

# Clinical Efficacy of Electroacupuncture Combined with Modified Suoquan Pill in the Treatment of Overactive Bladder Syndrome

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**Abstract:** ***Objective:** To observe the clinical efficacy of electroacupuncture combined with Modified Suoquan Pill in the treatment of overactive bladder (OAB). **Methods:** Ninety-six patients diagnosed with overactive bladder (OAB) in Qiannan Hospital of Traditional Chinese Medicine, Qiannan Buyi and Miao Autonomous Prefecture, Guizhou Province, were selected from September 2023 to February 2025, and all the study subjects were grouped according to the principle of randomized control, and were divided into Group A, Group B, and Group C. Patients were randomly divided into three groups, in which Group A (30 cases, with 2 cases rejected by dislodgement) orally took Gavi Modified Suoquan Pill + electroacupuncture + Western medicine treatment, Group B (30 cases, shedding rejected 2 cases) were treated with oral plus flavor shrinking spring pill + western medicine, and Group C (32 cases) were treated with pure western medicine. SPSS 27.0 statistical software was used to analyze the efficacy indexes before and after treatment of the three groups of patients, compare the differences within and between the groups, and draw conclusions from the study. **Results:** The total effective rate of treatment in the three groups was compared, and the difference was statistically significant ( $P < 0.05$ ). The total effective rate of treatment in Groups A and B was higher than that in Group C, and the difference was statistically significant ( $P < 0.05$ ). In terms of improving the efficacy of OABSS score in the three groups, Group A was the best, followed by Group B. In terms of improving OAB-q scores, group A had the best efficacy, followed by group B. In terms of improving urinary diary, the efficacy of group A and group B was comparable to that of group C in terms of improving the number of nocturia and urinary urgency. No significant adverse reactions occurred in all three groups during treatment.*

**Keywords:** Electroacupuncture, Modified Suoquan Pill, Overactive bladder syndrome, Nocturia frequency, Quality of life.

## 1. Introduction

Overactive Bladder (OAB) is a common disorder in urology. As defined by the International Continence Society (ICS), the main symptom of the disease is sudden urgency to urinate, usually accompanied by increased frequency of urination and nocturia, and some patients may experience urge incontinence. Diagnosis requires the exclusion of urinary tract infections and other definitive pathologies. Epidemiologic data show that the global prevalence of OAB is about 16% to 23%, and in China, the overall prevalence is as high as 23.9%. The disease affects more females than males and the prevalence increases with age [1]. At present, the treatment of OAB is mostly based on medication and behavioral therapy, and M receptor blockers are mostly used for medication, but they are often accompanied by a series of adverse reactions, such as dry mouth, constipation and blurred vision. The  $\beta_3$  agonist represented by mirabilone is also one of the commonly used drugs in the treatment of OAB, but there are potential effects such as increasing blood pressure and heart rate. Behavioral therapies include pelvic floor muscle therapy and bladder training, etc., but they require long-term cooperation from patients, who often have difficulty adhering to them. Currently, adverse reactions to therapeutic drugs and lower-than-expected therapeutic effects may be the main reasons for poor patient adherence.

In traditional Chinese medicine literature, OAB has no exact name, and modern Chinese medicine attributes it to the symptoms of “qigong”, “laogong”, “urinary incontinence” and “urinary incontinence”. Modern Chinese medicine has categorized it as “qigong”, “labor drench”, “urinary incontinence” and “urinary incontinence”. According to

