INTRODUCTION

Painful bladder syndrome/interstitial cystitis (PBS/IC) denotes suprapubic filling pain, day and night time frequency with cystoscopic granulations [1].

The etiologic factors of painful bladder syndrome/interstitial cystitis (PBS/IC) are not yet clearly understood. Experimental evidence indicates that a component in the cell coat of the vesical epithelium, a polysaccharide named glycosaminoglycan prevents noxious compounds in the urine from infiltrating into the bladder wall [2]. The defective GAG layer leads to the urinary compulfate to infiltrate into the vesical wall and trigger inflammatory reactions and/or nerve stimulation that would ultimately account for most of clinical manifestations of PBS/IC [3].

Up till now no gold standard therapy has been available for the treatment of PBS/IC. Several intra-vesical agents have already been approved by the Food and Drug Administration (FDA) for treatment of PBS/IC, like dimethyl-sulphoxide, hyaluronic acid, heparin and some anti-inflammatory agents [4]. Pentosan polycarbonate sodium (PPS) is the only oral therapy approved by the FDA for treatment of PBS/IC. The mechanism of action of PPS is thought to replaces damaged segments of the GAG layer, the mucus of the bladder lining [5].

The Food and Drug Administration (FDA) approved for use of sacral neuromodulation in refractory urge incontinence and chronic non-obstructive retention [6]. Mac Guire (1983) [7] was the first to use Percutaneous Tibial Nerve Stimulation (PTNS) for nerve modulation. The mechanism of PTNS is thought to be retrograde modification of S3 nerve root function or inhibiting sacral reflexes pathway. FDA approved the use of PTNS with urgent PC neuromodulator for over-active bladder (OAB) and urge incontinence.

The aim of the present work is to evaluate the urgent PC neuromodulator (PTNS) in patients with refractory painful bladder syndrome/interstitial cystitis (PBS/IC).

RESULTS

Only two patients (10%) reported good improvement of pain according to VAS. The mean pain score of the other 18 patients did not decreased statistically significant at the end of week 12 (p = 0.7333). Pain score decreased in only one patient at the end of sessions score from 4 to 1.

Two patients (10%) experienced relief in the daytime frequency. No statistically significant change of day time frequency reported among the study group between week 0, 6 & 12 (p = 0.0759). Moreover, there was no statistically significant difference between the scores of nocturia among weeks 0, 6 and 12 (p = 0.4234). Also, no statistically significant difference of the mean voided volume change was reported (it changed from 131.8 ml at week 0 to 134.3 ml at week 6 and 141.0 ml at week 12; p = 0.5217).

The mean ICSI score changed (with no statistically significant difference; p=0.6621) from 12.25 at week 0 to 11.95 at week 6 & 11.70 at week 12. Moreover, the mean ICPI score changed (with no statistically significant difference; (P= 0.9373) from 9.8 at week 0 to 9.6 at week 6 & 9.55 at week 12.

Only two patients (10%) reported a mild good response with GRA scale. Moreover, after the 12th week 2 cases reported having a mild good response and asked for more treatment sessions. On the other hand, 3 patients reported worsen symptoms at week 6, reached only one patient reporting still worse symptoms at week 12

Interpretation of results

In the present study, twenty female patients accepted PTNS once per week for treatment of refractory PBS/IC, and only two cases noted subjective improvement. The ICPI & ICPI, day and nighttime frequency & volumes did not significantly improve statistically in the cases. Moreover, the GRA scale, showed only two cases of improvement, fifteen cases reported no effect and only 3 patients became worse.

CONCLUSION

Intermittent PTNS is not a satisfactory treatment for refractory PBS/IC.