

# Research Progress in the Treatment of Mild to Moderate Female Stress Urinary Incontinence by Chinese and Clinical Medicine

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**Abstract:** *Stress urinary incontinence (SUI) is a common continence disorder in the female population, and its prevalence increases significantly with age. Although the disease is not life-threatening, it seriously affects daily life, such as work and socializing, and significantly reduces the quality of life, so it is also called "social cancer." At present, the mechanism of SUI in clinical medicine has not been clarified, and the mechanism of SUI in Chinese medicine is categorized under the category of "failure of the lower Jiao to control and loss of the bladder's restraining function". In view of the above mechanisms and pathomechanisms, the treatment methods of this disease are diversified, and the treatments of Chinese medicine and clinical medicine take advantage of each other, complement each other, and have remarkable efficacy. In this paper, the latest research developments in the treatment of SUI by Chinese medicine and clinical medicine in recent years are summarized as follows.*

**Keywords:** Mild to moderate female stress urinary incontinence, Chinese medical treatment, Clinical medicine, Research progress.

## 1. Introduction

According to epidemiological statistics. The standardized prevalence of urinary incontinence in Chinese adult females is 21.2%, with the standardized prevalence of stress incontinence as high as 13.1% [1]. The more definitive risk factors include fertility, age, obesity, pelvic organ prolapse, and genetic factors. However, the etiology and pathogenesis of SUI in clinical medicine are still uncertain and are closely related to the anatomy and molecular biology of the urethral sphincter system and the urethral support system. In terms of therapy, For patients with mild-to-moderate SUI, clinical medicine takes the form of behavioral interventions, rehabilitation therapy, and medication. Traditional Chinese Medicine (TCM) treatments include both internal and external treatments. In this paper, we will discuss and summarize the research progress of SUI in recent years around the etiological mechanisms and treatment methods of Chinese and clinical medicine.

## 2. Clinical-medical Etiologies

Risk factors for SUI include a woman's pregnancy, age, estrogen decline, obesity, and coughing, sneezing, and other conditions that cause increased abdominal pressure. Yu Chunmei et al [2] pointed out that pregnancy causes changes in the pelvic floor tissue structure, leading to increased bladder and urethral mobility, while, the fetus growth can weaken the pelvic floor support structures. Wang Yuanyuan et al [3] noted that Mechanical stretching and fetal descent during vaginal delivery can damage the peripelvic floor tissues and increase the risk of postpartum SUI. Estrogen promotes urethral mucosal proliferation, enhances urethral closure pressure, and increases urethral resistance. Combined with pelvic floor ultrasound measurements, Pan Huijun et al [4] pointed out that lower estrogen levels can increase the risk of SUI, emphasizing the importance of estrogen levels in the

protection of pelvic floor tissues. Obesity is an independent risk factor for SUI, and Swenson et al [5] experimentally demonstrated that obesity can lead to an increase in intravesical pressure, which induces SUI. In addition, diseases such as cough, constipation, urinary tract infections, and a history of pelvic surgery can cause SUI [6-7].

## 3. Clinical Pathogenesis

The pathogenesis of SUI in clinical medicine has not yet been clarified and is mainly studied around the anatomy of pelvic floor tissues and molecular biology. From an anatomical point of view, the physiological functions of the urinary control mechanism include the normal urethral sphincter, periurethral tissues, urethral mucosa, and the nerves controlling the urethra, and any of these tissues can be damaged to induce SUI [8]. From a molecular biological point of view, the development of SUI is closely related to abnormalities in the urethral sphincter system itself, as well as in its support and self-regulatory systems [9]. Bioelectrical studies have pointed out that pathophysiological changes in the urinary system's own tissues, blood supply abnormalities anatomical abnormalities, etc. can cause bioelectrical changes, leading to abnormal cellular physiological functions and inducing SUI [10].

## 4. Clinical Medical Therapy

### 4.1 Behavioral Interventions

Behavioral intervention therapy focuses on lifestyle changes, including weight control and Blood glucose index control. Some studies have shown that obesity is one of the risk factors for SUI, so weight loss may improve SUI symptoms [11]. It has been shown [12] that female patients with diabetes mellitus with SUI have frequent and large leakage of urine, so controlling blood glucose is the key to treating SUI.