Chinese medicine, this kind of disease is mainly located in the kidneys and bladder, and prolonged illness will damage the spleen and stomach, ultimately leading to the pathological state of deficiency of the spleen and kidneys. The classic Chinese medicine prescription Modified Suoquan Pill is from the “School Notes on Women’s Good Prescriptions”, which consists of the basic formula of Wu Yao, Yi Zhi Ren, and Shan Yao. In this study, we added *Atractylodes macrocephala* and *Poria* to strengthen the spleen and increase qi, *Cornus officinalis* and *Radix Rehmanniae Praeparata* to tonify the liver and kidneys, and *Cuscuta chinensis* and *Schizandra chinensis* to tonify the kidneys and increase the vital essence, and astringent and consolidating, so as to enhance the efficacy of tonifying the kidneys and strengthening the spleen and fixing and shrinking urine. Professor Jin Rui summarized the traditional acupuncture theory and repeated clinical and experimental studies by proposing urine-three needles consisting of Zhongji, Guanyuan, and Sanyinjiao points [2]. Electroacupuncture therapy combines modern neuroelectrical stimulation technology and traditional Chinese medicine theories, which can effectively stimulate specific acupoints and play a synergistic therapeutic role. A review of the current literature on the use of traditional Chinese medicine (TCM) tools such as herbal medicine, acupuncture, moxibustion, and acupoints for the treatment of this disease reveals that a combination of TCM or acupoints under the guidance of evidence-based therapy is indeed effective in the treatment of this disease, and has the advantage of fewer adverse effects and better therapeutic efficacy. In this study, electroacupuncture was effectively combined with traditional Chinese medicine, which has the therapeutic effect of both acupuncture and moxibustion in benefiting the qi and strengthening the kidneys, and the effect of traditional

Chinese medicine in tonifying the kidneys and strengthening the spleen, and consolidating essence and shrinking urine. It provides clinical practice basis for further alleviating the clinical symptoms of patients, and provides ideas for exploring new treatment methods.

## 2. Information and Methods

### 2.1 General Information

Ninety-six patients who were diagnosed with overactive bladder in the outpatient and inpatient departments of the Department of Urology of Qiannan Prefecture Hospital of Traditional Chinese Medicine between September 2023 and February 2025, were selected.

Western medical diagnostic criteria: Referring to the diagnostic criteria of overactive bladder as set out in the Diagnostic and Therapeutic Guidelines for Urological and Male Diseases in China (2022 edition): Typical symptoms were urinary urgency (sudden, strong and difficult to be delayed desire to urinate), urinary frequency (more than 8 times during the day, with each time the volume of urine less than 200 ml) and nocturia (more than 2 times of urination during the night, awakening to urinate due to urinary urgency), with or without urinary incontinence; and there was no urinary tract deficiency. Urinary incontinence; and no urinary tract infection or other pathology of clear cause. The Overactive Bladder Syndrome Score (OABSS) questionnaire score must also be met: a score of  $\geq 2$  for question 3 (Urinary urgency) and a total score of  $\geq 3$ .

Inclusion criteria: patients with overactive bladder in Western medicine; patients aged 18-75 years old, regardless of gender; patients who had not received any medication related to this study within two weeks prior to participation in the study and had not received any acupuncture therapy within one month prior to participation in the study; patients who voluntarily participated in the study, cooperated with the treatment arrangement, and signed an informed consent form. consent form. Exclusion Criteria: patients with severe primary diseases or diseases that seriously affect the survival of patients, such as advanced tumors, AIDS, severe cardiovascular, cerebrovascular, neurological and other diseases; history of pelvic surgery or trauma; history of other urological diseases, such as prostate cancer, urethral stenosis, urethral calculi, neurogenic cystitis, glandular cystitis, etc.; patients who are allergic to the study medication, allergic to allergies, or allergic to multiple medications; patients who have a device in their body that is not compatible with the treatment; patients who are allergic to the medication; patients who are allergic to the medication. Allergy to the study drug, allergies, and multiple drug sensitivities; patients with pacemakers in their body; women who are pregnant or breastfeeding; patients who are currently participating in other clinical trials and taking other medications.

### 2.2 Methodology

Ninety-six patients with overactive bladder who met the inclusion criteria were divided into 32 cases each in Group A, Group B and Group C according to the digital randomization method. The patients were sorted by 1-96 according to the

order of enrollment, and were randomly divided into three groups by applying the random number table method: Group A (electroacupuncture combined group) electroacupuncture + Modified Suoquan Pill + western medicines (30 cases, 2 cases were rejected by dislodgement), Group B (traditional Chinese medicine combined group) Modified Suoquan Pill + western medicines (30 cases, 2 cases were rejected by dislodgement), and Group C (western medicines group) western medicines treatment alone (32 cases).

