

# Is Posterior Tibial Nerve Stimulation An Effective Treatment for Faecal Incontinence ?

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## Introduction

Posterior tibial nerve stimulation (PTNS) is a neuromodulatory treatment for patients with faecal incontinence (FI) who have failed to respond to conventional therapy.

It is unclear how effective PTNS is in patients with FI, for which subgroup of FI PTNS may work in (mixed, urge or passive), and the exact mechanism by which PTNS may exert its effect.

This study aimed to establish whether PTNS is an effective treatment for FI, for which sub-groups of FI, and whether PTNS alters anorectal physiology parameters.

## Methods

We conducted a prospective observational cohort study in patients who have failed conservative treatment for FI at a tertiary pelvic floor unit.

Patients received PTNS for 30 minutes once a week for 12 weeks.

Clinical data and subjective patient reported outcome (success / fail) were recorded. High resolution anorectal manometry (HRAM), 2 week bowel diary, FI severity score (Vaizey) and Quality of Life Scale for Faecal Incontinence (MHQ) were recorded prior to and 2 weeks following the course of PTNS.

Fig 1 Overview of Process

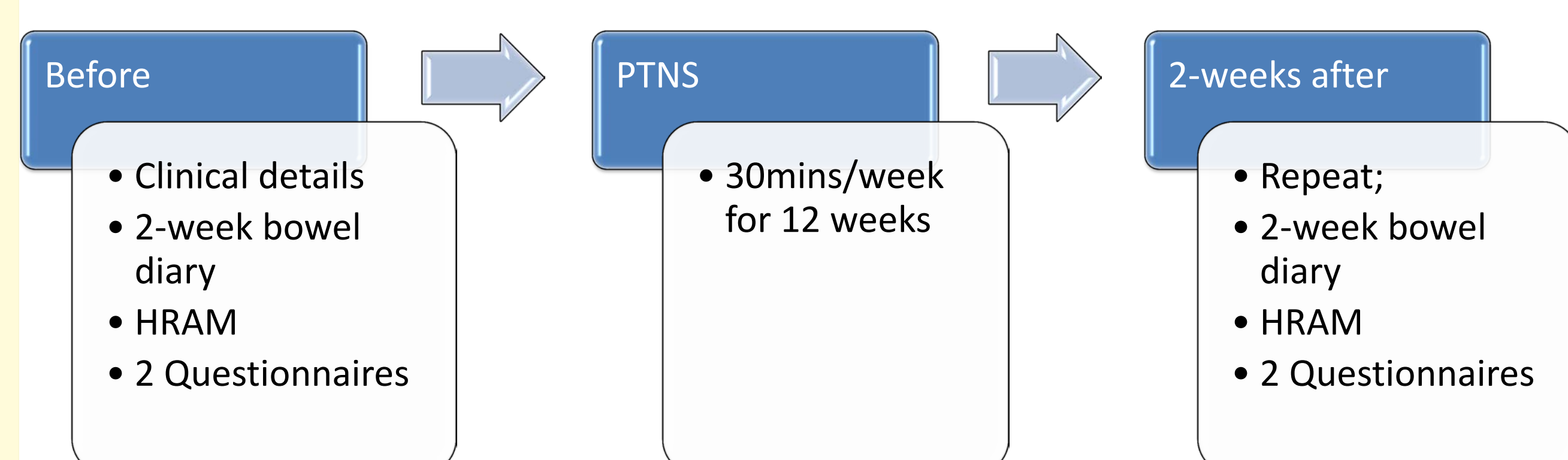


Figure 2 PTNS

Needle in place at the left ankle attached to the portable stimulator unit. Urgent® PC neuromodulation system (Uroplasty Ltd., Manchester, UK).

