

# The efficacy of Percutaneous Tibial Nerve Stimulation in Over Active Bladder Among Diabetic Patients, one center experience

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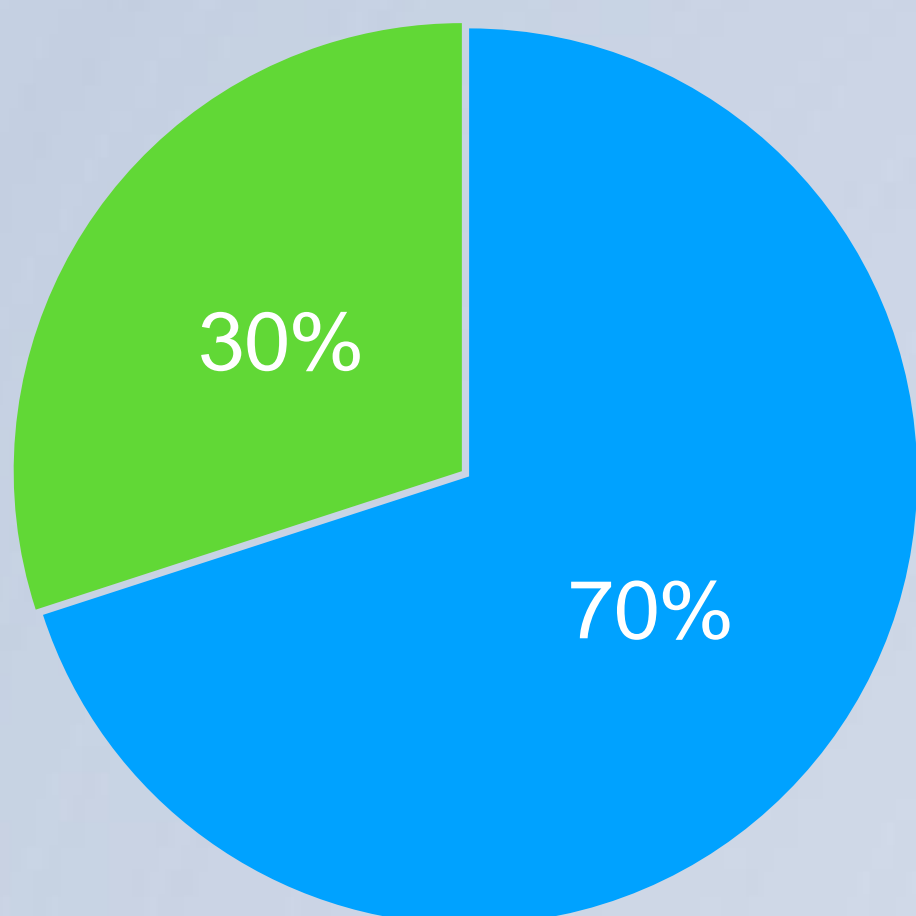
## ABSTRACT

Overactive bladder (OAB) syndrome is defined as “ urinary urgency, usually with urinary frequency and nocturia, with or without urgency urinary incontinence”. Around one in six people usually are having OAB symptoms. The management of OAB includes behavioral therapy and lifestyle modification as first line. The second line includes pharmacological treatment including antimuscarinics therapy, beta3 agonist. The third line therapy includes intradetrusor Botulinum Toxin injections ,Percutaneous Tibial Nerve stimulation (PTNS) or sacral neuromodulation (SNM). Both PTNS and SNM are thought to interfere with the afferent impulses of the bladder to the central nerves system which improve the control of the higher system on the bladder and thus improve the OAB symptoms. The aim of study is to assess retrospectively the efficacy of Percutaneous Tibial Nerve stimulation in treatment of OAB among diabetic (DM) and non-diabetic patients. The other objective is to assess the urodynamic parameters, the number of PTNS sessions, the mean amplitude used, adverse events or complications and the duration of follow up.

## METHODS

OAB patients files, aged 18 years or above, underwent PTNS from January 2008 till December 2020 at our institute will be reviewed. Those with neurogenic bladder other than DM etiology, or who had no urodynamic will be excluded. Demographic data, voiding diary, urodynamic parameters, and number of PTNS sessions will be collected. SPSS software version 26 will be used to analyze the data using the proper statistical tests.

