PERIPHERAL NEUROPATHY MAY ADVERSELY AFFECT THE OUTCOME OF TRANSCUTANEOUS TIBIAL NERVE STIMULATION (TTNS) IN OAB PATIENTS

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ABSTRACT

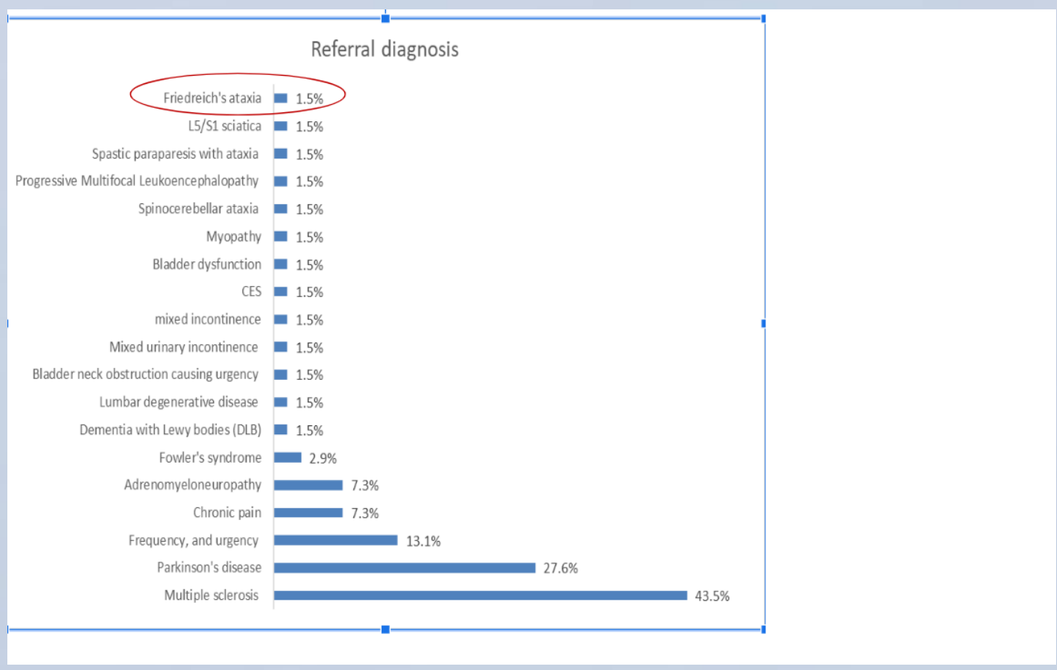
TTNS is a well-tolerated and effective treatment for refractory OAB symptoms. However, underlying sensory neuropathy, severe oedema at the ankle, or generalised peripheral neuropathy in lower limbs may adversely affect the TTNS outcome.

METHODS

Seventy-eight patients, 54 women and 24 men, mean age of 57.9 years (Range: 26-78 years), had completed TTNS therapy for six months. Most patients with OAB symptoms referred to TTNS therapy were with an underlying cause of either Multiple Sclerosis (43.5%) or Parkinson's disease (27.6%). The rest of the patients reported having a variety of underlying causes, such as Cauda equina syndrome or Spinocerebellar ataxia etc. A small percentage of patients referred were with Friedreich's ataxia (1.5%). None of these patients was reported to have peripheral neuropathy before coming to the department. Absent motor and sensory responses were noted in 13 (16.6 %) patients due to severe oedema in the feet or underlying neuropathy. Sural nerve sensory response was absent, but a good motor response, including toe twitch, was seen in 3 (3.8%) patients. A total of 12 patients (15.3%) were removed from the analysis due to missing pre- or post-TTNS bladder diaries. The analysis of the remaining 66 patients showed a 67% improvement in nocturia ($p<0.01$) and a 5% improvement in daytime voiding ($P=0.12$). Patients without motor and sensory responses showed no significant change in the mean daytime or night-time voidings (pre-TTNS: 9.3, post-TTNS:10.3 voidings per day and 2.8 to 2.2 voidings per night). Patients with no sural nerve response but good motor twitch in toes showed no significant change in daytime or night-time voidings after six months of TTNS therapy (pre-TTNS: 11, post-TTNS:11 voidings per day and 2.2 to 2.4 voidings per night). All patients who underwent TTNS tolerated it well and reported no adverse effects.

RESULTS

Patients without motor and sensory responses showed no significant change in the mean daytime or night-time voidings (pre-TTNS: 9.3, post-TTNS:10.3 voidings per day and 2.8 to 2.2 voidings per night). Patients with no sural nerve response but good motor twitch in toes showed no significant change in daytime or night-time voidings after six months of TTNS therapy (pre-TTNS: 11, post-TTNS:11 voidings per day and 2.2 to 2.4 voidings per night).



CONCLUSIONS

TTNS is a well-tolerated and effective treatment for refractory OAB symptoms. However, underlying sensory neuropathy, severe oedema at the ankle, or generalised peripheral neuropathy in lower limbs may adversely affect the TTNS outcome.

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