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PERCUTANEOUS POSTERIOR TIBIAL NERVE STIMULATION IN THE TREATMENT OF URGE INCONTINENCE

Hypothesis / aims of study

Pregnancy and childbirth, pelvic surgery and some medication (diuretics and anticholinergic), obesity, some neurological disease (Multiple-sclerosis, spinal cord injury, diabetes) are associated with urge incontinence as the long-held clinical impression confirmed. The aim of this study was to evaluate the efficacy of percutaneous tibial nerve stimulation (PTNS) for the treatment of complaints related to overactive bladder syndrome: urinary urgency, urinary frequency, urge incontinence (UI), non- obstructive urinary retention.
It is also looking for a gold standard treatment and if it would has to be medical or more invasive (neuromodulation).
Many author has showed that patient's bladder control can be improved by stimulating the tibial nerve near the ankle and altering the function of the sacral nerves that control bladder function.

Study design, materials and methods

Forty-five consecutive patient with symptoms related to overactive bladder syndrome were enrolled in this study. Patient underwent 12 PTNS sessions: the system we used consist of a small 34-G needle electrode, surface electrode, lead wire and handheld electrical generator. The percutaneous needle is insertedapproximately 2 inches (5cm) cephalad to the medial malleolus. After the lead wire and electrode are attached, the Stimulator is turned on and amplitude is slowly increased until the patient's large toe starts to curl, the toe digits fan out, or the entire foot extends, indicating proximity to the nerve bundle. The stimulator produces an adjustable electrical pulse that travels up to the sacral nerve plexus via the tibial nerve. Amplitude is then reduced slightly and treatment is continued for 30 minutes. Frequency/volume charts and I-Quol and SF – 36 questionnaires were completed at 0 and 12 weeks.
Success was analyzed by using subjective and objective criteria. Overall subjective success was defined as the willingness continue treatment, whereas objectives success was defined as a significant decrease (to<50%) in total number of leakage episodes.

Results

Thirthy-two patients (71%) reported a subjective success. Thirthy-eight patients (84%) showed a 50 % or greater reduction in total number of leakage episodes. Thirthy- five of these patients (62%) were completely cured (i.e., no leakage episodes) after 12 sessions. Quality of life parameters improved significantly.

Interpretation of results

We conclude that posterior tibial nerve stimulation is an effective, minimally invasive option for treatment of patients with complants of urge incontinence as improvement was seen in subjective as well as objective paramenters.

References

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