

# Research Progress on Clinical Effect of Acupuncture on Chronic Prostatitis/Chronic Pelvic Pain Syndrome

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**Abstract:** Chronic prostatitis / Chronic pelvic pain syndrome (CP/CPPS) is a common disease in men. It has a high incidence and a great impact on the quality of life of patients. It has become an important disease that threatens the physical and mental health of men. It belongs to the category of “essence turbidity” in traditional Chinese medicine. As a non-drug external treatment of traditional Chinese medicine, acupuncture has definite curative effect and high safety. By reviewing the relevant literature on acupuncture treatment of CP/CPPS in the past five years at home and abroad, it is found that acupuncture can significantly improve the clinical symptoms and quality of life of CP/CPPS, and has a wide application prospect. This paper makes a preliminary discussion on this, hoping to be helpful to acupuncture and clinical treatment.

**Keywords:** Acupuncture; prostatitis; chronic prostatitis; chronic pelvic pain syndrome

## 1. Introduction

Prostatitis is a common clinical disease with a high incidence. At present, the National Institutes of Health has divided prostatitis into four types: acute bacterial prostatitis, chronic bacterial prostatitis, CP/CPPS and asymptomatic prostatitis. CP / CPPS is the most common type, accounting for more than 90 % of all types [1]. And the data pointed out that the incidence of CP / CPPS can reach about 8.2 % [2]. This type of patients are usually accompanied by long-term, recurrent pain in the pelvic area, accompanied by urinary discomfort and other lower urinary tract symptoms, psychological problems and sexual dysfunction, and this type of disease has a long course of disease, easy to relapse and other characteristics [3], the impact on the normal life and health of patients is very large, but also increased the difficulty of clinical diagnosis and treatment. At present, the specific mechanism of CP / CPPS has not been clarified in clinical practice. In the past, the treatment of CP / CPPS was mainly based on western medicine empirical antibiotic treatment, analgesics, hormone preparations and  $\alpha$ -adrenergic receptor blockers, but the effect was usually not ideal, and there was a tendency to relapse after drug withdrawal.

## 2. Analysis of the etiology and pathogenesis in Chinese medicine

With the deepening of the research, the traditional Chinese medicine therapy is gradually applied to the treatment of CP / CPPS patients in clinical practice. Traditional Chinese medicine believes that prostatitis symptoms belong to “essence turbidity” and “stranguria”. It is believed that the main pathogenesis of the disease is the accumulation of dampness and heat toxin, the unfavorable gasification of kidney and bladder, and the obstruction of collaterals by blood stasis. Therefore, traditional Chinese medicine usually takes clearing heat and removing dampness, tonifying qi and activating blood circulation, regulating immune function as the key to the treatment of the disease. For a long time, acupuncture and moxibustion, as a classic traditional Chinese medicine therapy, has been the primary non-drug treatment choice for pain diseases, with good safety, and has gradually been widely used in the treatment of CP / CPPS patients. In view of this, this article reviews the application of acupuncture in patients with CP / CPPS.

### 3. Application of different acupuncture treatment in patients with CP / CPPS

#### 3.1. Filiform needle

By regulating related neurotransmitters and inhibiting the release of inflammatory factors, filiform needle can accelerate blood circulation, reduce the exudation of inflammatory substances, improve prostate edema and enhance the immunity of patients<sup>[4]</sup>. At the same time, it has many advantages such as rapid treatment effect and little side effects.

Li Bo et al<sup>[5]</sup> treated 42 patients with CP / CPPS. The acupuncture group was treated with acupuncture at Zhongliao(BL33), Huiyang(BL35), Shenshu(BL23) and Sanyinjiao(SP6), and was treated with small-amplitude lifting, thrusting, twisting, reinforcing and reducing manipulation for 8 weeks. After treatment, the total scores of NIH Chronic Prostatitis Symptom Index (NIH-CPSI) in the acupuncture group were lower than those in the sham acupuncture group ( $P<0.05$ ). The average flow rate (AFR) in the acupuncture group was higher than that in the sham acupuncture group ( $P<0.05$ ). Sun et al<sup>[6]</sup> divided 440 patients with CP / CPPS into acupuncture group and sham acupoint group. They selected bilateral Zhongliao(BL33), Huiyang(BL35), Shenshu(BL23) and Sanyinjiao(SP6), and received a total of 20 times within 8 weeks, 30 minutes each time. The total response rate of the acupuncture group was 60.6%, while that of the sham needle group was 36.8%. At the same time, the acupuncture group provided moderate clinical symptom relief, and continued to be effective during the follow-up 24 weeks( $P<0.05$ ). Lu Jianhua et al<sup>[7]</sup> randomly divided 120 patients into two groups, the treatment group took Guanyuan(CV4), Zhongji(CV3), Zhibian(BL54) and other points. The middle pole and rank side points were lifted, inserted and twisted, and obliquely punctured downward to make the acupuncture sensation radiate to the perineum. The remaining acupoints were treated with mild reinforcing-reducing manipulation, retaining the needle for 30 min, once a day for 28 days. The control group was treated with oral Propranolol, and the total effective rate was 95%, which was significantly higher than 80% of the control group.

