

# Advances in Appropriate Traditional Chinese Medicine Techniques for Stress Urinary Incontinence

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**Abstract:** Stress urinary incontinence (SUI) is one of the most prevalent types of pelvic floor dysfunction in women and significantly affects quality of life. In recent years, appropriate traditional Chinese medicine (TCM) techniques have been increasingly applied in the prevention and management of SUI because of their favorable safety profile, simplicity, and good patient adherence. Based on the TCM understanding of the etiology and pathogenesis of SUI, the current research progress of commonly used techniques, including acupuncture, moxibustion, and acupoint massage, is systematically summarized. This review aims to provide evidence-based references for clinical practice and future research.

**Keywords:** Stress urinary incontinence; traditional Chinese medicine techniques; acupuncture; moxibustion; acupoint massage

## 1. Introduction

Stress urinary incontinence (SUI) is defined as the involuntary leakage of urine during activities that cause a sudden increase in intra-abdominal pressure, such as coughing or laughing, in the absence of bladder dysfunction<sup>[1]</sup>. In women, pelvic floor support structures are often damaged during pregnancy and childbirth. These factors are considered major risk factors for the development of SUI<sup>[2]</sup>. In China, the overall prevalence of urinary incontinence among women aged over 18 years is approximately 33%, and nearly 50% of cases are classified as SUI<sup>[3]</sup>. Prolonged urine exposure may lead to perineal skin eczema, pruritus, and ulceration. Sleep disturbance and reduced sexual quality of life may also occur. In addition, the risk of genitourinary infections may be increased. Although SUI is not life-threatening, the associated stigma can significantly restrict social participation and daily activities. Negative emotions, such as anxiety and depression, are frequently reported. As a result, both physical and psychological health may be markedly affected<sup>[4,5]</sup>. According to the European Association of Urology (EAU) guidelines, non-surgical management is recommended as the first-line treatment for patients with mild to moderate SUI<sup>[6]</sup>. Therefore, alternative rehabilitation approaches that are simple, feasible, and easy to monitor have been increasingly explored worldwide. Appropriate traditional Chinese medicine (TCM) techniques represent non-pharmacological and non-surgical interventions. Unique advantages have been demonstrated in symptom relief and quality-of-life improvement. These approaches have gradually become a research focus. In this review, different appropriate TCM techniques are summarized to provide references for individualized, safe, and effective management strategies for patients with SUI.

## 2. Etiology and Pathogenesis

From a biomedical perspective, the development of SUI is closely associated with damage to pelvic floor support structures, weakening of urethral sphincter function, and abnormalities in neural regulation. Impairment in any of these components may lead to urinary incontinence. The major clinical risk factors include pregnancy, childbirth-related trauma, advanced age, obesity, menopause, chronic constipation, malnutrition, and chronic cough. According to the pressure transmission theory, when intra-abdominal pressure increases, the bladder neck and proximal urethra descend. Urethral closure pressure becomes lower than intravesical pressure, resulting in urine leakage<sup>[7]</sup>. The hammock hypothesis proposes that a hammock-like supportive structure beneath the mid-urethra maintains urethral closure. When this structure becomes weakened or defective, adequate support cannot be provided. During increased abdominal pressure, urethral closure fails, and SUI occurs<sup>[8]</sup>. In addition, pelvic floor injury in

multiparous women has been recognized as an important mechanism. Emerging molecular studies suggest that matrix metalloproteinases and aquaporins may also be involved in the pathogenesis of SUI.

Although the term “stress urinary incontinence” is not explicitly described in traditional Chinese medicine (TCM), similar conditions have been systematically documented under categories such as “involuntary urination” and “urinary incontinence.” Classical literature attributes the condition to deficiencies of the lung, spleen, liver, and kidney. Lung and spleen qi deficiency are considered to impair the regulation of body fluids. Liver dysfunction is believed to affect urinary control. Among these mechanisms, kidney qi deficiency is generally regarded as the fundamental cause of urinary incontinence. In TCM theory, congenital insufficiency, postpartum depletion of qi and blood, excessive physical exertion, chronic illness, and aging-related decline are considered major contributing factors. Although different theoretical interpretations exist, a consensus has been formed that the primary pathological location is the bladder. Normal urinary storage and voiding are believed to depend on the qi transformation function of the kidney. When kidney qi is sufficient, the bladder is able to maintain proper control of urine. When kidney qi becomes deficient, bladder regulation is impaired. The function of storage and control is weakened. As a result, involuntary urine leakage occurs. Therefore, kidney qi deficiency, impaired consolidation function, and loss of bladder control are considered the core pathogenesis of SUI in TCM<sup>[9,10]</sup>.

