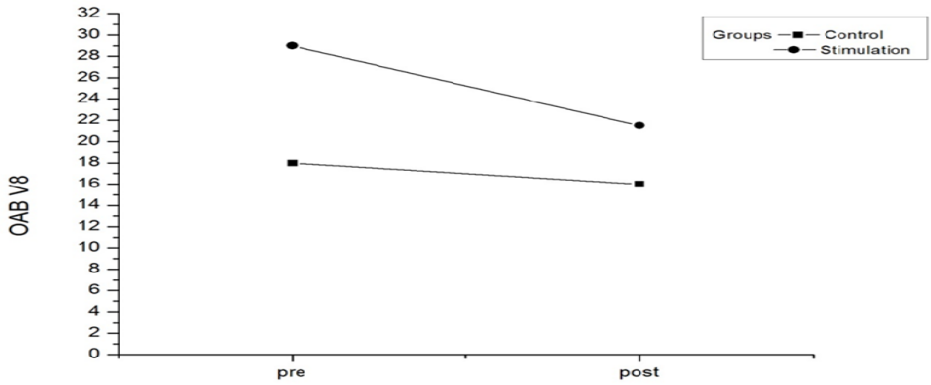

Figure 1: *Median of OAB-V8 pre and post treatment in Group and Group II*

Table 1. Median of volume at urgency (VU) pre and post treatment in Group I and Group II (p=0.0014)

Group	Variável	N	Minimum	Median	Maximum
Sham	VU pré	5	210.0	300.0	380.0
	Vu pós	5	200.0	200.0	280.0
PNTS	VU pré	8	85.0	200.0	500.0
	Vu pós	8	200	285.0	650.0

Interpreting results

These results explain why PD patients improve their lower urinary tract symptoms after a PNTS. The patient can postpone voiding, manage urinary urgency and gain enough time to reach the toilet and prevent urge incontinence.

Concluding

PNTS is an option in the treatment of LUTS in patients with diagnosis of PD, contributing to reduce urgency and nocturia and improving QoL score. This pilot study shows a good response in treat patients with PD and LUTS, further study should be perform to provide evidence of the potential therapeutic effects.

References

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