

Traditional Chinese Treatment (TCM) Progress of Urge Urinary Incontinence

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ABSTRACT

Urge urinary incontinence is one of the common clinical symptoms of paruria, which affects the physical and psychological health and life quality of the patient seriously. TCM treatment on urge urinary incontinence has significant advantages.

Introduction

The urge urinary incontinence (UUI) is defined as spontaneous leakage of urine with a strong urge to urinate, by international continence society (ICS). Its symptoms are frequent urination, urgent urination, urinary incontinence and difficult urination control, though the patient has an urge to urinate. UUI is one of the common clinical symptoms of paruria and affects the physical and psychological health and life quality of the patient seriously, which is called as "social cancer" vividly^[1]. The urinary incontinence incidence in Chinese female adults is 30.9% and the UUI incidence is 8%^[2,3]. There is no

exposition about urinary incontinence in ancient China. According to the clinical symptoms, it can be classified into the categories like "enuresis" and "incontinence of urine" in TCM. The treatment is based on viscera syndrome differentiation, which is mostly related to kidney and bladder and involves in viscera, such as heart, liver, spleen, lung and triple energizer. Among them, the insufficiency-cold of kidney and bladder is of greatest importance. The treatment of traditional Chinese medicine and acupuncture on urge urinary incontinence has achieved a good efficiency. The progress of TCM treatment on urge urinary incontinence in recent years is reviewed as followed.

1 Treatment of Urge Urinary Incontinence Mainly Based on Chinese Medicine

Xie Renming^[4] and his co-workers believed that the treatment of urge urinary incontinence after stroke should warm and invigorate kidney-yang to improve kidney and

essence storages. 40 cases in the experimental group were treated with TCM tonifying kidney and inducing astringency methods and incubator-acupuncture combined with bladder training, while 38 cases in the control group were treated with TCM placebo combined with bladder training. The TCM prescription used in the experimental group composes of monkshood, bitter cardamom, rehmanniae vaporata, dogwood, Chinese yam and so on. 1 dose / day, decoction. The 2 groups were treated for 14 days as a course of treatment and treated for continuous 2 - 3 courses of treatment. The total effective rates of the experimental group and the control group were respectively 87.5% and 68.4%. After the treatment, the scores on urinary incontinence degree of the 2 groups had been significantly improved, and the improvement in the experimental group was better than the control group. Shen Hui^[5] and her co-workers took the principle of tonifying kidney and spleen and yiqi. 36 middle and old aged women with UUI were treated with reinforcing qi enriched soup, 100 mL per time, twice a day, for 6 weeks.

After 2 - and 6 - week treatment, the patients had increased each urine volume on average, reduced 24 - hour urine frequency, with decreased average incontinence frequency, decreased nocturia and increased 24 - hour water consumption volume. The average total score of ICIQ-FLUS was decreased significantly after treatment.

2 Acupuncture Treatment of Urge Urinary Incontinence

2.1 Scalp Acupuncture First

Xue Weihua^[6] and his co-workers thought that the scalp acupuncture on foot motor-sensory area and genital area could adjust the high-level urination neural center. They treated 87 cases of urge urinary incontinence with scalp acupuncture and needing warming through moxibustion. The patients were punctured on foot motor-sensory areas on both sides and genital area in sitting position and punctured on Chung-chi, Tituo on both sides and Sanyinjiao in supine position. After the needle acupuncture, the patients underwent moxibustion and warm needle acupuncture on Chung-chi and Tituo for 20 min, once a day, 10 times as a course of treatment. After one course of treatment, 69 patients were healed, 12 patients were cured effectively and 6 patients were unhealed.

2.2 Body Acupuncture First

2.2.1 Traditional Needle Acupuncture

Geng Yushan^[7] observed the clinical effect of acupuncture for urge urinary incontinence after transurethral resection of the prostate. The patients were divided into two groups. The treatment group was treated with needle acupuncture on Kidney-Shu, Bladder-Shu, Huiyang, and Ciliao on both sides. The acupuncture took an acid bilge feeling going into until perineum region and urethra region. The twirling-reinforcing needle method was conducted after getting the needling responses on Kidney-Shu and Bladder-Shu, 100 times / min for 1 min. heavy pulling and slight puncturing method was conducted on perineum and Ciliao points, for 30 min, once a day, 10 days for a course of treatment. The control group was treated with tolterodine tartrate, 2 mg, twice a day, orally, 10 days for a course of treatment. After the treatment, the scores of the questionnaire for urine incontinence in the treatment group and the control group had been significantly improved, and the improvement in the treatment group was more significant. Wan Guoqiang^[8] and his co-workers treated 48 cases of elderly urinary incontinence by acupuncture. The patients with kidney deficiency-cold were punctured