Western medicine group (Group C): oral Mirabelone extended-release tablets (State Pharmacopoeia J20180019, 50 mg  $\times$  10 tablets) once a day, 50 mg each time, taken orally after breakfast for 4 weeks. It was taken continuously for 4 weeks.

Traditional Chinese medicine combined group (group B): based on the simple western medicine group, the group was treated with traditional Chinese medicine (Modified Suoquan Pill): the composition of the medicine was Modified Suoquan Pill, which was an agreement formula of the hospital, and the specific formula was as follows: the basic formula of Modified Suoquan Pill: Wu yao 15g, Yi Zhi Ren 10g, Shan yao 15g, Bai Zhu 10g, Poria 10g, Cornu Cervi Pantotrichum 6g, Cuscuta chinensis 10g, Wu Wei Zi 6g, and Rehmannia Glutinosa 10g. The duration of the treatment was 4 weeks. The Chinese herbal medicines were obtained from the Chinese herbal pharmacy of Qiannan Prefecture Hospital of Traditional Chinese Medicine. The above medicines were decocted to 450 m L, 150 m L/dose, 3 times/day, and taken warmly after meals for 4 weeks.

Electroacupuncture combined group (Group A): Electroacupuncture acupoint therapy was added on the basis of the traditional Chinese medicine combined group, and electroacupuncture was performed 3 times a week for 4 weeks. Electroacupuncture treatment: the patient took the supine position, used the specification of 0.25 mm $\times$ 40 mm millimetre needle for acupuncture, and used 75% ethanol cotton balls to sterilize. Directly stabbing the middle pole, bilateral Sanyinjiao, Guanyuan 1.5 inches, using twisting and tonic method. Shunhe brand electroacupuncture instrument (SH/I) was used with a frequency of 30 Hz, continuous wave, connected to the Zhongji, Sanyinjiao and Guanyuan for 25 min. Acupuncture points were taken with reference to the "Names and Positioning of Meridian Acupuncture Points" (GB/T12346-2021), which was formulated by the State of China.

### 2.3 Observation Indicators

(1) Overactive Bladder Syndrome (OABSS) Symptom Scale, where respondents are scored according to the frequency of four types of symptoms occurring in the past 1 week, with a total score of 0-15, with higher total scores indicating more severe OAB symptoms: 1)  $3 \leq \text{score} \leq 5$ : mild OAB; 2)  $6 \leq \text{score} \leq 11$ : moderate OAB; 3)  $\text{score} \geq 12$ : severe OAB (2) OAB Health-Related Quality of Life Scale (OAB-q) scale is specifically designed to assess the quality of life situation of OAB patients, which contains four dimensions such as coping ability, worry, sleep, socialization, etc., with a total of 19 questions, and the lower the quality of life score indicates the better the quality of life situation of the patients. (3) Voiding

diary: record the number of urinary urgency in 24 hours, the number of nocturia in 24 hours, and other discomforts, etc. (recorded for 3 consecutive days for a total of 72 hours). (4) Comprehensive efficacy evaluation criteria: The efficacy evaluation of overactive bladder disease is based on the change of OABSS questionnaire score before and after treatment. Calculation formula: OABSS score reduction ratio = difference between pre- and post-intervention scores / pre-intervention score  $\times 100\%$ .

## 2.4 Statistical Methods

SPSS 27.0 statistical software was applied for statistical processing. Measurement information that conformed to normal distribution with chi-square was expressed using mean  $\pm$  standard deviation, and t-test was used for comparison. Measurement data that did not conform to normal distribution were expressed as median (interquartile range) and compared using the nonparametric Kruskal-Wallis test;  $P > 0.05$  was not statistically significant, and  $P < 0.05$  was statistically significant. The  $\chi^2$  test was used for count data.  $p < 0.05$  indicated that the difference was statistically significant.