■ normal compliance ■ impaired compliance

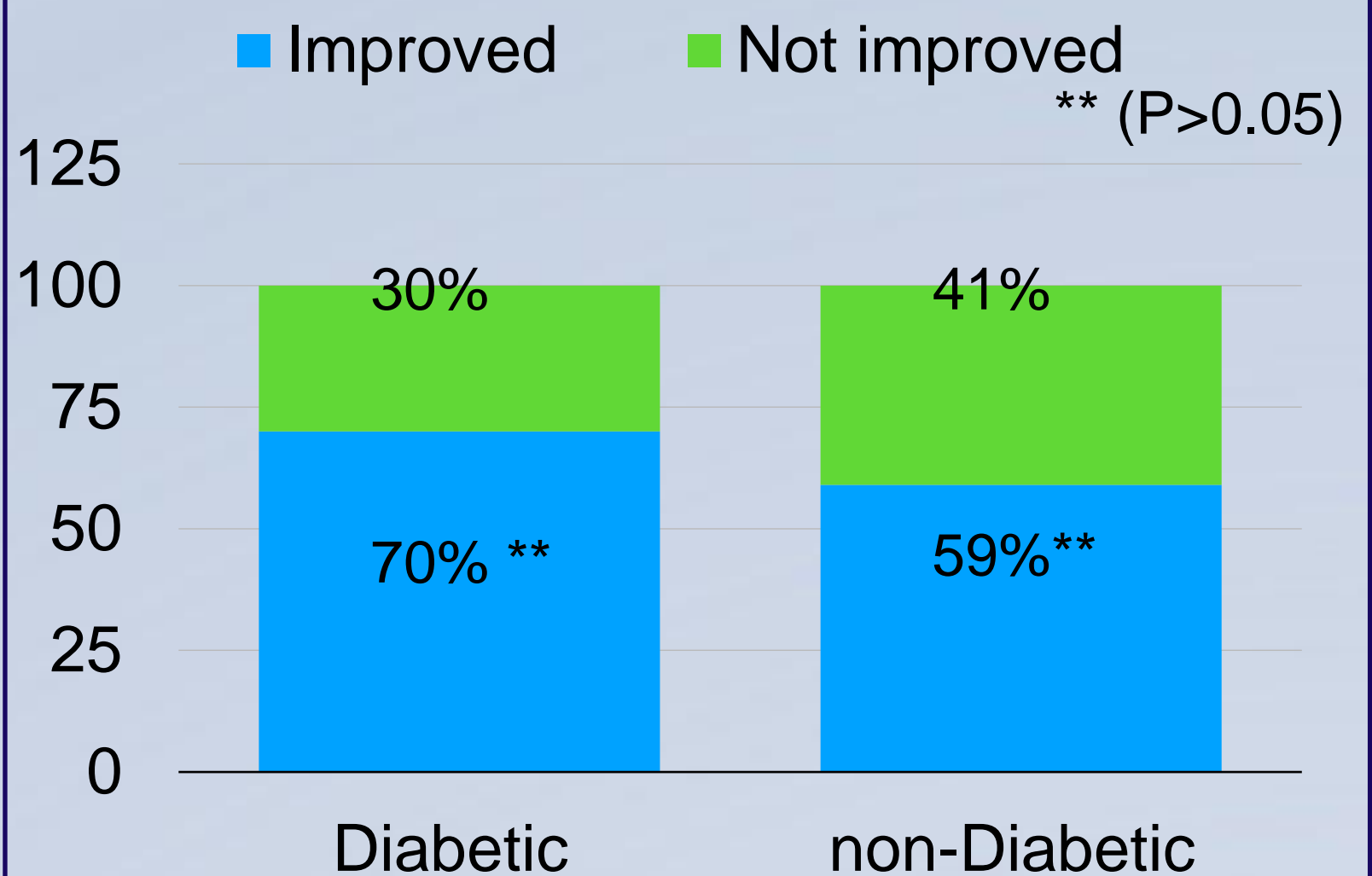


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## RESULTS

The required data are extracted from 90 patients' files (39 men and 51 women). Men aged 43±12 and women 45±16 years. Diabetic patients were 20 (22%), and non-diabetic 70 (78%). 70% of them had normal compliance, while 30% had impaired compliance; and 86% experienced leak versus 15% were none. The mean capacity for men was 418±153, while for women 413±155. Men had 17±6 PTNS versus 20±11 for women, 58% improved. For diabetics, the mean capacity and PTNS were 457±186 and 18±7, respectively; while for non-diabetics they were 403±141 and 19±7, respectively. 70% of diabetics improved versus 59% of non-diabetics, however the association was not significant (P>0.05). No significant adverse effect was observed, only mild with two patients. All patients have completed all sessions with no complications or significant side effects. Results showed that both diabetic and non diabetic patients have a statistically significant outcome and satisfactory results for their OAB symptoms with slightly higher outcome in diabetic compared to non diabetic but was not statistically significant



## CONCLUSIONS

PTNS is an effective and safe treatment option of OAB in both Diabetic and nondiabetic patients with superior results in diabetic patients . Larger randomized prospective study is suggested