## 4.2 Pelvic Floor Rehabilitation Therapy

### 4.2.1 Pelvic floor muscles training

Pelvic floor muscles training, also known as Kegel (Kegel) training is used as a rehabilitation treatment for SUI. Autonomous, repetitive contraction and diastole of the pelvic floor muscles strengthens the muscles, improving structural support of the pelvic floor and urethral stability [13-14]. Currently, urinary incontinence guidelines include pelvic floor muscle training as a first-line treatment for the prevention and treatment of SUI [15]. Cacciari LP [16] performed pelvic floor muscles training to improve the function of the pelvic floor muscles, forced urethral muscles and urethral sphincter in 1817 female patients with SUI, which was shown to be effective in reducing the number of incontinence episodes and achieving therapeutic goals.

### 4.2.2 Biofeedback Electrical Stimulation

Biofeedback electrical stimulation therapy is a combination of biofeedback and electrical stimulation. Biofeedback therapy, in which detected electromyographic signals are converted into visual and auditory signals, instructs the patient to perform effective, autonomous pelvic floor muscle exercises [17]. Pelvic floor electrical stimulation is a passive exercise that stimulates pelvic floor muscles and nerves, which can increase urethral closure pressure by increasing the contractile force of the periurethral sphincter and anorectal muscles, which in turn improves symptoms of urinary leakage [18].

### 4.2.3 Magnetic stimulation

Magnetic stimulation therapy is the use of extracorporeal magnetic fields to stimulate the pelvic floor muscles, activate the motor nerve fibers or motor endplates, and strengthen the strength and tone of the pelvic floor muscles, thus achieving the goal of preventing and treating urinary incontinence. Magnetic stimulation can increase urethral sphincter volume and enhance pelvic floor muscles control [19].

## 4.3 Pharmacologic Therapy

The main effect of medication is to enhance urethral closing function by increasing the tone and tension of urethral smooth muscle and transverse striated muscle to achieve the therapeutic purpose. Current medications for SUI include estrogens, alpha-agonists, and norepinephrine and 5-hydroxytryptamine reuptake inhibitors.

Estrogen replacement therapy. By thickening the urethral mucosa, submucosal vascular plexus, and connective tissue, increasing the number and sensitivity of Alpha receptor agonists, Promote mucosal and submucosal tissue proliferation to maintain tenderness, enhance urethral closure pressure and functional urethral length, and achieve urinary control. Topical vaginal estrogen is recommended as an option for post-menopausal patients. However, long-term application can increase the risk of breast cancer, ovarian cancer, endometrial cancer and cardiovascular disease [20].

Alpha receptor agonists. By selectively activating

$\alpha$ 1-adrenergic receptors in the bladder neck and posterior urethra, it enhances smooth muscular contraction, increases urethral resistance, and increases urethral closing pressure. Side effects include elevated blood pressure, constipation, nausea, and urinary retention, while patients with high blood pressure can have an increased risk of stroke.

Norepinephrine and 5-hydroxytryptamine reuptake inhibitors. It can increase bladder capacity as well as improve the muscles strength of the external urethral sphincter, but this class of drugs has more pronounced hepatotoxicity and serious damage to the central system, so it is not used clinically as a first-line treatment modality.