## 3. Results

**Table 1: OABSS scores (M $\pm$ SD)**

group	before	after 4 weeks	difference
A	8.27 $\pm$ 2.88	3.77 $\pm$ 1.66	4.50 $\pm$ 1.90
B	8.07 $\pm$ 2.13	4.50 $\pm$ 1.61	3.57 $\pm$ 1.10
C	8.66 $\pm$ 2.30	5.94 $\pm$ 1.80	2.80 $\pm$ 1.09

**Table 2: OAB-q scores (M(P25, P75))**

group	before	after 4 weeks	P
A	65(51.75, 71)	28.5(22, 33)	<0.05
B	59.5(48.75, 68.52)	34.5(32, 37.25)	
C	65.5(53.75, 68)	40.5(35, 45)	

**Table 3: Urination Diary (M(P25, P75))**

group	nocturia		urinary urgency	
	before	after 4 weeks	before	after 4 weeks
A	4(3.75, 5)	1(0.75, 2)	8(6, 9.25)	3(2, 4)
B	4(3, 5)	1(2, 2.25)	7(5, 9)	4(3, 5)
C	4(3.25, 5)	2(3, 4)	8(6, 9.75)	6(4, 7)

**Table 4: Overall effectiveness rate**

Group	quantities	validity	null	overall
A	30	27	3	90%
B	30	23	7	76.7%
C	32	20	12	62.5%

### 3.1 Comparison of OABSS Scores Before and After Treatment in the Three Groups

As shown in Table 1, there was a significant difference in the OABSS scores of the three groups before and after treatment ( $P < 0.05$ ). There were statistically significant differences on OABSS scores of the three groups after treatment ( $F = 11.15$ ,  $P < 0.05$ ), comparing two by two, there were statistically significant differences between the electroacupuncture combined group and the traditional Chinese medicine combined group, and between the traditional Chinese medicine combined group and the western medicine alone group ( $P < 0.05$ ), and there were statistically significant differences between the electroacupuncture combined group and the western medicine alone group ( $P < 0.05$ ). Regarding the improvement of OABSS scores in the three groups, the electroacupuncture combination group was the best, followed

by the traditional Chinese medicine combination group.

### 3.2 Comparison of OAB-q Quality of Life-related Scores Before and After Treatment in the Three Groups

As shown in Table 2, the comparison of OAB-q scores among the three groups before treatment ( $P = 0.674 > 0.05$ ) was not significantly different by test within the group and was comparable, and the comparison of OAB-q scores among the three groups after treatment ( $P < 0.05$ ) indicated that there was a significant difference between the three groups in terms of the improvement of patients' OAB-q scores after treatment. Comparison between groups: between the groups by Kruskal-Wallis test, the three groups of treatment programs were statistically different in two comparisons ( $P < 0.05$ ). In terms of the efficacy of the three groups in improving the OAB-q score, the electroacupuncture combination group was the best, followed by the traditional Chinese medicine combination group.

### 3.3 Comparison of Urinary Diary-related Scores Among the Three Groups

As shown in Table 3, the comparison of the number of nocturnal urination: the comparison of OAB-q scores among the three groups before treatment ( $P = 0.418 > 0.05$ ) did not have significant differences after the test within the groups, and the comparison of the number of nocturnal urination among the three groups after treatment ( $P < 0.05$ ) all had significant differences. Comparison between groups: after the test between groups and two-by-two comparison, it was found that there was no statistically significant difference between the electroacupuncture combined group and the traditional Chinese medicine combined group ( $P = 0.303 > 0.05$ ), and there was a statistically significant difference between the electroacupuncture combined group and the pure western medicine group, and the traditional Chinese medicine combined group and the pure western medicine group ( $P < 0.05$ ). In terms of improving the efficacy of the number of nocturia, the efficacy of the electroacupuncture combined group was comparable to that of the traditional Chinese medicine combined group.

Comparison of the number of urgency of urination: After the test within the group, the comparison of the number of urgency of urination among the three groups before treatment ( $P = 0.401 > 0.05$ ) did not have a significant difference, and the comparison of the number of urgency of urination among the three groups after treatment ( $P < 0.05$ ) had a significant difference. Comparison between groups: After the test between groups and two-by-two comparison, it was found that there was no statistically significant difference between the electroacupuncture combined group and the traditional Chinese medicine combined group ( $P = 0.48 > 0.05$ ), and there was a statistically significant difference between the electroacupuncture combined group and the simple western medicine group, and between the traditional Chinese medicine combined group and the simple western medicine group ( $P < 0.05$ ). In terms of efficacy in improving the number of urinary urgency, the electroacupuncture combined group was the best, followed by the Chinese medicine combined group.