on Kidney-Shu, Mingmen, Qihai and Guanyuan; the patients with lung-spleen qi deficiency were punctured on Lung-Shu, Spleen-Shu, Danzhong, Zhongwan and Zushanli; the patients with liver and kidney Yin deficiency were punctured on Liver-Shu, Kidney-Shu, Taixi, Sanyinjiao; the patients with bladder heat amassment were punctured on Bladder-Shu, Ciliao, Shuidao and Chung-chi. The needle acupuncture methods were selected according to the principle of "treating deficiency with tonification while treating excess with purgation", once a day, 10 days for a course. Result: after 2 courses of treatment, 31 cases were healed, 10 cases were cured high-effectively, 5 cases were cured effectively and 2 cases were unhealed. Therefore, the total effective rate was 95.3%.

2.2.2 Electroacupuncture

The onset time of electroacupuncture treatment is fast, with the efficacy obviously better than pure needling group^[9]. Low-frequency electrical stimulation can maximumly inhibit the uninhibited contraction of urinary bladder detrusor muscle, increase the bladder volume and raise the original sensation threshold of bladder to control urge urinary incontinence^[10,11]. It is often punctured on Huiyang, Ciliao, Kidney-Shu and Zhongliao^[12]. In modern medicine, it is believed that there are the 2nd and 3rd sacral nerves respectively in the deep Ciliao and Zhongliao, which dominate the urinary bladder detrusor muscle of bladder and the external urethral sphincter; there are the 2nd and 3rd posterior rami of lumbar nerve in the deep Kidney-Shu; and the rectal wall is in deep Huiyang. Rectum and bladder are dominated by lumbosacral nerve. In addition, the pudendal nerve trunk is also in deep Huiyang. The pudendal nerve belongs to somatic motor nerve and dominates the external urethral sphincter. It can control the relaxation and contraction of external urethral sphincter easily to reduce urination frequency^[13-16].

Liu ZhiShun^[17] and his co-workers treated the neurologic urge urinary incontinence with electroacupuncture acupuncture on Ciliao and Huiyang on both sides. Ciliao: Obliquely puncture with the acupuncture needle of 4 - 5 cun downward into the posterior sacral foramina, with an electrical sensation going to external genitalia; Huiyang: straightly puncture with the acupuncture needle of 3 cun into 2.5 cun, with a local acid bilge feeling. After getting the needle response, connect the HANS ACUTENS electrode to Ciliao and Huiyang, with frequency of 15 Hz and dilatational wave form, as well as continual electric needle for 20 min. The acupuncture was performed once every day from Monday to Friday, half month for a course. Result: the recent cured rate of the electric acupuncture group was 35.0%, the effective rate 55.0%, and the total effective rate 90.0%; after 1 year, the total effective rate

was 65%. After 2 years, the total effective rate was 41.9%. After 5 years, the total effective rate was 26.9%. Wang Huixia^[18] and her co-workers divided the patients with UUI into the treatment group and the control group, with 30 cases in each group. The patients in the treatment group were punctured on Kidney-Shu and Huiyang on both sides, in lateral position or prone position. The slight contraction of the muscle in the puncture area was observed. The pulse electric acupuncture device was connected, with low-density wave in width of 2 ms, frequency of 1 Hz, positive and negative pulse of 6.0 V for 30 min, in the tolerance of the patient. The control group was punctured on Guanyuan, Chung-chi, Bladder-Shu and Taixi for 30 min. At the first week, the 2 groups were treated once a day. Since the 2nd week, they had been treated once every 2 days until healed, but not exceeding 1 month as the longest course. The total effective rate of the treatment group was 90% and the effective rate of the control group was 36.6%. Harif^[19] and his co-workers treated 84 cases with UUI with acupuncture on Huiyang, ZhonglvShu and Zhongliao. Hand technique: obliquely puncture from Huiyang to ZhonglvShu into 4 - 5 cm, straightly puncture into 4 - 5 cm on ZhonglvShu and obliquely puncture upward 4 - 5 cm on Zhongliao, with a needling sensation going into perineum and urethra region. And maintain the acupuncture for 20 min each time. In the electroacupuncture group, the electric needle was connected to Huiyang and Zhongliao, with variable density waveform (low-density: 4 Hz; high-density: 20 Hz). The strength was based on the comfort of the patient; The control group was treated in the same way with the electroacupuncture group, but not connecting the electric needle. The needle acupuncture was performed once every 2 days, 10 days for a course. After 2 courses of treatment, the curative effect was assessed. The curative effect of elect acupuncture group was significantly better than the control group.