## 5. Chinese Medicine Etiology and Mechanism

SUI is not recorded in the early literature of the traditional Chinese medicine, and ancient medical practitioners attributed it to the category of "urine loss" and "incontinence of urine". Its main manifestation is a disorder of water and fluid metabolism. The basic mechanism of disease is failure of the lower Jiao to control and loss of the bladder's restraining function. The organs involved are mainly the bladder and kidney, and are closely related to the lungs, spleen, liver and Triple Energizer. The Plain Questions - Xuan Ming Wu Qi states, "Unfavourable transmission from the bladder is difficulty urinating, and loss of containment is urinary incontinence. It emphasises that the diseased organ is the bladder. The Su Wen - Cough Lecture says: 'Recurrent cough caused by kidney lesions leads to bladder function being affected, and cough associated with bladder lesions, cough accompanied by urine loss. It was pointed out that incontinence is closely related to the kidneys. The General Treatise on the Cause and Symptoms of Diseases states, 'Weakness of the kidneys leads to deficiency of yang qi in the lower jiao, which is unable to warm and constrain the water and fluids, and therefore leads to urinary incontinence.' It is believed that if kidney yang is insufficient, the lower jiao will be weak and cold, the bladder will further malfunction, the excretory function of the bladder will be unmanaged, and urinary incontinence will occur. synopsis of prescriptions of the golden chamber - urinary incontinence" suggests: "the lung and spleen qi deficiency, can not properly regulate water metabolism and produce disease..... lung main governing dispersing and purifying dysfunction, the bladder on the urinary loss of control", lung and spleen deficiency, lead to water transport and transformation dysfunction, thus the urinary incontinence. The Inner Canon of Huangdi states, 'When the liver is sick, urine is lost.' When the liver loses its governing smoothing flow of qi, urine loss occurs. Lin Peiqin's Classification based treatment and arbitration says: 'The function of the bladder is mainly to contain urine; the excretion of urine depends on the Triple Energizer's functional activity of the qi. It is believed that the occurrence of enuresis is related to the Triple Energizer's functional activity of the qi. If the functional activity of the qi of the Triple Energizer is out of order and the metabolism of water and fluids is impassable, then there will be the 'Classical and visceral manifestation' recorded: 'If the upper jiao is out of order, water will remain in the upper part of the human body; if the middle jiao is out of order, water will remain in the epigastric and abdominal areas; if the lower jiao is out of order, the metabolism of water and fluids for urine and faeces will be

irregular.

## 6. Traditional Chinese Medicine

### 6.1 Internal Treatment with Traditional Chinese Medicine

#### 6.1.1 Treatment from the perspective of the heart and kidneys

The heart dominates and coordinates the physiological functions of the viscera, the heart's physiological malfunction affects the remaining four viscera, resulting in the spleen can not transport and transform fluid, the lungs can not governing dispersing and purifying the fluid, the liver can not smooth qi dynamic, the kidneys can not warm and cosy water, the bladder store and discharge urine function abnormal, the emergence of the overflow of urine. Kidneys are the fundamental of 'the five internal organs' yin and yang' When the yin and yang of the kidneys are in a coordinated and balanced state, the qi of each viscera can control the ascending and descending opacity, and produce and excrete urine. Qian Haimo [21] believed that the storage and excretion of urine depended on the regulation of the heart and kidneys' function, and proposed that benefiting qi and nourishing the heart, tonifying the kidney and consolidating the bladder as the treatment method, adopting the empirical formula of bladder consolidation soup, which had a good effect on the treatment of enuresis.

#### 6.1.2 Treatment from the perspective of the spleen and kidney

The spleen is governing the transporting and transforming water and fluid, and the kidney is responsible for functional activity of qi to dispose of water and fluid. If the spleen and kidney are out of order, the metabolism of water and fluid will be abnormal, and urinary incontinence will occur. Many scholars believe that deficiencies of the spleen and kidneys are closely related to enuresis, and emphasise strengthening the spleen and tonifying the kidneys. Xiao Lei et al [22] selected 56 cases of SUI patients with spleen and kidney yang deficiency type, and used ShengXian Soup with additions and subtractions combined with pelvic floor muscle training as a treatment group, and compared it with the control group of oral midodrine hydrochloride combined with pelvic floor muscle training. The results showed that the I-QOL scores and ICI-Q-SF scores of the treatment group were better than those of the control group, and the overall effective rate of Chinese medicine evidence points in the treatment group was 92.8%, compared with 60.7% in the control group, and the treatment group could effectively improve the quality of life of female urinary incontinence patients. Pan Zhenliang et al [23] took 60 middle-aged and elderly patients with moderate SUI to adopt the self-proposed Strengthening the Spleen and Benefiting the Kidneys Formula with additions and subtractions, and the results showed that significant effects were achieved on the 1h urinary pad test, ICI-Q-SF questionnaire scores, and changes in myoelectric potentials of fast and slow muscle fibres ( $P < 0.01$ ). Qi Snap et al [24] selected 34 cases of SUI patients with spleen and kidney yang deficiency, the observation group took Tonifying Qi Suo Quan soup combined with pelvic floor muscle functional training, and the control group only took pelvic floor muscle functional training, the results showed that the clinical symptom scoring scale, genitourinary short

form scoring and frequency of incontinence of the observation group were better than that of the control group.