### 3.4 Comparison of the Three Groups Having Pre-treatment and Post-treatment Total Effective Rate

As shown in Table 4, after testing, the difference between the efficacy of electro-acupuncture combined group and the efficacy of traditional Chinese medicine combined group is not statistically significant ( $P=0.69>0.05$ ), electro-acupuncture combined group and the simple western medicine group, there is a statistically significant difference ( $P=0.035<0.05$ ), and in terms of the effective rate, electro-acupuncture combined group > traditional Chinese medicine combined group > western medicine group. Table 12 shows that among the three groups, the total clinical efficacy of the electroacupuncture combined group was the highest at 90.0%, followed by the total clinical efficacy of the traditional Chinese medicine combined group at 76.7%, and the total clinical efficacy of the western medicine group alone was the lowest at 62.5%.

## 4. Discussion

In recent years, with the rapid economic growth and accelerated pace of life, the group of people suffering from OAB has gradually tended to be younger. The clinical manifestations of the disease cause distress to most patients, severely interfering with their daily lives and social activities, as well as having a serious impact on their mental state. Although significant progress has been made in the treatment of OAB, there are still challenges in ensuring that patients receive long-term and effective treatment, which is closely related to a number of factors. Among them, unmet therapeutic efficacy and adverse drug reactions may be the main reasons for low patient adherence [3]. Therefore, there is a clinical need for therapeutic regimens with fewer adverse reactions, better therapeutic effects, and improved quality of life for patients. It has been a common belief among medical practitioners throughout the ages that the locus of this type of disease is mainly in the kidney and bladder, and that prolonged illness will damage the spleen and stomach, ultimately leading to the pathological state of deficiency of the spleen and kidneys. Deficiency of the spleen and kidney qi leads to malfunctioning of the bladder qi function, which in turn triggers urinary disorders. Therefore, treating OAB from the two organs of the spleen and kidney often yields significant curative effects in clinical practice. By tonifying the spleen and kidneys and restoring the bladder's qi and chemical functions, symptoms such as urinary frequency and urgency can be effectively improved, reflecting the unique advantages of the holistic concept of Chinese medicine and evidence-based treatment.

Studies have shown that stimulation of Guanyuan acupoint can repair the central nerve conduction pathway of urinary reflex that functions abnormally due to injury, and can improve the reflex activity of the urethral muscle and its excitability, thus promoting the recovery and reconstruction of bladder function. This mechanism provides a scientific basis for the clinical application of Guanyuan acupoint in the treatment of urinary system diseases. Zhongji point is located in the Ren vein and is also a recruitment point of the bladder meridian, with a location adjacent to the bladder. From a modern anatomical point of view, the middle pole point is located near the projection area of the bladder's body surface,

and its innervation mainly comes from the T12-L1 spinal cord segment, which highly overlaps with the nerve distribution area of the T12-L2 and S2-S4 spinal cord segments that innervate the bladder [4]. This neuroanatomical correlation provides a scientific basis for the regulation of bladder function by Zhongji acupoints. In addition, acupuncture at the middle pole point has a bidirectional regulatory effect: on the one hand, it can inhibit abnormal voiding by inhibiting the excitability of the infra-abdominal nerve, pelvic nerve and other afferent nerves; on the other hand, it can directly stimulate the neural pathways involved in the voiding reflex, and promote the restoration of normal voiding function. This bi-directional regulation characteristic makes Zhongji acupoints have unique advantages in the treatment of overactive bladder and other urinary disorders. As a meeting point of the foot-taiyin spleen meridian, the foot-syncopal liver meridian and the foot-shaoyin kidney meridian, Sanyinjiao point belongs to the foot-taiyin spleen meridian, which is closely related to the function of the spleen. Studies have shown [5-7] that the Sanyinjiao point is located on the medial side of the tibia, and is closely related to the bladder meridian and the kidney meridian in terms of anatomical structure, functional distribution and nerve conduction. There is a saphenous nerve distributed in the superficial layer of this point, and the posterior tibial nerve is distributed in the deep layer. Stimulation of the Sanyinjiao point can transmit signals to the spinal cord, which in turn affects the central nervous segments of the lumbosacral urinary center, inhibiting the overactivity of the urethral muscles, delaying and reducing the feeling of urgency to urinate. In addition, the therapy enhances the ability of the nerve center to regulate bladder tissue, thus improving bladder function. This mechanism of action provides a scientific basis for the application of Sanyinjiao points in the treatment of overactive bladder and other urinary disorders.

