

ACUPUNCTURE FOR THE TREATMENT OF BLADDER PAIN, URINARY FREQUENCY AND URGENCY CAUSED BY INTERSTITIAL CYSTITIS

Hypothesis / aims of study

Acupuncture is one of the standardized neuromodulatory therapies available. We have reported that acupuncture had impact on increasing the maximum cystometric bladder capacity as well as suppressing the bladder contraction in patients with detrusor overactivity and on relieving the chronic pelvic pain (1, 2). Neuromodulation by acupuncture is also believed to impact on inhibit transmission of pain as well as to normalize sensory processing within the peripheral and/or central nervous systems. Recently we reported that, using Neurometer, quantitative neuroselective measurement of the current perception threshold (CPT) values of the bladder afferent fibers could be successfully assessed (3). We investigated the clinical usefulness of acupuncture for the treatment of bladder pain, urinary frequency and urgency caused by interstitial cystitis, and additionally, to determine whether acupuncture had possible impact on urinary sensory dysfunction.

Study design, materials and methods

Ten patients (1 male, 9 females) suffering from the symptoms due to interstitial cystitis were treated by acupuncture. Their ages ranged from 43 to 87 years (mean 68 years). Two patients had been treated by bladder hydrodistension, and 6 patients had been treated by oral IPD-1151T.

Acupuncture was performed using disposable stainless steel needles (0.3 mm in diameter, 60 mm in length, SEIRIN Kasei, Shimizu, Japan) with the patient in the prone position. Acupuncture needles were inserted into the bilateral BL-33 (Zhongliao) points as standardized by the World Health Organization, on the skin of the third posterior sacral foramina. A needle was inserted into each side of the foramina sufficiently deeply for its tip to be placed close to the sacral periosteum, and then the bilateral needles were picking up and down reciprocally with manual for 10 min. The treatment was repeated once a week for 4 weeks for the initial treatment (1st to 4th acupuncture).

All patients recorded a frequency volume chart as well as IPSS-QOL questionnaire (graded 0-6) for 1 week before treatment as a baseline, and again after the 4th acupuncture. All patients with complaining of pain recorded visual analogue scale of pain for 1 week before treatment as a baseline, and again after the 4th acupuncture. In 6 patients, neuroselective bladder sensory function and water cystometry were evaluated in both before and after the 4th treatment. Neuroselective bladder sensory function was evaluated by Neurometer (Neuroton, Baltimore, MD) which emits graded alternating current stimuli at 2000, 250, and 5Hz, which could selectively reflect the functions of A-beta-fiber, A-delta-fiber and C-fiber, respectively (3). Water-filling cystometry at a filling rate of 50 ml/min was performed in 32 patients, before acupuncture and one week after the 4th acupuncture, using Menuet Compact (Dantec, Skovlunde, Denmark) with an 8F catheter, to determine a bladder volume when strong desire to void or involuntary detrusor contraction was recognized.

Results

No side effects were recognized throughout the treatment period. Urinary frequency decreased as 19.7, 14.6, 12.7 and 10.8, baseline, after the 4th acupuncture, after the 8th acupuncture and after the 12th acupuncture, respectively. Maximum voided volume changed as 192ml, 224ml, 275ml and 272ml. VAS scale changed as 84mm, 47mm, 37mm and 50mm. Out the 6 patients in whom bladder sensory function was evaluated in both before and after the 4th treatment, the CPT value at 5 Hz was changed 66 to 69.

Interpretation of results

Acupuncture has improved the clinical symptoms of urinary frequency and urgency and QOL scores, accompanied with increase of bladder capacity as well as with possible inhibition of the sensitivity of C-fiber dysfunction. This study suggested that acupuncture is a safe

promising therapeutic alternative for the difficult-to-treat patients with overactive bladder and/or suspicious pelvic pain syndrome. A controlled trial with sham of acupuncture for treatment of bladder pain, urinary frequency and urgency caused by interstitial cystitis is warranted.

Concluding message

In patients with interstitial cystitis, acupuncture could be a therapeutic alternative for the treatment of bladder pain, urinary frequency and urgency.

References

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2. Effects of acupuncture for chronic pelvic pain syndrome with intrapelvic venous congestion: preliminary results. *Int J Urol* 11: 607-612, 2004.
3. Neuroselective current perception threshold evaluation of bladder mucosal sensory function. *Eur Urol* 45:70-76, 2004.