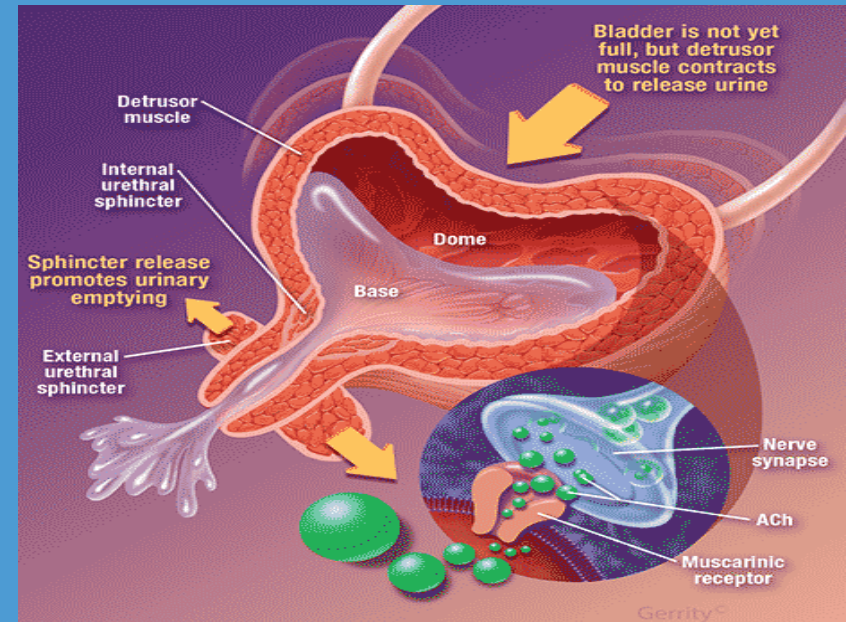


# ROLE OF PERCUTANEOUS TIBIAL NERVE STIMULATION (PTNS) IN THE TREATMENT OF NEUROGENIC OVERACTIVE BLADDER SYNDROME

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Overactive bladder syndrome (OAB) is characterized by a series of urinary symptoms such as incontinence, urgency, frequency, nocturia and it is differentiated in OAB due to an involuntary urodynamic detrusor contraction, and Neurogenic Detrusor Overactivity (NDO). Many neurologic pathologies can be responsible of NDO. The study is proposed to evaluate the results on symptoms and urodynamic findings of PTNS in patients with NDO.

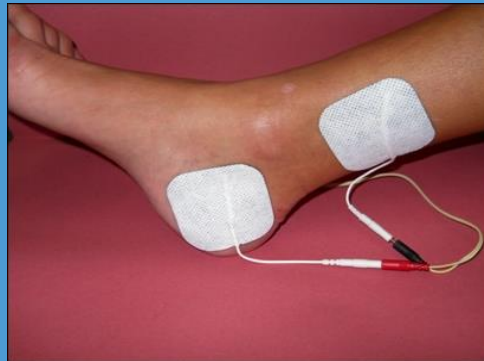


### Neurogenic Detrusor Overactivity

- Sub group of overactive bladder syndrome
- Urge and frequency to urinate with or without incontinence
- Neurologic injuries or diseases
- Lack of coordination of detrusor muscles and urethral sphincter

The diagram illustrates the neurogenic pathway for bladder control. It shows the brain with various regions labeled: ACC (Anterior Cingulate Cortex), PFC (Prefrontal Cortex), and SN (Substantia nigra). The midbrain and brainstem are shown with PAG (Periaqueductal gray) and PMC (Paramedian cell). The spinal cord is shown with the L5-S2 motor nuclei. The bladder is shown with the detrusor muscle and the pudendal nerve. The diagram is labeled with 'Brain: Vision, Emotion, Perception, Homeostasis', 'Midbrain and brainstem: Integration, Synergy, Phase switching', 'Spinal cord: Motor nuclei', and 'Bladder: Detrusor muscle, Pudendal nerve, Hypogastric nerve'.