#### 6.1.3 Treatment from the perspective of the Spleen and Stomach

The first effective formula for treating bladder-related cough, Ginseng Powder, was published in the Song Dynasty's General Medical Collection of Royal Benevolence, emphasising the treatment of strengthening the spleen and enhancing qi, cultivating the spleen-earth and generating lung-gold, strengthening the transport of the spleen and stomach in the middle jiao, and restoring the lung governing dispersing and purify, so as to avoid the emergence of the syndrome of 'the upper deficiency being unable to control the lower'. --Lung qi deficiency cannot control the lower jiao, and bladder retention disorder leads to urinary incontinence [25]. Wang Mengqi et al [26] believe that the spleen and stomach's yang deficiency leads to the middle jiao insufficiency, the middle jiao is the pivots of whole body qi to lifting and descending, the qi of middle jiao imbalance affects the lower jiao, then the bladder solid loss of urination, and descending to its normal state, Poria and Licorice Soup, a formula for treating bladder-related coughs, was first recorded in the Jade Machine Microcosmology, which strengthens the spleen and warms the yang so that the qi in the middle jiao can be regulated smoothly and achieve the effect of declaring the upper and controlling the lower.

### 6.2 External Treatment with Chinese medicine

#### 6.2.1 Acupuncture therapy

Studies have shown that acupuncture therapy can increase urethral resistance and enhance pelvic floor muscle tone, which helps to improve pelvic floor muscle atrophy, promote blood microcirculation, and restore pelvic floor muscle function [27]. Fu Yingying [28] treated 40 female patients with SUI with exercise therapy combined with acupuncture on Qihai, Guanyuan, Ashigaru and Sanyinjiao points for a period of one month. The results showed that acupuncture combined with exercise therapy could alleviate the psychological burden and improve the quality of life, and the total effective rate of treatment was 95% ( $P < 0.05$ ). In addition to the effectiveness of ordinary millimetre needling, electro-acupuncture can effectively stimulate the nerves to promote rhythmic contraction of the pelvic floor muscles, which is an important therapeutic effect. Kan Wenjing et al [29] used electro-acupuncture combined with pelvic floor muscle training to treat 20 female patients with SUI by stimulating bilateral Zhongliao, Huiyang and Sanyinjiao points, and the results showed that their total effective rate reached 90.00%, and effectively improved the clinical symptoms and quality of life of female patients with SUI.

#### 6.2.2 Moxibustion therapy

##### (1) Mild moxibustion.

Peng Yubo et al [30] studied 70 cases of female patients with SUI, the observation group used Shu-Mu matching point method, selected double Shen Shu, double PangGuang Shu, double Jingmen, Zhongji points to be gentle moxibustion with

the pelvic floor muscle training, the control group pelvic floor muscle training, after 4 weeks of treatment, the observation group urodynamic indexes improved compared with the previous, the total effective rate was 88.6%. Liu Yang et al [31] randomly divided 60 cases of SUI patients into drug group, training group and combined group, which were given duloxetine hydrochloride orally, pelvic floor muscle training, and mild moxibustion (taking Guanyuan, Zhongji, Qihai, double Zu Sanli, double Sanyinjiao) combined with pelvic floor muscle training, and the results found that the combined group's clinical efficacy rate was much higher than that of the drug group and the training group.

## (2) Thermal moxibustion.

Qiao Xueqi et al [32] studied 46 patients with SUI, randomly grouped and then the observation group was given moxibustion at Qihai, Zhongji, Shenshu, and Ciliao to heat-sensitize the acupoints, combined with the pelvic floor muscle training method, while the control group was given only the simple pelvic floor muscle training, the results showed that the number of leaks of urine in 24h was reduced in the observation group, and the scores of ICI-Q-SF rating scale and I-QOL scale were reduced, and the efficiency was higher than that of the control group. Yang et al [33] divided 120 cases of SUI with lower-jiao deficiency and cold into a control group and an observation group, and gave them pelvic floor muscle training and moxibustion Qihai and Guanyuan acupoints with pelvic floor muscle training, respectively, and the results showed that thermal moxibustion could reduce the mobility of the bladder neck, the angle of urethral rotation, and the area of the fissure of the anus muscle, which was superior to the pelvic floor muscle training alone. Zhu Zen [34] treated 42 cases of postpartum SUI patients, the control group was only given conventional pelvic floor muscle rehabilitation training, and the observation group was treated with heat sensitive moxibustion combined with the pelvic floor muscle rehabilitation instrument at Qihai and ShenShu points, the results showed that the amount of leakage of urine in the 1h urinary pad test and the number of urinary incontinence in 24h after 4, 8 and 12 weeks of treatment was significantly less than that of the control group ( $P < 0.05$ ), and the values of the pelvic floor muscle electrical vitality, the value of the maximum contraction, the value of the sustained contraction values, and pelvic floor muscle strength grades, PMUC and PVLV were higher than those of the control group ( $P < 0.05$ ). Hu Dan et al [35] treated 45 female patients with SUI, the observation group was treated with Kegel exercise therapy only, and the treatment group was treated with heat-sensitive moxibustion on the basis of Kegel exercise therapy at Zhongji, Qihai, Ciliao, and Shenshu, the results showed that the 1h urinary pad test and ICI-Q-SF scale scores of the treatment group were significantly lower than those of the control group, and the number of leakage of urine was significantly reduced ( $P < 0.01$ ), and the total effective rate of treatment was 95.65%.