#### 3.2. Filiform needle combined with drugs

Many scholars have adopted a combination of acupuncture and medicine in clinical practice to better use TCM syndrome differentiation and treatment to achieve the purpose of improving the therapeutic effect. Combining the basic theory of traditional Chinese medicine with syndrome differentiation and treatment, combined with the characteristics of “four qi and five flavors” and “ascending, descending, floating and sinking”, combined with drugs to work together, plays an important role in the prevention and treatment of diseases.

In the study, Wang Li et al<sup>[8]</sup> treated CP / CPPS patients with acupuncture combined with drugs, while giving the patients Shaba Brown Soft Capsule treatment, the acupoints Zhongji(CV3), Shenshu(BL23), Huiyang(BL35), Zhongliao(BL33), Sanyinjiao(SP6), Yinlingquan(SP9) and other acupoints were selected, and the acupuncture treatment was carried out with the method of reinforcing and reducing. The needle was retained for 30 min, and the treatment was performed once every 15 min for 3 months. The results showed that the NIH-CPSI score, International Index of Erectile Function-5 (IIEF-5) score, Maximum Flow Rate (MFR) and AFR of the combined group treated with acupuncture combined with drug therapy were better than those of the Shaba Brown Soft Capsule group treated with drug alone ( $P<0.05$ ), suggesting that acupuncture combined with drug therapy is more effective in the treatment of CP / CPPS patients. Combined with Shaba brown soft capsule, it can play a synergistic role and further improve the therapeutic effect of CP / CPPS. According to the random grouping method<sup>[9]</sup>, 84 patients with CP / CPPS were divided into three groups: group C : tamsulosin hydrochloride group, group B : acupuncture combined with medicine group, group A : acupuncture combined with medicine combined with Shao 's Huayu Ruanjian Guqi Decoction group, treat for 6 weeks. The results of the three groups of follow-up showed that the levels of tumor necrosis factor- $\alpha$  (TNF- $\alpha$ ), interferon- $\gamma$  (IFN- $\gamma$ ), interleukin-12 (IL-12), prostate volume and prostate transition zone volume in groups A and B were significantly lower than those in group C ( $P<0.05$ ), and AFR and MFR were significantly higher than before ( $P<0.05$ ). Ma Yong et al<sup>[10]</sup> used acupuncture combined with traditional Chinese medicine to treat 30 patients with CP / CPPS of damp-heat stasis type, and the other 30 patients were treated with tamsulosin hydrochloride capsules. The results showed that after treatment, the NIH-CPSI score, Self-rating Anxiety Scale (SAS) score and Self-rating Depression Scale (SDS) score of the acupuncture-medicine group were better than those of the western medicine group ( $P<0.05$ ). The improvement of clinical symptoms in the acupuncture-medicine group was significantly better than that in the western medicine group ( $P<0.05$ ). 60 patients with CP / CPPS were divided into two groups<sup>[11]</sup>. The control group was treated with

levofloxacin capsule orally. The treatment group was treated with acupuncture at Guanyuan(CV4), Zhongji(CV3), Shuidao(ST28) and other acupoints combined with Bazheng Powder. After 4 weeks of treatment, it was found that the treatment group was better than the control group in improving the clinical symptoms and reducing inflammatory factors ( $P < 0.05$ ).

### 3.3. *Electroacupuncture*

Electroacupuncture is also a common method for clinical treatment for CP / CPPS. Electroacupuncture can not only improve the efficacy of filiform needles and reduce the demand for continuous twisting needles, but also expand the scope of acupuncture and improve the efficacy through the effect of electrical stimulation.