Suoquan Pill, as a classic formula of traditional Chinese medicine, was first recorded in Wei's Family Collection of Formulas [8] of the Southern Song Dynasty. This formula consists of three medicines, namely, Yi Zhi Ren, Wu Yao, and Shan Yao, which have the efficacy of warming the kidneys, strengthening the spleen, and consolidating essence and shrinking urine, and it is mainly used for treating the symptoms of frequent urination, nocturnal wetting, and urinary incontinence caused by the deficiency of the lower anxiety. Huang Di Nei Jing puts forward the theory that "if the water spring is not stopping, it is because the bladder does not hide it", pointing out that the root cause of increased urination is the decline of the bladder's retention function. Modified Suoquan Pill is a classic formula of Chinese medicine based on the theory that "the kidney and the bladder are mutually exclusive", and its formula follows the principle of the combination of the ruler, the subject, and the auxiliary, in which Yi Zhi Ren is the ruler to warm the kidney and consolidate the essence, Wu Yao is the subject to disperse the cold and move the qi, and Shan Yao is the auxiliary to strengthen the spleen and tonify the kidney. The three herbs together form a unique combination of "warming and tonifying, promoting and astringent", which effectively treats the symptoms of frequent urination caused by insufficient kidney energy by restoring the bladder's qi function and enhancing its restraining effect. The name "Shrinking Spring" implies the therapeutic purpose of restoring the normal

constraining function of the bladder. In the present study, based on the original formula, we combined the long-term clinical experience in the use of medication with the addition of spleen-enhancing, qi-fixing and kidney-strengthening drugs to enhance the efficacy of tonifying the kidneys, strengthening the spleen and fixing the essence to shrink the urinary bladder. In this study, the efficacy of Modified Suoquan Pill in overactive bladder syndrome with deficiency of spleen and kidney was verified through clinical efficacy observation, which provided the basis for clinical practice to further alleviate the clinical symptoms of the patients. Existing studies have confirmed that Modified Suoquan Pill has a solid research foundation on the mechanism of action, and its multi-target, multi-pathway regulatory characteristics for the treatment of OAB provide an important direction for subsequent in-depth research. Fu Yuanjie et al [9] used network pharmacology combined with molecular docking technology to systematically elucidate the molecular mechanism of Shrinking Spring Pill in intervening in OAB, and screened out 8 core active ingredients, which may play anti-inflammatory and calcium ion regulation roles by regulating key target proteins such as AKT1, IL-6, TNF, IL-1B, and other key proteins, and participating in the regulation of the HIF-1 signaling pathway, calcium ion signaling, and the cGMP-PKG signaling pathway. Calcium ion regulation and other regulatory effects.

