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EVALUATION OF ANXIETY IN OLDER WOMEN TREATED FOR OVERACTIVE BLADDER: TIBIAL POSTERIOR ELECTRICAL SENSORY STIMULATION VERSUS MOTOR STIMULATION

Hypothesis / aims of study

Overactive bladder (OAB) syndrome is urinary urgency, usually accompanied by frequency and nocturia, with or without urgency urinary incontinence (UUI), in the absence of urinary tract infection [1]. Although high prevalence rate would suspect the opposite, OAB is often underdiagnosed and subsequently undertreated, mainly because of patients' reluctance to seek medical help. Only 27% of people with OAB were receiving treatment in a large population based survey . One possible reason is that people may assume that UI is part of the normal aging process . In addition an inverse relationship between depressive or anxiety symptoms and healthcare seeking in patients with OAB is reported [2]. Transcutaneous posterior tibial nerve stimulation (TPTNS) is a technique of noninvasive peripheral electrical neuromodulation for the treatment of OAB. It's involves stimulation of afferent fibers of the posterior tibial nerve (L4-S3) accessed just above the ankle. The key potential benefit of this approach is that it is less invasive than SNS. There is evidence of significant improvement in OAB symptoms using PTNS which is comparable to the effect of antimuscarinics but with a better side effect profile. The purpose of the present study was evaluate anxiety symptoms after tibial posterior electrical and compare sensory stimulation and motor stimulation for overactive bladder syndrome patients.

Study design, materials and methods

This is randomized, clinical trial study. Women admitted with they were between 60 and 80 years old and were diagnosed with overactive bladder syndrome. They were randomized in two groups (SSG – sensory stimulation group and MSG- motor stimulation group). All patients were prospectively treated with TPTNS weekly for a total of 8 sessions. OAB symptoms were the main clinical presentation reported by all women. OAB symptoms were assessed using ICIQ-OAB (International Consultation on Incontinence Questionnaire Overactive Bladder). Women who did not consent or were unable to complete the weekly treatment sessions, and women that used drugs to treat overactive bladder in the last six months, women who presented some neurological disease, with heart pacemaker, with lower urinary tract infection, were excluded. We chose to use the protocol described previously: two self adhesive electrodes, positioned with gel, one immediately behind the medial malleolus and another 10cm above. It begins with a frequency of 1Hz and seeks to correctly identify the posterior tibial nerve. This position is confirmed with the rhythmic movement of flexion of the fingers. The frequency is then changed to 10Hz, pulse width fixed at 200μs and intensity adjusted according to each patient's threshold (SSG) and rhythmic movement of flexion of the fingers (MSG). The Beck Anxiety Inventory (BAI) was used to evaluate the level of anxiety. It was composed of 21 items that evaluated different anxiety symptoms identified through questions on self-evaluation and perception of anxiety of the individuals during the last week. Scores from 0 to 7 were considered no anxiety, from 8 to 15 as mild level, 16 to 25 as moderate level and from 26 to 63 as severe level of anxiety. The sample size calculation was based on a pilot study of 12 elderly (6 women in each group), considering a significance level of 0.05 ($\alpha = 0.05$), a power of 80% ($\beta = 0.20$) and test non-directional and used the program GPower 3.1.5.For the statistical analysis, SPSS (Statistical Package for Social Sciences) version 20.0 was used.To determine normality of the data and to analyze the differences between the groups Komogorov-Smirnov and test-t Student's was used, respectively, as appropriate. A P-value of <0.05 was considered statistically significant.

Results

From July 2014 to march 2015, 101 possible eligible patients were recruited and 39 were excluded. In total, 62 women were divided between 34 SSG (sensory stimulation group) women, and 28 MSG (motor stimulation group). Table 1 shows the distribution of patients according to demographic characteristics collected. It is noticeable that there was no difference between groups in terms of age, body mass index, number of pregnancies, vaginal births.

Table 1: Distributions of patients according to demographic characteristics

Variables	**Group**	**Mean**	**p- value**
Age (years)	Sensory stimulation Group Motor Stimulation Group	67,97 (±6,63) 69,66 (±6,28)	0,314
IMC (Kg/m²)	Sensory stimulation Group Motor Stimulation Group	28,11 (4,51) 29,26 (±4,88)	0,342
Number of Pregnancies	Sensory stimulation Group Motor Stimulation Group	5,47 (±3,39) 4,81 (±3,29)	0,451

* α = 5%0,

*value of p obtained through the Mann-Whitney

No statistically significant differences were observed when analyzing a sensory stimulation group and motor stimulation group, regarding anxiety symptoms (table 2).

Variables	Sensory stimulation Group	Motor stimulation Group	p- value
Pre ICIQ-OAB	8, 38(±3,31)	8,46 (±3,01)	0,680
Post ICIQ- OAB	3,61(±2,53)	4,03 (±2,86)	
Pre Anxiety symptoms	16,17(±9,15)	17,96 (±10,75)	0,503
Post Anxiety symptoms	13,17(±9,10)	13,48 (±7,92)	

value of p obtained through the ANOVA

Interpretation of results

The study demonstrated that there are not difference in anxiety symptoms when we compare sensory stimulation group and motor stimulation group after OAB treatment by tibial posterior nerve stimulation. Even with the improvement of symptoms of OAB

Concluding message

The study demonstrated that there are not difference in anxiety symptoms when tibial posterior electrical sensory stimulation and motor stimulation

References

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Disclosures

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