### 6.2.3 Acupuncture Point Patching

Acupuncture point dressing will be prepared by applying the medication to the relevant acupoints, so that the medication acts on the meridians and thus achieves the therapeutic purpose. Gao Zhuwei et al [36] used strengthening the spleen

and promoting qi as a treatment method, and selected tonifying the middle and promoting qi as a treatment for qi deficiency type SUI, making acupuncture patches combined with pelvic floor rehabilitation therapy, taking Guanyuan, Qihai and double Sanyinjiao points, which showed that it could effectively reduce the number of patients' urine leakage and improve the score of quality of survival ( $P < 0.01$ ). Li Meijuan et al [37] used tonifying kidney qi as a treatment method, and used the dressing of tonifying the kidney and Suo Quan powder is made into acupoint patch combined with pelvic floor muscle function exercise treatment for 60 cases of SUI patients, selected Shenque, Guanyuan, Qihai points and so on to the acupoint patch, the results show that the total effective rate of 90.0%.

## 7. Summary

SUI is a common disease in females, and its clinical symptoms have seriously affected patients' quality of life. With the opening of the two-child policy, the prevalence of the disease is gradually increasing. The etiologic mechanism of SUI has not yet been clarified, and for mild to moderate patients, clinical medicine mainly uses rehabilitation and drug therapy as the main means, the symptomatic relieved obviously, However, there are still potential drawbacks, such as adverse reactions and complications, as well as longer cycles of rehabilitation and poorer patient compliance. Traditional Chinese medicine includes internal medication, external acupuncture, moxibustion, acupoint application and other treatments, which are diversified, effective, economical, safe and effective in reducing adverse reactions and complications, and can make up for the shortcomings of clinical medical treatment. The combination of Western medicine and Chinese medicine can take advantage of each other's strengths and better utilize the therapeutic advantages. However, the current treatment of SUI by combining Chinese and Clinical medicine also has the following shortcomings, such as the lack of standardized clinical efficacy evaluation and the lack of in-depth research of a basic experimental nature. In future studies, it is hoped that the standards of Chinese and Clinical medicine diagnosis and treatment can be further standardized, and the etiological mechanisms of the disease can be explored in depth, so as to enrich the means of treatment and improve the quality of life of patients.

## References

- [1] Pang H, Lv J, Xu T, et al. Incidence and risk factors of female urinary incontinence: a 4-year longitudinal study among 24 985 adult women in China[J]. BJOG: An International Journal of Obstetrics & Gynaecology, 2022, 129(4): 580-589.
- [2] Yu Chunmei, Wang He. Mechanisms of stress urinary incontinence in pregnancy[J]. Acta Academiae Medicinae Weifang, 2024, 46(02): 150-152.
- [3] Wang Yuanyuan, Wang Jing, Xu Lihua. Meta-analysis of risk factors for postpartum stress urinary incontinence in women [J]. Maternal and Child Health Care of China, 2023, 38(17): 3385-3390.
- [4] PAN Hui-jun; YIN Ming. Correlation Analysis of Pelvic Floor Ultrasound, Serum Estradiol Level and Severity of Early Postpartum Stress Urinary Incontinence[J].

