TRANSCUTANEOUS TIBIAL NERVE STIMULATION FOR FECAL INCONTINENCE

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Hypothesis / aims of study

Fecal incontinence, characterized by the involuntary loss of feces — whether solid or liquid — affects approximately 9% of the population. Various conservative treatment approaches are available. When first-line treatments are ineffective, sacral nerve neuromodulation is often considered the optimal second-line treatment. However, sacral nerve neuromodulation is costly and requires highly skilled operators.

Tibial Nerve Stimulation (TNS) offers a minimally invasive and more affordable alternative. Transcutaneous Tibial Nerve Stimulation can even be administered at home as an outpatient treatment.

The aim of this study is to analyze the effects of

60% obstetric, and 20% surgical. Additionally, 60% of the patients had concomitant urinary incontinence, and 20% suffered from chronic pelvic pain. Anorectal manometry revealed sphincter insufficiency in all patients, while transrectal ultrasound showed a normal sphincter complex in 55% and sphincter injury in 18%. Previous treatments received by the patients included: biofeedback in 75% of cases, pharmacological treatment in 70%, and physiotherapy in 55%. The initial <u>Wexner scale</u> score was 12.05, which decreased to 11.4 by the end of the study (p = 0.388). On the <u>St. Mark's scale</u> scores decreased from 14.85 to 13.8 (p = 0.478).



transcutaneous tibial nerve stimulation in patients with fecal incontinence who have not responded to first-line treatments.

Study design, materials and methods

Patients with fecal incontinence from the Pelvic Floor Rehabilitation Unit were included in this quasi-experimental (pre-test and post-test) study. Demographic and clinical characteristics, previous treatments received, complementary examinations, and severity of fecal incontinence were recorded.

All patients had completed a multimodal therapy as a first-line treatment, which included specific dietary recommendations, pharmacological treatment to optimize fecal bolus, and/or an instrumented anorectal biofeedback protocol.

In this study, patients underwent a transcutaneous tibial nerve stimulation protocol for 3 months at home, receiving bilateral stimulation for 30 minutes a day with a stimulation parameter of 20Hz and 200ms. At the Pelvic Floor Unit, patients were taught how to perform this technique, and a telemedical followup was conducted to assess adherence to treatment and address any questions or issues. To evaluate the response to treatment, the Wexner scale and St. Mark's score were In our study, treatment with transcutaneous tibial nerve stimulation in patients with fecal incontinence who had previously received other treatments did not result in an improvement in the severity of fecal incontinence. The severity was assessed using the St. Mark's score and Wexner scale, which consist of fecal incontinence related to feces consistency, urgency symptoms, the need of pads, constipation treatment and alteration of lifestyle. The overall analysis of the St. Mark's score and Wexner scale did not demonstrate a statistically significant improvement in the severity of fecal incontinence.

In future studies, it would be interesting to conduct a subanalysis focusing on fecal urgency. It is necessary to analyze a larger sample of patients and to conduct mid- and longterm follow-ups.

Conclusions

In our sample, treatment with transcutaneous tibial nerve stimulation in patients with fecal incontinence who had previously received other treatments did not result in an improvement in the severity of fecal incontinence. These findings do not support the use of transcutaneous tibial nerve stimulation for the treatment of fecal incontinence.

assessed before and after transcutaneous tibial nerve stimulation.

Descriptive analysis was performed, and the Wilcoxon test was used to compare the results. A p-value <0.05 was considered statistically significant.

Results and interpretation

Twenty patients with fecal incontinence were included in the study, with a mean age of 60.35 years (range 35-82 years), and 95% of them were women. The etiology of fecal incontinence was as follows: 10% due to digestive dysfunction,

References

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