

EFFICACY OF NESA NEUROMODULATION TREATMENT IN OVERACTIVE BLADDER AND SLEEP: A RANDOMIZED CONTROLLED CLINICAL TRIAL.

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INTRODUCTION

NESA non-invasive neuromodulation is a recent innovative technique based on the modulation of the autonomic nervous system. Its physical characteristics, intensities 0.1-1 mA, as well as frequencies from 1.14 to 14Hz, make this microcurrent effective as a helper of the treatment of the overactive bladder due to the implications of the autonomic nervous system.

AIM

To evaluate the efficacy, sleep quality and quality of life of the application of non-invasive NESA neuromodulation in the treatment of patients with overactive bladder.

METHODS

A randomised, triple-blind clinical trial was developed where samples were taken from two different centres. Patients (n=46) were divided into two groups, intervention (n=19) and placebo (24). Subjects had 10 treatment sessions (2/week) with a specific protocol during 60 min. The placebo device had the electrical emission switched off but the ignition appearance is identical to the real one.

The sleep quality (Pittsburgh test), self-assessment of bladder control, the international incontinence test (ICIQ_UI SF test) together with Quality of Life (ICIQ_UI SF test) were analysed.

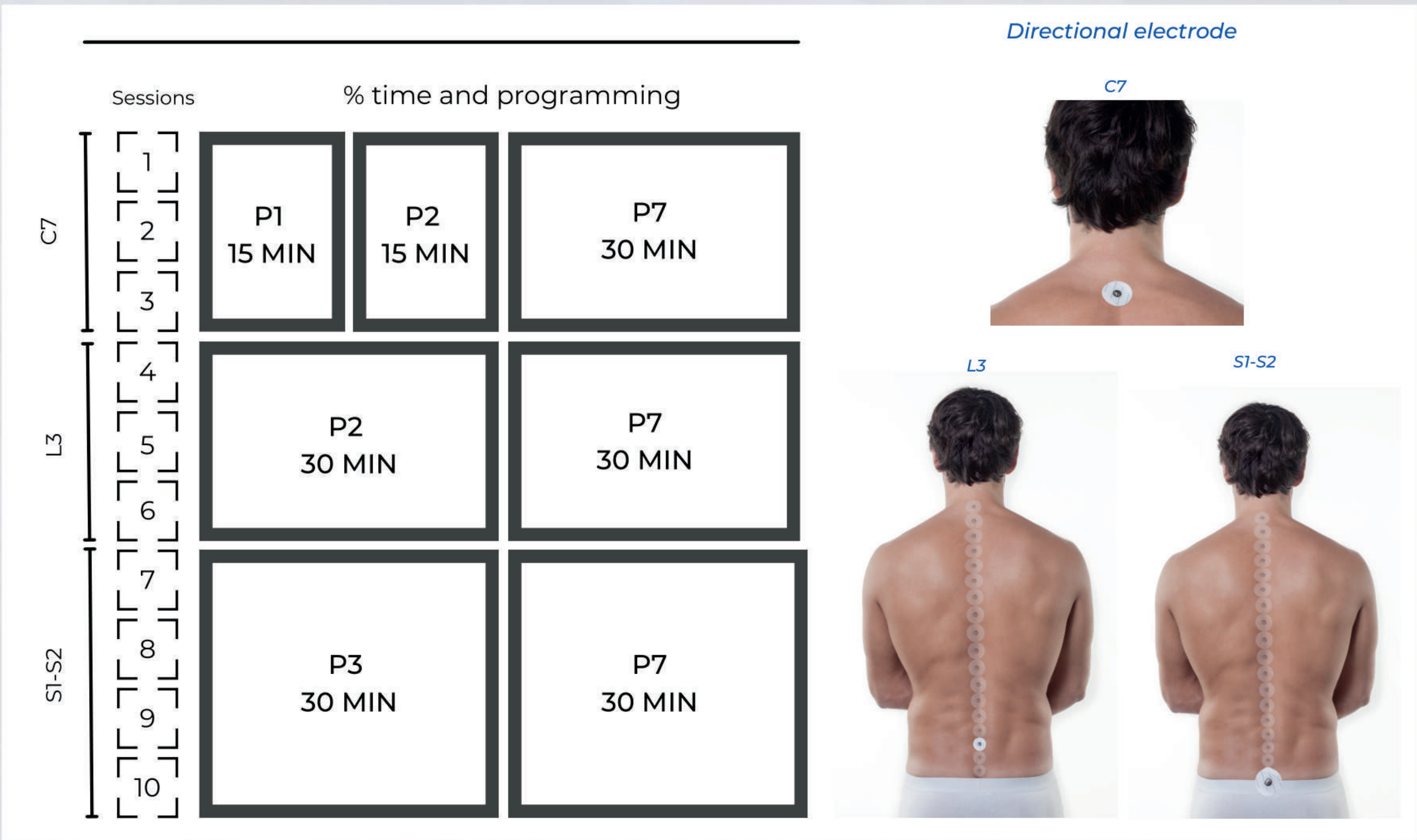


Figure 1. Detailed NESA protocol used during the 10 sessions. The application was twice a week during 60 min.