- Journal of Taizhou Polytechnic College,2023,23(05): 56-59.
- [5] Swenson C W, Kolenic G E, Trowbridge E R, et al. Obesity and stress urinary incontinence in women: compromised continence mechanism or excess bladder pressure during cough[J]. *Int Urogynecol J*, 2017, 28(9): 1377-1385.
- [6] Xue Kaikai, Zhuo Lang, Wu Jiao et al. Prevalence and associated factors of stress urinary incontinence in young females: an example of the college students group, Xuzhou [J]. *Modern Preventive Medicine*, 2019, 46(5): 831-834.
- [7] Huang Li. Risk factors for stress urinary incontinence in middle-aged and elderly women[J]. *Medical Equipment*, 2024,37(03): 47-49.
- [8] ZHANG Tianyu; MA Tieming. Research on the Pathogenesis and Mechanism of Stress Urinary Incontinence[J]. *Chinese Medicine Modern Distance Education of China*, 2021,19(10): 196-199.
- [9] Post W M, Widomska J, Grens H, et al. Molecular processes in stress urinary incontinence: a systematic review of human and animal studies[J]. *Int J Mol Sci*, 2022, 23(6): 3401-3424.
- [10] Ferreira C R G, Soares W M, da Costa Priante C H, et al. Strength and Bioelectrical Activity of the Pelvic Floor Muscles and Sexual Function in Women with and without Stress Urinary Incontinence: An Observational Cross-Sectional Study[J]. *Healthcare*, 2023, 11(2): 181-190.
- [11] Sun Y, Chen H, Bai Y, et al. Ketogenic diet may be a new approach to treatment stress urinary incontinence in obese elderly women: report of five cases[J]. *BMC women's health*, 2022, 22(1): 402-408.
- [12] Lowenstein E P, Andersen L L, Moller L A, et al. Uro-dynamic and questionnaire findings in urinary incontinent women with and without diabetes: Data from a health study[J]. *Int Urogynecol J*, 2021, 32(10): 2847-2856.
- [13] Hagen S, Mcclurg D, Bugge C, et al. Effectiveness and cost-effectiveness of basic versus biofeedback-mediated intensive pelvic floor muscle training for female stress or mixed urinary in-continence: protocol for the OPAL randomized trial[J]. *BMJ Open*, 2019, 9: e024153.
- [14] Marques S A A, da Silveira S R B, Pássaro A C, et al. Effect of pelvic floor and hip muscle strengthening in the treatment of stress urinary incontinence: a randomized clinical trial[J]. *J Manip Physiol Ther*, 2020, 43(3): 247-256.
- [15] Gynaecological Pelvic Floor Group of the Obstetrics and Gynaecology Section of the Chinese Medical Association. guideline on the diagnosis and treatment of female stress urinary incontinence (2017) [J]. *Chinese Journal of Obstetrics and Gynecology*, 2017, 52(5): 289-293.
- [16] Jiang Li. Clinical study of modified pelvic floor muscle training combined with moxibustion at Guanyuan acupoint in the treatment of female stress urinary incontinence[D]. Beijing University of Chinese Medicine, 2020.
- [17] Liu Sicong, Zhang Li, Kong Fang, et al. Meta-analysis of the efficacy of electrical stimulation biofeedback therapy combined with pelvic floor muscle exercise on stress urinary incontinence in adult women in China[J]. *Maternal and Child Health Care of China*, 2024, 39(13): 2545-2549.
- [18] Sahin U K, Acaröz S, Çirakoğlu A, et al. Effects of external electrical stimulation added to pelvic floor muscle training in women with stress urinary incontinence: A randomized controlled study[J]. *Neurourol Urodynam*, 2022, 41(8): 1781-1792.
- [19] QI Hongjing, LIU Zejian, SONG Jinfeng, et al. Research progress in the rehabilitation of stress urinary incontinence in elderly women[J]. *Chinese Journal of Geriatric Care*,2024,22(01): 3-7.
- [20] Juneau A D, Gomelsky A. Pharmaceutical options for stress urinary incontinence[J]. *Curr Bladder Dysfunc*, 2019, 14: 357-364.
- [21] Qian Haimo, Pan Guangqiang, Chen Yingyi. An overview of the treatment of stress urinary incontinence from the heart and kidney perspective[J]. *Zhejiang Traditional Chinese Medicine*, 2023, 58(9): 649-650.
- [22] Xiao Lei. CLINICAL STUDY OF SHENGXIAN DECOCTION MODIFIED RECIPE IN THE TREATMENT OF FEMALE STREE URINARY INCONTINENCE (SPLEEN AND KIDNEY YANG DEFICIENCY TYPE) [D]. Heilongjiang University Of Chinese Medicine, 2022.
- [23] Pan Zhenliang, Tang Ming, Li Mingguo. Observation on the Clinical Effect of Tonifying Spleen and Kidney Therapy on Moderate Stress Urinary Incontinence in Middle-aged and Elderly Women Based on Spleen Kidney Treatment [J]. *Heilongjiang Science*, 2021, 12(8): 48-50.
- [24] Qi Xiao. Clinical study on the treatment of female stress urinary incontinence by Yiqi Suoquan soup[D]. BEIJING UNIVERSITY OF CHINESE MEDICINE, 2015.
- [25] JIANG Dao-bin; CHEN Fang. Discussion on origin and development of syndrome differentiation and treatment prescription of bladder cough [J]. *China Journal of Traditional Chinese Medicine and Pharmacy*, 2018, 33(4): 125-128.
- [26] Wang Mengqi, Yu Wei, Pu Baoping. Treatment of Bladder Cough from the Spleen and Stomach Theory[J]. *famous doctor*, 2019, (02): 47-47.
- [27] Zhang Lifang, Tang Shiqian, SUN Ruyi, et al. Clinical analysis of urinary flow rate and urinary flow rate curves in female patients with stress urinary incontinence [J]. *Chinese Journal of Clinical Obstetrics and Gynecology*, 2020, 21(04): 381-384.
- [28] FU Yingying. Clinical efficacy analysis of acupuncture in treating female patients with stress urinary incontinence[J]. *Contemporary Medicine*, 2022, 28(02): 174-176.
- [29] Kan W. J, Yuan A. H, Deng M. M, et al. Therapeutic efficacy of electroacupuncture combined with pelvic floor muscle training in the treatment of female mixed urinary incontinence[J]. *Shanxi Journal of Traditional Chinese Medicine*, 2022, 38(6): 44-45.
- [30] PENG Yu-bo1, SUN Dan1, HUANG ding-wen, et al. Efficacy Observation of the Treatment of Female Stress Urinary Incontinence Predominantly with Moxibustion at Back-Shu and Front-Mu Points [J]. *Shanghai Journal of Acupuncture and Moxibustion*, 2018, 337(7): 773-776.

