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Title: ACUPUNCTURE & MOXIBUSTION FOR WOMEN WITH SYMPTOMATIC VOIDING DIFFICULTIES A PRELIMINARY REPORT

Aims of Study:

Much attention focused on voiding difficulty in women has been paid recently. Although debates in diagnosing standardized monogram exist, the goal of treatment i.e. anatomic correction and functional restoration are almost consistent. However, the impacts of surgery, reoperation and /or unsatisfactory with medication on voiding dysfunction are progressively increasing. An alternative approach including traditional Chinese medicine (TCM) in the treatment of lower urinary tract dysfunction with a good response in the relief or improvement of irritable symptoms in women are reported. Acupuncture & moxibustion (acumoxa) , an important part of TCM, in the clinical trial for the obstructive symptoms was still scarce and to be explored. Fortunately, acumoxa is popular and easier to be accepted as a regimen in Taiwan. Therefore, we tried to investigate the therapeutic potential of acupuncture & moxibustion in the treatment of women with symptomatic voiding difficulties.

Methods:

During a period of 2 years, all consecutive women attending for lower urinary tract symptoms (LUTS) evaluation completed a thorough history-taking, urinalysis, physical examination and free uroflowmetry. Patients fulfilled the following criteria were enrolled.

Firstly, had 2 or more of symptoms of voiding difficulty such as strain to void, poor stream, incomplete voiding or frequency.

Secondly, voided into a gravimetric flowmeter (microflo 2001 N, Life-Tech Inc, USA) in the circumstances of comfortable full bladder in privacy with Qmax $\leq$ the 10^{th} centile of the Liverpool nomogram chart for women [1].

Thirdly, repeated the second procedure within one week with the same Qmax result and /or post-void residual (PVR) measured immediately after uroflowmetry by 14 French catheter $\geq$ 100 ml.

Patients with recent UTI (urinary tract infection) attack, medication for LUTS, concomitant LUTS-related management (for example : functional electrical stimulation etc.), vaginal pessary usage, CISC (clean intermittent self-catheterization), acute retention with Foley catheter and fear of acumoxa were excluded.

They received acupuncture and moxibustion twice a week for 2-3 weeks (average : 5.3 $\pm$ 1.04 times). No hint was dropped by acupuncturist during the treatment period. A disposable stainless steel needle (0.3 mm in diameter, 3.8 cm in length) was inserted into selected acupoint at the depth of 2-3 cm with lifting, twirling, thrusting to elicit DeQi sensation (heaviness, fullness, numbness or slight painful) and left in situ for 30 minutes. DeQi was elicited 4-6 times during each treatment section. A warmer box containing Moxa fuel bar was put in selected acupoint as moxibustion stimulation simultaneously. Two sets of acupoints were selected according to TCM theory and previous literature recommendation [2].

Set 1 : Bilateral Sp6,Sp9 (Acupuncture) plus CV4-6 (Moxibustion) : patient was treated in supine position.

Set 2 : Bilateral BL32, BL54 (Acupuncture) plus Bilateral BL 23 (Moxibustion) : patient was treated in prone position.

Set 1 and set 2 were used alternatively.

Before treatment, one available uroflowmetry done with PVR checked by 3.0-5.0 MHz convex transducer scanner (HDI 1500, ATL, USA) in the formula of W x D x H (W : width in transverse plane; D & H : depth and height in longitudinal plane) [3,4]. At the end of treatment, another data was collected as done before. Symptomatic improvement was quantified as visual analogue scale (VAS) (Minimum: 0 to Maximum: 10)and recorded by an independent assistant. Objective outcome variables : Qmax, PVR and RF (residual fraction : residual urine/ premicturition bladder volume x 100)[5] were compared and calculated using paired t-test with $p < 0.05$ as statistically significant value.

Results:

41 women, age from 31 to 78 (mean age : 55.27 $\pm$ 13.77 year-old) were studied. Duration of voiding difficulty symptoms was reported from 3 months to more than 10 years. The mean parity was 2.95 $\pm$ 1.63; 15/41 (36.5%) had abdominal surgery before; 5/41 (12.2%) had vaginal surgery before; 11/41 (26.8 %) was told to have recurrent UTI; 7/41 (17.1%) had DM (Diabetes Mellitus); 31/41 (75.5%) had concomitant urinary incontinence; 12/41 (29.3%) received HRT (Hormone Replacement Therapy). The average of VAS was 5.86 $\pm$ 2.40 (SD). The oblective outcomes all got statistically significant improvement as shown in Table 1.

Table 1 Objective Outcome Parameters

Variables	Pre-treatment	Post-treatment	p value
Qmax	13.13 $\pm$ 5.84 ml/s	21.55 $\pm$ 9.52 ml/	< 0.001
PVR	222.07 $\pm$ 192.43 m	54.02 $\pm$ 55.56 m	< 0.001
RF	47.51 $\pm$ 27.43	15.91 $\pm$ 11.30	< 0.001

One post-treatment uroflow tracing was absent, 40 uroflow traces left showed the change of Qmax position in the Liverpool nomogram chart for women as followings: 20 out of 30 cases $\leq 10^{th}$ centile changed to $> 10^{th}$ centile; 2 out of 10 cases $> 10^{th}$ centile with PVR $\geq$ 100 ml changed to $\leq 10^{th}$ centile, the other 8 out of 10 cases was still $> 10^{th}$ centile with PVR < 100 ml.

Conclusions:

The results seem to be promising. Hence, this preliminary study suggests that acupuncture & moxibustion might be helpful in the treatment of female voiding difficulties no matter what the causes are. It merits further study as a clinical trial to confirm its clinical therapeutic value. Further analyses for this preliminary study are performing. (*KHC is for the responsibility and the correspondence of analysis and biostastics .)

References:

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