### 3. Advances in Appropriate Traditional Chinese Medicine Techniques for SUI

#### 3.1 Acupuncture Therapy

Acupuncture is one of the earliest and most systematically studied traditional Chinese medicine (TCM) techniques for the treatment of stress urinary incontinence (SUI). Previous clinical studies have shown that acupuncture can alleviate SUI symptoms by improving bladder–urethral control function<sup>[11]</sup>. The underlying mechanisms are believed to be associated with stimulation of specific acupoints on the body surface. Neural activity in corresponding regions may be activated. Pelvic floor–related nerve electrophysiological activity may be enhanced. Pelvic floor muscle strength may also be improved. Commonly used acupoints include Guanyuan (CV4), Zhongji (CV3), Sanyinjiao (SP6), Shenshu (BL23), and Qihai (CV6). Clinical evidence suggests that acupuncture may regulate pelvic floor nerve function and enhance pelvic floor muscle contraction, thereby reducing urine leakage. Several studies have further demonstrated that acupuncture combined with pelvic floor muscle training (PFMT) is more effective than PFMT alone in reducing urine leakage and improving quality of life<sup>[12,13]</sup>. Based on clinical experience, a therapeutic protocol known as the “six-needle pelvic floor method” was proposed for postpartum SUI<sup>[14]</sup>. The primary pathological basis was considered to be postpartum injury and loss of bladder control. Core acupoints included Zhongji (CV3), Guilai (ST29), Shuidao (ST28), Zhongliao (BL33), Huiyang (BL35), and Zhibian (BL54). Local acupoint selection was used to regulate bladder function. Sacrococcygeal acupoints were applied to stimulate the pudendal nerve and pelvic plexus. In addition, head acupoints such as Baihui (GV20), Shenting (GV24), and Benshen (GB13) were selected to regulate mental activity. Sanyinjiao (SP6) was used as an adjunct point. Through combined stimulation, overall body coordination was promoted and urinary control was enhanced. Experimental studies have provided further biological support for the therapeutic effects of acupuncture. Cai et al.<sup>[15]</sup> reported that acupuncture at acupoints located within the same neural segment as the bladder significantly improved urodynamic parameters in female rats with SUI. Increased electromyographic activity of the external urethral sphincter (EUS-EMG) was observed. Rhythmic contractions were promoted. Bladder–urethral function was consequently regulated. These findings suggest that acupuncture may exert its effects through neurohumoral regulation mechanisms and reflect the specificity of acupoint stimulation and somatovisceral reflex pathways. In addition, it has been reported that the combined application of sacral and abdominal acupoints may further enhance the clinical efficacy of PFMT in the treatment of SUI<sup>[16]</sup>.

#### 3.2 Moxibustion Therapy

Moxibustion is considered a safe and non-invasive traditional Chinese medicine (TCM) nursing technique. It is traditionally used to warm the interior, dispel cold, and tonify yang qi. Increasing clinical attention has been given to its application in the prevention and management of stress urinary incontinence (SUI) in women. Among various forms of moxibustion, umbilical moxibustion is centered on Shenque (CV8). Dual stimulation from moxibustion heat and herbal application is applied. This approach is believed to strengthen primordial qi and enhance bladder control. Clinical studies have shown that umbilical moxibustion combined with other rehabilitation interventions can significantly alleviate

urinary incontinence symptoms and improve treatment adherence<sup>[17]</sup>. In terms of specific techniques, the “raising yang and lifting sinking” method has been applied in elderly women with SUI attributed to kidney yang deficiency. Significant reductions in the average daily frequency of urinary leakage and the 1-hour pad test volume have been reported. Improvements in ICIQ-SF scores and TCM syndrome scores have also been observed. Overall symptom relief and quality-of-life enhancement were achieved. To further explore the clinical application patterns of moxibustion for SUI, Li et al.<sup>[18]</sup> conducted a data-mining analysis of 82 published studies. Kidney qi deficiency with failure of consolidation was identified as the most common syndrome type (54. 54%), followed by kidney yang deficiency (18. 18%) and spleen–kidney deficiency (13. 63%). Frequently selected acupoints included Guanyuan (CV4, 16. 33%), Zhongji (CV3, 16. 33%), Qihai (CV6, 15. 33%), and Shenshu (BL23, 12. 33%). These findings suggest that moxibustion treatment for SUI is primarily guided by the therapeutic principle of tonifying the kidney and reinforcing bladder control, with relatively consistent clinical strategies. In addition, ginger-partitioned moxibustion applied along the belt vessel was combined with pelvic floor muscle training for the treatment of mild to moderate SUI<sup>[19]</sup>. Significant clinical improvement was reported. The treatment site is located in the lower abdomen and is believed in TCM theory to connect the abdomen and lumbosacral region, regulate visceral function, and promote qi and blood circulation. Through these mechanisms, bladder control function may be enhanced and urinary continence restored.