- [31] Liu Zhan, Hu Rong, Yuan Guanghui, et al. Clinical Observation of Moxibustion plus Pelvic Floor Muscle Exercises for Postpartum Stress Urinary Incontinence [J]. Shanghai Journal of Acupuncture and Moxibustion, 2018, 37(2): 192-195.
- [32] QIAO Xue-qi; AN Jun-ming. The Efficacy of Heat-Sensitive Moxibustion in Combination with Pelvic Floor Muscle Exercise on Female Stress Urinary Incontinence [J]. Henan Traditional Chinese Medicine, 2019, 39(10): 1575-1578.
- [33] Yang Xiao-bo; An Jun-ming; Li Yu-jia, et al. Clinical effect of heat sensitive moxibustion combined with Kegel method in the treatment of female patients with mild to moderate simple stress urinary incontinence [J]. Clinical Research and Practice, 2020, 5(20): 143-146.
- [34] Zhu Chan. Clinical Observation on Thermal Moxibustion Combined with Pelvic Floor Muscle Rehabilitation Instrument in the Treatment of Postpartum Stress Urinary Incontinence [J]. GUANGMING JOURNAL OF CHINESE MEDICINE, 2023, 38(15): 3007-3010.
- [35] Hu D, Deng P, Jiao L, et al. Clinical Observation of Heat-sensitive Moxibustion Combined with Kegel Exercise Therapy for Female Stress Urinary Incontinence [J]. Acupuncture Research, 2017, 42(04): 338-341.
- [36] Gao Zhuwei, Yang Tingxian, He Junjing, et al. Clinical study on the treatment of stress urinary incontinence in qi deficiency by acupoint application[J]. Yunnan Journal of Traditional Chinese Medicine and Materia Medica, 2021, 42(6): 97-99.
- [37] Li MJ, Wang Y, Hu B, et al. Therapeutic efficacy of tonifying the kidney and Guquan powder acupoint patch combined with comprehensive nursing intervention on female stress urinary incontinence observed[J]. Hunan Journal of Traditional Chinese Medicine, 2017, 33(8): 119-120.