

PERCUTANEOUS TIBIAL NERVE STIMULATION FOR TREATMENT OF FECAL INCONTINENCE

Hypothesis / aims of study

Fecal incontinence (FI) is an highly incapacitating medical problem that affects 2,2% of adult general population. It can have a number of underlying causes affecting either the anatomy or the function of the anal sphincter. Conventional treatments including diet modifications, drugs, pelvic floor muscle training, biofeedback or surgery have frequently unsatisfactory results. Sacral neuromodulation is a more recent treatment option with established efficacy. Peripheral neuromodulation by electrical percutaneous tibial nerve stimulation (PTNS) is an alternative, more economic and minimally invasive. The objectives of this study are to evaluate the clinical efficacy of PTNS for FI and its correlation with physiological parameters.

Study design, materials and methods

Prospective study beginning in October/2009, still ongoing, which included 10 patients, female, average age 53,4 +/- 12,7 years, with moderate to severe FI from different etiologies (8 after anal surgeries, 1 after anterior rectal resection and radiotherapy, 1 after nephrectomy), persistent after conventional treatments (including sphincter repair in 6). External anal electromyography was normal in all. Anal ultrasound excluded sphincter defects. Initial treatment protocol consisted of 12 weekly sessions of PTNS; maintenance treatment was considered if there was recurrence after initial good results. Outcomes were evaluated with Wexner score and anorectal manometry performed at baseline and at the end of treatment. Wexner score was repeated one and three months after, to evaluate the need of maintenance treatment.

Results

Sixty percent, 6 out of 10 patients, improved after the initial treatment. Wexner score improved from an initial average of 15,3+/- 3,16 to 10+/-4,08. Within the 3 months after treatment, only one patient with good response worsened and started a maintenance treatment. There were no significant changes in mean resting pressure or mean squeeze pressure values in anorectal manometry (both subnormal in 9 of the 10 patients). Two patients had minor complications (abdominal pain within the two hours after the initial treatment sessions and leg pain with the need of medication).

Interpretation of results

These study preliminary results suggest that PTNS is a well-tolerated, promising treatment for FI. Other studies [1-3], mostly small case series, with variable treatment protocols, also reported high success rates (63% to 78%), with different recurrence rates. De La Portilla (2009) (N=16) [2] reported associated improvement in maximum squeeze pressure values, while Boyle (2010) (N=31) [3] did not find any correlation between clinical improvement and physiological parameters including manometry results.

Concluding message

Larger, randomized controlled studies are needed to establish which patients with FI have more probability of positively respond to PTNS, which is the better treatment protocol and if there is the need for maintenance treatment.

References

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3. Boyle DJ, Prosser K, Allison ME, et al. Percutaneous tibial nerve stimulation for the treatment of urge fecal incontinence. *Dis Colon Rectum*. 2010; 53(4):432-437

Disclosures

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