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COMBINATION OF PELVIC FLOOR BIOFEEDBACK WITH ELECTRIC STIMULATION CAN IMPROVE CHRONIC PELVIC PAIN, LOWER URINARY TRACT SYMPTOMS AND SEXUAL DYSFUNCTION IN PATIENTS WITH INTERSTITIAL CYSTITIS / BLADDER PAIN SYNDROME (IC/BPS) – 1 YEAR FOLLOW-UP

Hypothesis / aims of study

In recent years, female sexual dysfunction (FSD) has become a popular research area because of the importance of sexual function in determining quality of life. Recent research showed that 75% of patients with IC/BPS reported exacerbation of their urinary and pain symptoms following sexual activity. Moreover, most of IC/BPS patients have hypertonic pelvic floor muscle dysfunction (HTPFD) which can be closely associated with sexual dysfunction. Other studies suggested that transvaginal biofeedback (TVBF) and transcutaneous electric nerve stimulation (TENS) reported a short-term effect on the patients with urinary urgency with frequency and pelvic floor muscle spasm. The aim of this study was to investigate the effectiveness and different regimen of combination of TVBF plus TENS for a follow-up of 12 months in patients with IC/BPS.

Study design, materials and methods

A total of 56 IC/BPS female patients compatible with the NIDDK criteria were included in this study. Among the patients, 28 were assigned to TVBF plus TENS for one month group (Group-1), 12 were assigned to TVBF plus TENS for 2 months group (Group -2), and 16 were assigned to TVBF plus TENS for 3 months group (Group-3). All patients were treated by TVBF 2 times daily and TENS 2 times a week. After the treatment, all patients were followed up for one year and O'Leary-Sant Symptom (ICSI) and Problem Index (ICPI), bladder pain visual analogue scale (VAS), bladder urgent score, Global response assessment (GRA), and self-report sexual activity were collected at baseline, 3rd month, 6th month, 9th month, and 12th month. We compare the clinical results and response at different follow-up time in each three groups.

Results

Patient demographics showed the average age of Group-1, Group-2, and Group-3 was 35.1(20-60), 36.6(23-53), 40.1(21-63) year-old respectively. Subjective symptoms including ICSI, ICPI, VAS, and urgency score all decreased significantly after TVBF plus TENS therapy in each three groups at 3rd month, 6th month, 9th month, 12th month compare to baseline ($p<0.05$) (Figure 1 and Figure2). GRA rate in each three groups was 71%, 70%, 40% at 12th month respectively. Statistically significant increase of self-report sexual activity was noted at 12th month compare to 3rd month (84% v 77%, 75% v 70%, 83% v 40%). However, there was little adverse effect including intravaginal discomfort (n=8) and urinary tract infection (n=5).

Interpretation of results

The results of this study revealed that TVBF plus TENS appeared to be helpful in improving both irritative symptoms and pelvic pain in patients with IC/BPS in each three group. Sexual activity scores were all markedly improved, with a significant reduction in pain. Although there was no difference between each three groups, GRA rate in Group-1 and Group-2 was significantly higher than Group-3 were observed. The results seem that combination of TVBF plus TENS more than 2 months was not helpful in long term effect.

Concluding message

The combination of TVBF plus TENS provided a benefit effect on irritative symptoms, pelvic pain, and sexual activity with little adverse effect. Because there was no difference in each three groups, therapy with TVBF plus TENS for 1-2 months is safe and effective in the improvement of clinical symptoms except for 3 months due to lower GRA score. The therapeutic effect could last for 12 months and it seems to be one good choice of conservative treatment.