### ***3.3 Acupoint Massage Therapy***

Acupoint massage is simple to perform and relatively low in cost. It is convenient for implementation by nursing staff in both hospital settings and community-based continuing care. Manual stimulation of commonly used acupoints, including Zhongji (CV3), Sanyinjiao (SP6), and Guanyuan (CV4), is applied. This intervention is believed to promote meridian circulation and improve local blood flow. Pelvic floor muscle function may therefore be enhanced, and urinary control may be improved. Clinical studies have indicated that pelvic floor muscle training combined with acupoint massage is effective in postpartum women with stress urinary incontinence (SUI)<sup>[20]</sup>. Improvements in voiding status and urodynamic parameters have been reported. Favorable clinical applicability has been suggested. Zhou et al.<sup>[21]</sup> demonstrated that acupoint massage combined with pelvic floor muscle training and biofeedback therapy effectively reduced clinical symptoms and improved urodynamic function in postpartum SUI patients. Furthermore, Fu et al.<sup>[22]</sup> reported that bionic electrical stimulation combined with acupoint massage significantly improved urodynamic indicators in patients with SUI. Overall therapeutic efficacy was enhanced.

### ***3.4 Other Appropriate Traditional Chinese Medicine Techniques***

Auricular acupressure involves stimulation of specific auricular points associated with the genitourinary system. It is considered to regulate visceral function and improve urinary control. The procedure is simple and is associated with good patient adherence. Therefore, it is suitable for long-term home-based management of stress urinary incontinence (SUI). It has been reported that the auricular region contains abundant neural-sensitive points and a rich vascular network. Stimulation of these areas may induce hemodynamic changes, regulate systemic blood circulation, and modulate neural activity in the central nervous system, thereby alleviating urinary incontinence symptoms<sup>[23]</sup>. He et al.<sup>[24]</sup> reported that auricular acupressure combined with magnetic stimulation achieved favorable clinical outcomes in postpartum SUI patients. Pelvic floor muscle strength was improved. The frequency and volume of urinary leakage were reduced. Quality of life was enhanced. Anxiety and psychological stress were also alleviated to some extent. These findings suggest potential synergistic effects. However, further high-quality studies are required to verify the stability and long-term efficacy of this combined intervention. In addition, other TCM techniques, such as cupping therapy and scraping therapy (Gua sha), have demonstrated potential adjunctive effects in some studies. Nevertheless, most available studies are limited by small sample sizes or methodological weaknesses. The therapeutic efficacy and underlying mechanisms remain to be clarified through rigorously designed clinical trials.

### ***3.5 Integrated Traditional Chinese Medicine Therapies***

In recent years, the research focus has gradually shifted from single-modality interventions to integrated therapeutic approaches. Two or more appropriate traditional Chinese medicine (TCM) techniques are frequently combined to enhance clinical efficacy. A meta-analysis indicated that combined TCM interventions, such as acupuncture plus moxibustion or umbilical moxibustion plus acupoint massage, are increasingly adopted in clinical practice<sup>[25]</sup>. Integrated therapy may improve pelvic

floor function through multiple pathways and targets. Greater overall efficacy has been reported in symptom relief, functional improvement, and quality-of-life enhancement compared with single interventions. Shen<sup>[26]</sup> further demonstrated that appropriate TCM techniques combined with Kegel exercises produced synergistic effects in postpartum women with stress urinary incontinence (SUI). Treatment durability appeared to be prolonged. This combined approach was also considered compatible with breastfeeding and postpartum recovery.

#### 4. Conclusion and Future Perspectives

Appropriate traditional Chinese medicine (TCM) techniques have demonstrated favorable safety profiles, clinical effectiveness, and good patient adherence in the management of stress urinary incontinence (SUI) in women. These approaches may serve as important complementary strategies to conventional medical treatment. The integration of multiple TCM techniques appears to enhance symptom relief and improve quality of life. Such combined interventions may provide broader clinical benefits compared with single-modality therapy. However, despite promising findings, several limitations remain. Many existing studies are characterized by small sample sizes, heterogeneous intervention protocols, and relatively short follow-up periods. The overall level of evidence remains limited. Future research should focus on well-designed, multicenter, large-scale randomized controlled trials. Standardized intervention protocols and unified outcome measures should be established. Long-term efficacy and safety should also be evaluated. In addition, the role of nursing professionals in the implementation of appropriate TCM techniques should be further strengthened. Standardization and clinical protocol development are needed to promote wider and more consistent application in clinical practice.

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