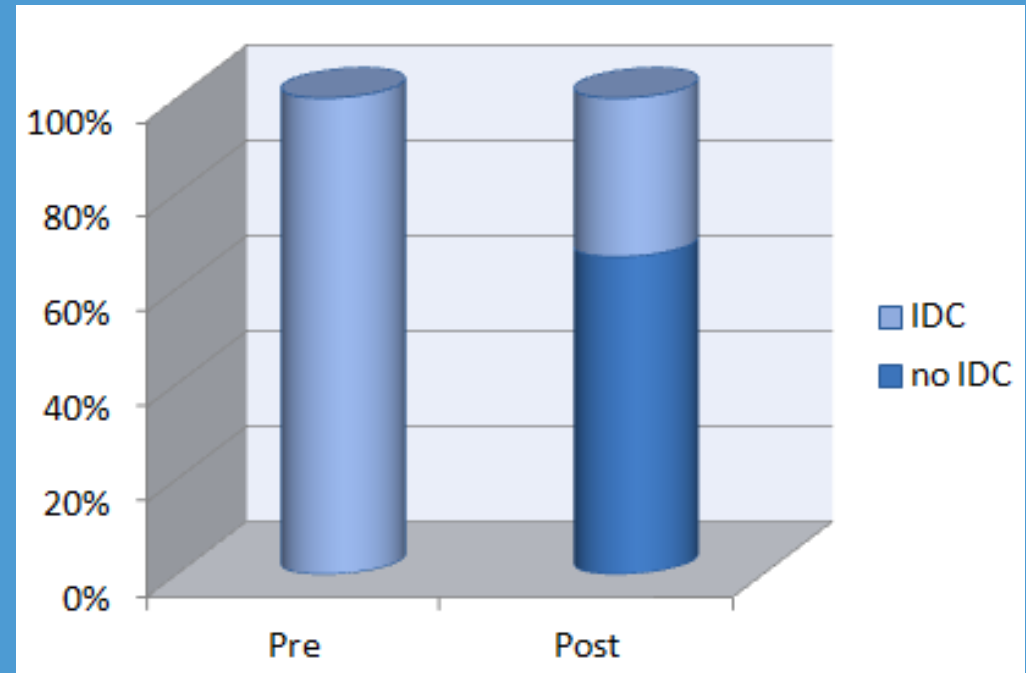
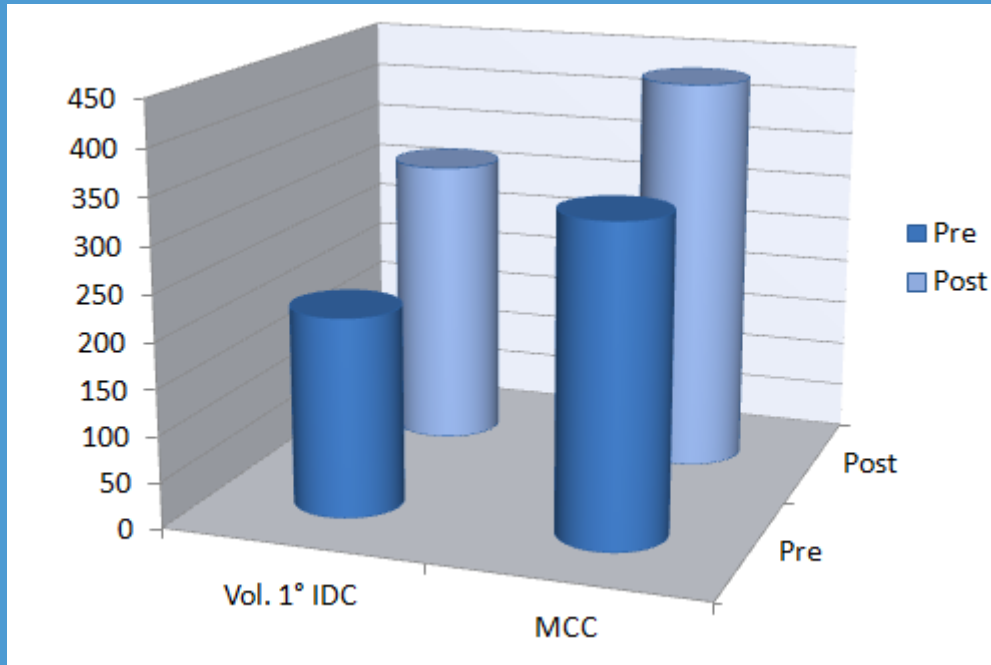
12 pts., 9 males and 3 females, age ranged from 25 and 76 years, with clinical and urodynamic diagnosis of NDO, underwent electrical tibial nerve stimulations , unilaterally, from the medial malleolus and posteriorly to the edge of the tibia, twice a week for a total of 6 weeks. Urodynamic parameters, OverActive Bladder Symptoms Score (OABSS) and voiding diary were evaluated in all pts. before treatment, after 6 electrical stimulations and at the end of treatment.



## **RESULTS**

PTNS was found to be effective on OAB symptoms in all pts. Mean 1st involuntary detrusor contraction ( IDC ) and mean maximum cystometric capacity ( MCC ) were significantly improved on standard cystometry. 8 pts. (66,6%) showed a complete disappearance of IDC and the other 4pts. (33,3%) showed an increased filling volume to IDC. No complications have been reported, and pts. compliance to treatment was very high.

# RESULTS



## *CONCLUSIONS*

PTNS is an effective and safe option to treat pts. with symptoms from NDO.

Further studies are needed to assess the role of this technique, and to establish the length of treatment in order to maintain the results obtained.