With further studies on bladder sensation-related mechanisms, more and more ion channels, neurotransmitters and neuroreceptors have been found to be involved in the regulation of bladder sensory function. These include transient receptor potential vanilloid (TRPV), purinergic P2X receptor (P2X) and so on. Animal studies have shown that electroacupuncture stimulation of Guanyuan and Zhongji points can inhibit the activity of transient receptor potential vanilloid subtype 1 (TRPV1) channels and reduce the expression of purinergic P2X2 receptors in the bladder, thus regulating the contraction frequency of the smooth muscle of the bladder. smooth muscle contraction frequency [10]. Linghu Juanrong et al [11] further confirmed that electroacupuncture treatment could significantly improve bladder function and reduce pathological damage of bladder tissues in OAB rats through rat model experiments. The mechanism of action may be related to the down-regulation of the expression of TRPV1 and TRPV4, the mechanosensitive channels of the bladder uroepithelium. The results showed that TRPV1 and TRPV4 channels were involved in the process of electroacupuncture regulation of bladder function in OAB rats, confirming that electroacupuncture can stimulate the “Guanyuan” and “Zhongjie” to inhibit receptor activity rapidly. The core principle of Chinese medicine, which is to tonify the kidney and reduce urination, has been clinically proven to be an effective method in the treatment of symptoms related to OAB. LAI et al. [12] found that the Modified Suoquan Pill may stabilize the excitability of the bladder smooth muscle associated with the neurogenic pathway during the filling process by continuously regulating the expression of the transient receptor potential vanillic acid subtype 1 (TRPV1) in the OAB model rats, and thus reduce the frequency of bladder voiding contractions. frequency and intensity of bladder voiding contractions. In addition, Shrinking Spring Pills can reduce intravesical pressure, improve voiding efficiency, and reduce residual urine volume,

thereby significantly improving the clinical symptoms of OAB patients. It was further verified that Modified Suoquan Pill could consistently modulate the expression of transient receptor potential TRPV1 receptor. In conclusion, electroacupuncture can rapidly inhibit the activity of transient receptor potential vanilloid subtype 1 (TRPV1) and purinoid receptor P2X by stimulating the “Guanyuan” and “Zhongji” acupoints, and the Chinese herbal formula can continuously regulate the expression level of these receptors. Electroacupuncture and traditional Chinese medicine may exert synergistic therapeutic effects by acting synergistically on the TRPV1/P2X receptor pathway. In this study, clinical observation confirmed that electroacupuncture combined with Jiawei Zhenquanwan could play a synergistic effect.

On the basis of extensive reading of relevant literature at home and abroad, this paper combines electroacupuncture “urinary triple-needle” and Jiawei Shouquanwan with western medicine Mirabellone to form a comprehensive treatment program of “combination of acupuncture and medicine”, which provides a better treatment option for OAB through the comparison of the therapeutic effects. Through the comparison of efficacy, it provides a better integrated treatment program for the treatment of OAB by combining Chinese and Western medicines. In this study, the “urine three-needle” treatment method proposed by Prof. Jin Rui was used to strengthen acupoint stimulation through electroacupuncture to enhance the effect of “tonifying the kidney and regulating qi”, which is simple, easy to implement, cost-effective, and has good therapeutic efficacy, and provides a safe, effective, and effective treatment option for the treatment of OAB. This method is simple, easy to implement, cost-effective, and has good therapeutic effect, providing a safe, effective treatment with Chinese medicine characteristics for OAB. In this study, electroacupuncture was effectively combined with traditional Chinese medicine (TCM), which has the therapeutic effect of both acupuncture and moxibustion in benefiting the qi and strengthening the kidney, and TCM in tonifying the kidney, strengthening the spleen, and consolidating the essence and shrinking the urine. It provides a clinical practice basis for further alleviating the clinical symptoms of patients, and provides ideas for exploring new treatment methods. The results of this study showed that after 4 weeks of treatment, the OABSS and quality of life scores of the electroacupuncture combined group were significantly lower than those of the western medicine-only group, and the total clinical effectiveness rate was significantly higher than that of the western medicine-only group, suggesting that electroacupuncture combined with Modified Suoquan Pill is superior to the treatment with Mirabellone extended-release tablets alone for the treatment of OAB in women in terms of relieving bladder spasms, improving urination, and improving the quality of life. However, the sample size of this study was small, the accuracy of the experimental results may be biased, and a separate electroacupuncture group and traditional Chinese medicine group were not formed to further study the therapeutic effects of these two groups when treated separately. In the future, further multicenter, large-sample randomized controlled studies can be conducted to further investigate the efficacy of electroacupuncture combined with Modified Suoquan Pill in the treatment of OAB.

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