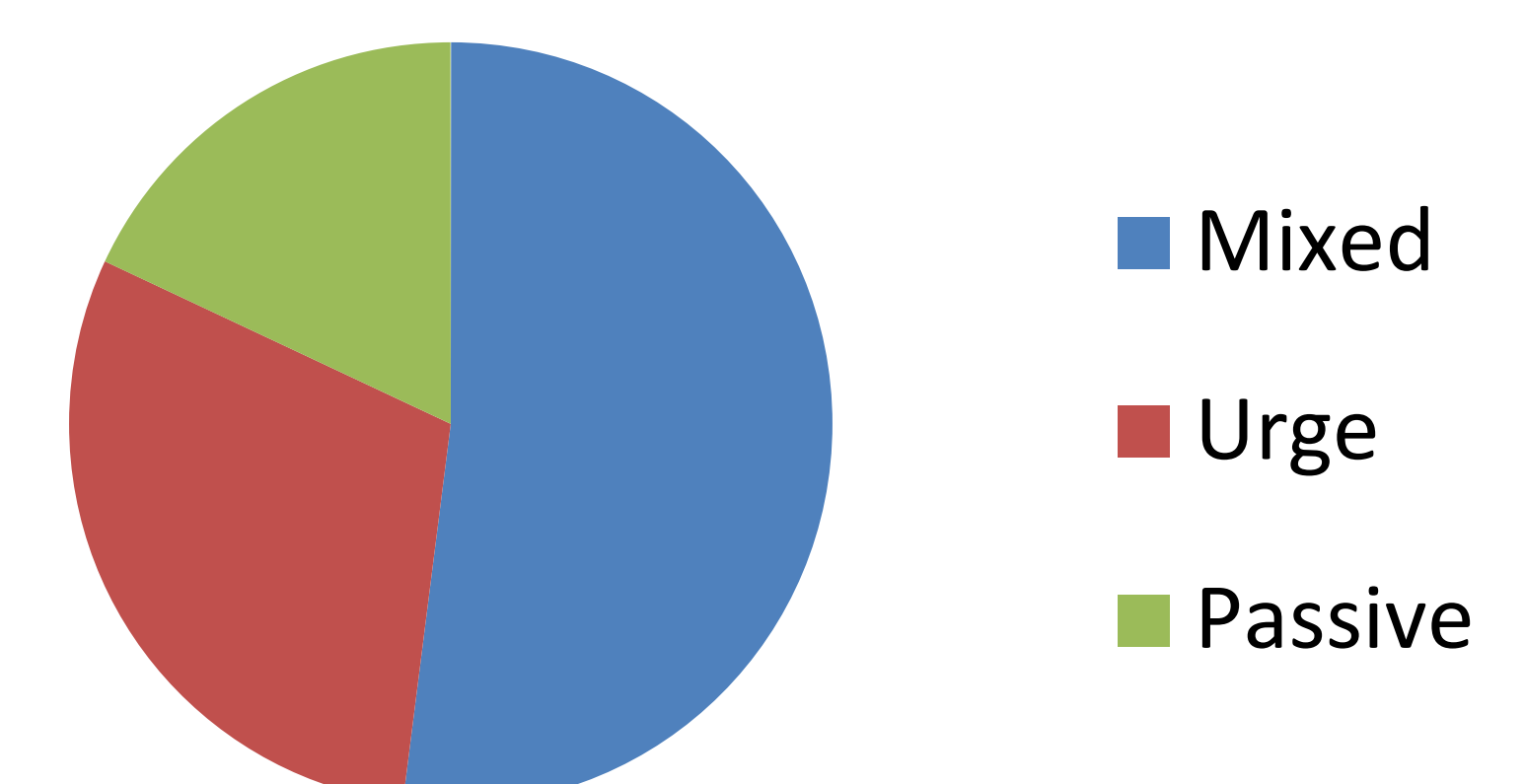


## Results

23 patients, 19 (83 % women) with a median age of 62 years (31-78) were included in the study.

12 (52 %) had mixed FI, 7 (30 %) had urge FI and the remaining 4 (17 %) had passive incontinence as depicted in Figure 2.

Figure 3 Types of FI



There was a reduction in the number of mean urgency episodes (19 v 11,  $p=0.002$ ), urge FI episodes (6 v 2,  $p=0.038$ ) and passive FI episodes (12 v 8,  $p=0.154$ ), with a significant improvement in Vaizey (16.7 v 14.4,  $p=0.003$ ) and MHQ scores (481.9 v 413.1,  $p=0.039$ ).

All HRAM variables (mmHg) improved after PTNS; MRP (40v46,  $p=0.088$ ), MSP (72v92,  $p=0.009$ ) and ISP (32v45,  $p=0.031$ ). Increased rectal sensation was also observed (mls); onset (42v33,  $p=0.064$ ), call (80v54,  $p=0.000$ ) and urge (112v82,  $p=0.001$ ).

Subjective success occurred in 74% (17) of patients, 4 of 6 that failed had passive incontinence. Objective success (defined as >50% or >70% improvement in 2 or more of the following; overall FI episodes, urgency episodes, urge FI episodes, passive FI episodes, Vaizey and MHQ scores) was seen in 52% (12) and 39% (9) respectively.

3 out of the 4 men (75%) did not improve subjectively or objectively.

## Conclusion

PTNS subjectively helped in 17 out of 23 participants (74%). This was reflected in an improvement in questionnaire responses along with fewer incontinence episodes.

The cohort demonstrated an increase in rectal awareness along with an improvement in squeeze pressures which may have given participants more warning of the need to defecate and an improved ability to defer defecation.

This study suggests that PTNS appears to help women with urge incontinence.