2.2.3 Electroacupuncture Neurostimulation Therapy

Wang Siyou^[20] and his co-workers treated 80 UUI cases with electroacupuncture pudendal nerve stimulation method. It was punctured on the "Disi Acupoint" (the upper acupoint: at 1 cm from the sacrococcygeal joint; the lower acupoint: at 0.5 cun from apex of coccyx). The 40 patients in the control group were electropuncture through vagina. After the needling sensation going to urethra and getting the needle response, the G6805-2 electric needle device was connected, with constant waves, the frequency of 2.0 Hz and electric current of 2.5-3.5 mA for moderate stimulation for 60 min (during the period, the rhythmic contractions of pelvic floor muscle around urethra should be maintained). The needle acupuncture was performed

once every 2 days, 3 times a week for a total of 3 weeks. The electro stimulation through vagina was performed 3 times a week for a total of 4 weeks. The acceptable UUI scoring scale and 24 - hour urinal pad index were adopted as the assessment criteria by the two groups. The effective rate of the needle acupuncture group was 70.1% and the effective rate of the control group was 45.0% (the improvement rate of $\geq 50\%$ was considered as effective). Wang believed that electric needle "Disi Acupoint", that is, the electroacupuncture pudendal nerve stimulation can directly stimulate the pudendal nerves by continuous electroacupuncture introductions. The afferent pudendal nerve endings under the "Disi Acupoint" and the afferent bladder nerve endings were converged at the spinal cord section S2 - S4 (the position of the urination promoting center) to inhibit the hyperfunction of the urination promoting center to alleviate the symptoms effectively. Lu Jing^[21] took 48 cases with UUI as the research objectives and treated them with electroacupuncture neurostimulation. The patients were punctured on the "Fusi Acupoint" and the "Disi Acupoint", with the needle tip pointing to urethra or vulva region. And the electric stimulation was added to agitate the pudendal nerves, iliohypogastric nerves and ilioinguinal nerves. The symptom scores of each patient before and after the treatment and at the following up (one year after the treatment) were recorded and the curative effect was assessed. The effective rate after the treatment was 81.3% (39/48) and the effective rate at the following up was 66.7%. Both the short-term and long-term curative effects of the electroacupuncture neurostimulation for UUI were good.

2.3 Moxibustion First

Liu Lanqun^[22] and his co-workers divided the patients with UUI after stroke into the observation group (19 cases) and the control group (17 cases). The control group was treated with routine acupuncture. The observation group was treated with ginger-salt partitioned moxibustion on Shenque Acupoint at the same time. The patients were in supine position, exposing the umbilical region. Cut the fresh ginger into round-like pieces in thickness of 0.6 - 0.7 cm and in diameter of 4 - 5 cm. Then puncture each piece for 10 - 15 holes with toothpick to help the warm heat go downward. Knead the moxa into cone shape in diameter of 3 cm and in height of 3 cm and put it on to the ginger plate. Fill Shenjue Acupoint fully with edible salt and then put the ginger plate on it. Ignite the moxa until it is burned up. Continuously ignite the moxa for 3 times once a day, 5 times every week. The two groups both took 4 weeks as a course. After the treatment, the total 72 - hour urinations, UUI frequency and nocturia in the two groups had

decreased significantly, average each urination volume had increased significantly, and the residual urination volume in bladder had reduced, too. And the curative effect on the observation group was significantly better than the control group.

2.4 Other Treatments

Hu Bin^[23] and his co-workers treated 30 women with UUI by TCM acupoint application. 7 kinds of Chinese herbs-radix linderiae, bitter cardamom, ootheca mantidis, cherokee rose fruit, clove, cinnamon and fructus psoraleae were dried, made into powder and mixed. Then add yellow wine and glycerinum to mix them into grease and knead it into pills in diameter of about 1cm. Fix them on Shenque, Qihai and Guanyuan acupoints with medical breathable tape. And change them every 2 days. The two control groups with 30 cases in each group were treated with pelvic floor muscle training and oral tolterodine respectively. 3 courses of treatment lasted for 8 weeks. After the treatment, average 24-hour incontinence frequency and average each urination volume in the 3 groups were compared and the differences were of statistical significance. TCM point application on women with UUI has a good curative effect. Wang Cunzhi^[24] and his co-workers divided the patients with UUI after stroke into the treatment group of 30 cases and the control group with 30 cases, respectively treated with transcutaneous electrical acupoint stimulation and oral tolterodine tartrate. The treatment group was treated with transcutaneous electrical acupoint stimulation, and the acupoints included: Bladder-Shu (bilateral), Ciliao (bilateral), Guanyuan, Chung-chi, Sanyinjiao (the affected side) and Weizhong (the affected side). After the treatment, the 72 - hour bladder diary index and the bladder volume measurement index between the treatment group and the control group had statistical significance, and the total effective rates of the two groups also had statistical significance.

In conclusion, TCM treatment on UUI has made a great progress in recent years, with various treatment methods. TCM treatment on UUI has significant advantages and the curative effect is also very outstanding.

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