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EFFECTIVENESS OF PERCUTANEOUS TIBIAL NERVE STIMULATION FOR OVERACTIVE BLADDER SYNDROME IN A PRIMARY CARE'S REHABILITATION CENTRE

Hypothesis

Neuromodulation of the tibial nerve is a relative new and not well-known treatment in relation to overactive bladder and voiding dysfunction (OAB), even if it continues to be investigated and a wide bibliography supports its evidence. (1,2) A large part of these studies were designed at hospitals and using a relative expensive stimulating- device (i.e. URGENT PC1) The wavelength and frequency we need for the neuromodulation is easily achieved with a conventional Percutaneous Nerve Stimulation device (TENS) in a Primary care Rehabilitation Centre

Aims of study

Aim of this study is to evaluate the efficacy and quality of life in women with overactive bladder syndrome treated by means of Percutaneous Tibial Nerve Stimulation (PTNS) **.**

Study design, materials and methods

Design: Quasi-experimental before-and-after

Study population: patients with severe symptom of OAB (with both urge and mixed incontinence) tested in Primary Care Rehabilitation in Barcelona between December 2010 and March 2013 .

Inclusion criteria: Female patients with severe OAB non-responding to conventional treatments (behavioral therapy and antimuscarins)

Exclusion criteria: Urinary tract infections, pace-maker carriers, pregnancy, age less than 18 years, central or peripheral neurological disorders

The subjects were asked to record in a micturition time chart (for 24 hours at least 3 days) : history of symptoms , mictional frequency, urgency episode, nocturia, previous surgeries, menopause

Variables: sex, age, Urinary Incontinence ICIQ-Form and Spanish version of the Bladder Control Self-Assessment Questionnaire (BCSAQ), measured at baseline and at 6 months.

Intervention: The subjects underwent to 12 PTNS sessions with conventional TENS performing a 20 HZ quadrangular wave of 20 microseconds. They received one session per week lasting 30 minutes. The acupuncture-needle insertion site was identified approximately 5 cm cephalic from the medial malleolus.(3) An adhesive grounding pad was placed on the bottom of the foot just below the smallest toe.

Statistics: description of the main variables and analysis of paired data (t test or nonparametric tests IF NECESSARY)

Results

37 patients (94.66% women) with mean age of 60.41 years (SD: 14.68 years). ICIQ at the start had an average of 15.61 (sd 4.25), the BCSAQ / symptoms, 9.32 (SD: 2.26) and the BCSAQ / discomfort, 9.51 (SD: 2.23). Improvement at the end was 6.44 (SD: 5.46), 4.02 (SD: 3.29) and 4.02 (SD: 3.28).

Interpretation of results

The percentage of improvement in the ICIQ were 41.26% (SD: 30.15%), the BCSAQ / symptoms, 42.89% (SD: 29.51%) and BCSAQ / discomfort, 42.58% (SD: 30.60%).
All results were statistically significant (p <0.001).
No patients worsened their test scores.
No association could be demonstrated between test scores and age, sex or type of incontinence.

Concluding message

PTNS is an easy, affordable treatment that showed a significant improvement in OAB symptoms reducing urinary frequency, nocturia, urgency and improving quality of life in patients with both urge and mixed incontinence

References

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