Figure 1 ICSI change in Group-1, Group-2, and Group-3 treatment

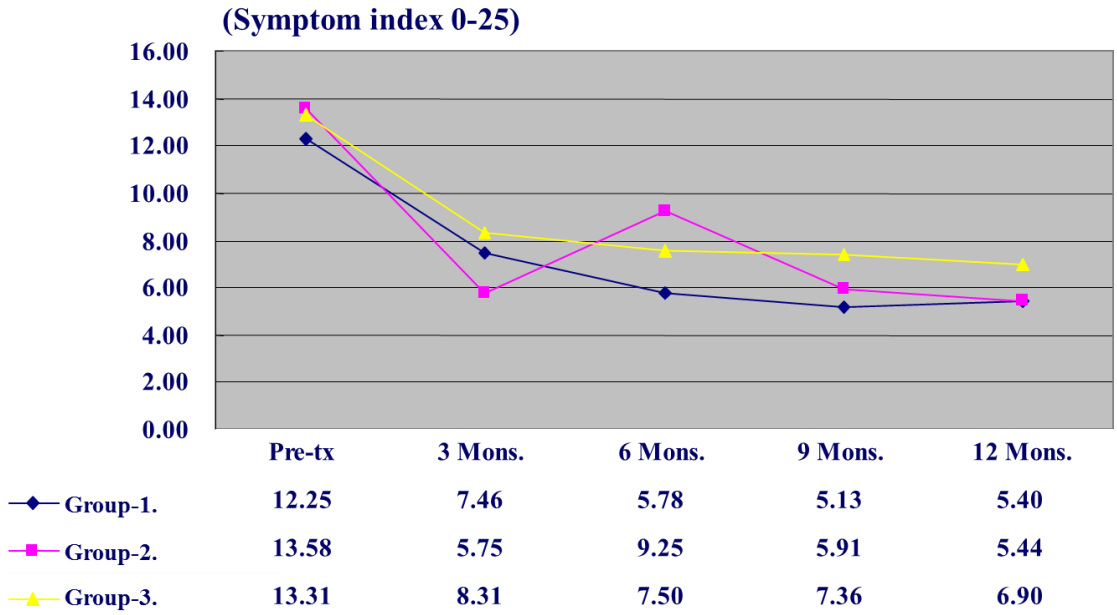
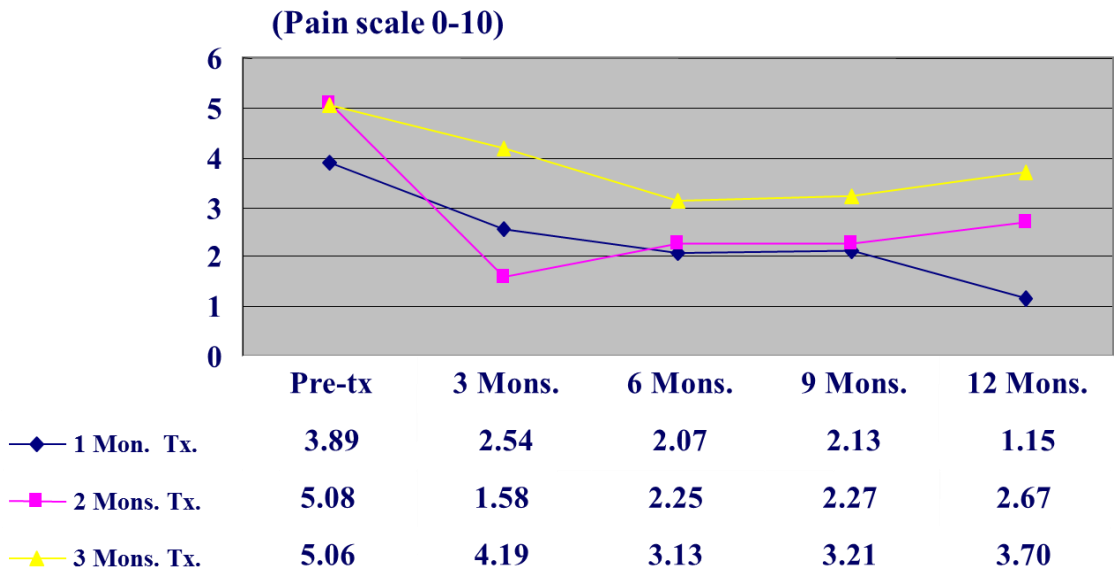


Figure 2 Bladder pain score change in Group-1, Group-2, and Group-3 treatment



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