RESULTS

Comparing the clinical outcomes of patients using the Spanish version of the Overactive Bladder Control Self-Assessment Questionnaire (CACV), significant differences were obtained for the intervention group over time for CACV symptoms (p-value=0.04) and CACV discomfort (p-value=0.003). In addition, significant differences were found for the incontinence questionnaire (ICIQ_UI SF) over time, showing a rapid improvement in the NESA group (p-value=0.007) and for the ICIQ_UI life quality division. Regarding, sleep, significant differences were found in the intervention group over time, improving by +- 1 point on the Pittsburgh test.

The intervention group presented a 15% decrease in nocturia and urge incontinence episodes; however, no differences were obtained between groups, probably due to the sample size. In future studies it is recommended to replicate this methodology with a larger sample and male patients.

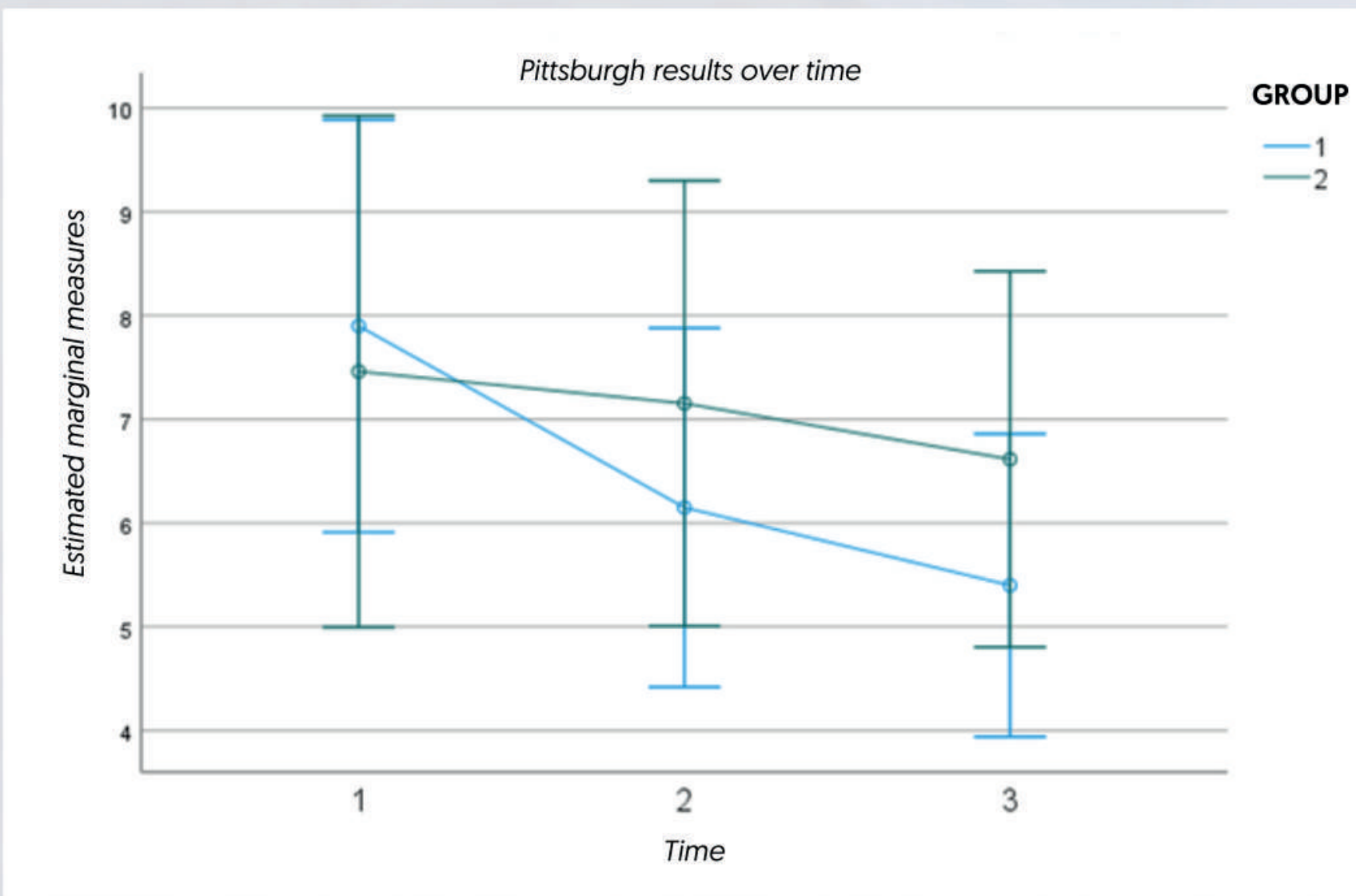


Figure 2. Graphic representations of Pittsburgh test result over times for both group. The group 1 is the intervention group (NESA treatment) and group 2 the placebo.

CONCLUSION

Non-invasive NESA neuromodulation has been shown to be an effective allied treatment in overactive bladder, showing potential by demonstrating improvements in sleep, incontinence and quality of life.

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- García, F., Fernández, D., Vázquez-Guerrero, J., Font, R., Moreno-Planas, B., Álamo-Arce, D., Medina-Ramírez, R., & Mallol-Soler, M. (2022). Recovery of the physiological status in professional basketball players using NESA neuromodulation treatment during different types of microcycles in season: A preliminary randomized clinical trial. Frontiers in Physiology, 13. <https://www.frontiersin.org/articles/10.3389/fphys.2022.1032020>