In the study of Xia Shunyao et al <sup>[12]</sup>, 70 patients with CP / CPPS were treated as an example. The control group was treated with levofloxacin hydrochloride tablets and tamsulosin hydrochloride sustained-release capsules. The observation group was given mind-regulating method combined with conventional acupuncture, and acupuncture was performed at Qihai(CV6), Guanyuan(CV4), Zhongji(CV3), Zusanli(ST36) and other acupoints. After qi was obtained, electroacupuncture was performed on bilateral waterways. Both groups were treated for 4 weeks. The results showed that the NIH-CPSI score, white blood cell count in prostatic fluid and Hamilton Depression Scale (HAMD) score in the observation group were significantly lower than those in the control group ( $P < 0.05$ ), indicating that the overall clinical effect of acupuncture on CP / CPPS was better than that of the control group. Zhang Yiming et al <sup>[13]</sup> treated type IIIB chronic prostatitis for 2 months, and compared the different curative effects of electroacupuncture combined with biofeedback group, biofeedback group and control group. Acupoints : Sanyinjiao(SP6), Zhibian(BL54), 3 times a week for 2 months. The results showed that NIH-CPSI score, quality of life (QoL) score and HAMD score were significantly lower than those of biofeedback group and control group ( $P < 0.05$ ). Liang Qifang et al <sup>[14]</sup> randomly divided 70 patients into acupuncture-medicine group and drug group for comparison. The acupuncture-medicine group was treated with Guanyuan, Sanyinjiao, Yinlingquan combined with tamsulosin hydrochloride. The treatment results showed that the acupuncture-medicine group could significantly improve the TCM syndrome score and NIH-CPSI of CP / CPPS patients. The total effective rate of clinical efficacy was 90.3%, which was higher than 80.0% of the drug group ( $P < 0.05$ ). Song et al <sup>[15]</sup> treated CP / CPPS patients for 8 weeks. The control group was treated with levofloxacin hydrochloride tablets. The combined group was treated with electroacupuncture combined with laser and drugs. Guanyuan(CV4), Zhongji(CV3) and Huiyin(CV1) acupoints were selected. The NIH-CPSI score, IIEF-5 score, MFR, AFR and prostatic massage fluid index of the two groups were compared. It was concluded that the combined treatment was superior to the control group in improving the efficacy index of CP / CPPS patients ( $P < 0.05$ ).

### 3.4. *Thumb-tack needle*

Due to its characteristics of subcutaneous embedding and continuous curative effect, thumbtack needle has little damage to patients, high compliance, and good curative effect on pain and functional diseases. It is widely used in the treatment of many chronic diseases <sup>[16]</sup>.

Zhang Xiaojuan et al <sup>[17]</sup> divided 50 patients into control group and observation group. The control group was treated with auricular point pressing beans combined with drugs, and the observation group was treated with intradermal needle therapy on the basis of the control group. The 0.2 mm × 1.2 mm intradermal needle was used to select Zhongji(CV3), Sanyinjiao(SP6) and Panguangshu(BL28), pressing 3-4 times a day, 1 min each time ; the total effective rate of the observation group was 92 %, which was significantly higher than that of the control group (68%) ( $P < 0.05$ ). The pain symptom score, urination symptom score, quality of life score and NIH-CPSI total score were significantly lower than those in the control group ( $P < 0.05$ ). Wan Yongsheng et al <sup>[18]</sup> took tamsulosin hydrochloride capsules as the control, and the treatment group was treated with needle embedding. After 4 weeks of treatment, the curative effect was followed up. Result shows that the NIH-CPSI score and clinical symptoms of the two groups were improved. The overall efficacy of the treatment group (93.75%) was better than that of the control group (68.75%).

## 4. **Conclusions**

In a word, CP / CPPS is a common disease in adult males. With the improvement of living standards and the change of environment, its impact on male health and quality of life cannot be underestimated.

Actively exploring effective means to treat the disease is the focus of clinical treatment. Throughout the clinical studies of acupuncture and moxibustion in the treatment of CP / CPPS in recent years, the application of acupuncture and moxibustion in traditional Chinese medicine has provided an effective path for the treatment of CP / CPPS, and has greatly improved the clinical symptoms of patients and improved the therapeutic effect. As a traditional Chinese medicine therapy, acupuncture has many advantages in the treatment of CP / CPPS, such as definite curative effect, less adverse reactions and rapid treatment effect. Among them, Guanyuan (CV4), Sanyinjiao(SP6), Zhongji(CV3) and Shenshu(BL23) are the most frequently selected in the treatment of CP / CPPS [19].

In the future, we should continue to explore the application of acupuncture and moxibustion therapy in patients with CP / CPPS, and flexibly apply acupuncture and moxibustion according to the patients' condition.

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