

## Moxibustion May Be a Potentially Effective Treatment for Chronic Scrotal Content Pain? A Case Report

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### Abstract

**Background:** Chronic scrotal content pain (CSCP) is a syndrome that seriously affects the quality of life in men. But in most men, there is no obvious structural abnormality and there may not be any identifiable pain on palpation, even medications and surgeries are not 100% effective and maybe cause other problems. In addition to medications and surgical treatment, any other effective method needs to be a therapeutic option, too.

**Objective:** To discuss a 36-year-old patient with chronic scrotal content pain for 3 years, with a view to introduce a potentially effective treatment for Chronic scrotal content pain.

**Conclusions:** Many pain syndromes can be treated with removal of the original stimulus. For the patients we treat, moxibustion is effective for the treatment of Chronic scrotal content pain caused by the cooling on the portion. Therefore, an effective conservative treatment may be a worthwhile option to try.

**Keywords:** Chronic Scrotal Content Pain, CSCP, Moxibustion

### Introduction

Chronic scrotal content pain (CSCP) is defined as an intermittent or continuous, one or both sides testicular pain for at least three months that causes the patient to look for medical help [1]. CSCP can seriously affect the life quality of patients. Depression is frequently found in these patients [2]. Although CSCP may occur at any age, most of patients are found in their mid- to late thirties [3]. Clinical examination usually demonstrates a tender testicle, epididymis, and/or cord structures, but in most men, there is no obvious structural abnormality and there may not be any identifiable pain on palpation [4].

The cause of CSCP is more complex, including varicocele, spermatocele, tumor, torsion, infection, rarely hydrocele, and so on. CSCP has wide variety of treatments, including medication, surgical treatment, acupuncture and pelvic floor physical therapy [5-8]. Due to surgical treatments such as orchidectomy and epididymectomy are associated with different success rates and are considered controversial, most contemporary authors agree

that orchiectomy is a treatment of last resort [9, 10]. However, medication is prone to drug resistance or other side effects. Therefore, treatment of idiopathic CSCP remains a therapeutic dilemma.

Moxibustion is a treatment that originated in China. It is an important treatment modality in Chinese Medicine treatment that stimulates acupoints with the heat energy of a burning herbal preparation [11, 12]. The absorption of the therapeutically active components of the herbal preparation also contributes to the effect of moxibustion. In Chinese Medicine theory, moxibustion treatment promotes qi stimulation and resolves qi stagnation at an acupoint [12]. Although moxibustion is not well-known in European countries, it may have been used there in the distant past; several soot marks were found on the body of Ötzi the 'Tyrolean Ice Man', half of which were coincident with classic acupuncture points [13]. A number of studies have shown moxibustion has good therapeutic effect in the treatment of painful diseases. Such as a multi-centre, non-blinded, parallel-group, randomised

controlled trial showed moxibustion may improve pain, function and quality of life in knee osteoarthritis(KOA)patients [14]. Another randomized controlled trial confirmed that moxibustion is effective in treating primary dysmenorrhea [15]. In addition, the other two RCTs suggested positive effects of indirect or direct moxibustion on pain in scleroma or herpes zoster compared to drug therapy, respectively [16].

In this article, we aim to describe our treatment on one patient and to introduce a potentially effective treatment for patients with CSCP. We hope that it can provide help to patients with similar conditions mentioned in this article.

## Materials and Methods

### Patient

The patient was a 36-year-old man, a college teacher. The patient described when he finished a long road cycling (about 340 km) about three years ago(2015), the right testis started to ache. He stated that it was raining at that time, and the perineum contacted the wet and cold cushion for a long time(about 13 hours) when the pain began. The pain is intermittent over the past several years, sometimes it is obvious, sometimes not. Especially after sedentary and when the weather gets cold it gets worse. He characterized the pain felt like a dull swelling. After more than a year the patient did not do any examinations, the pain was intermittent. Until Nov 27, 2016, the patient felt the pain of the right testis increased and lasted for several days and worried about the impact on fertility, he went to the hospital to do a semen examination, the semen analysis report was shown in the Table. No obvious abnormalities in the report except the PH. He thought that there was no other discomfort except that pain, and the result of the semen analysis had no obvious abnormalities, so he did not select any treatment including painkillers. Then the pain gradually eased, similar to the situation before the worse of this time. Until Jan 12, 2018, when the pain got worse and lasted for three days, he came for seeking medical help.

**Table 1: Semen Analysis Report of the Patient**

Check item	Results	Reference
Semen volume(ml)	2.8	2-6
Color	milky	milky
Liquefaction time(min)	20min	<60
Activity(grade)	a:6.4 b:58 c:27.5 d:8.1	a, b, c, d
Sperm survival rate(%)	80%	>75%
The total number of sperm/L	45×10 <sup>9</sup> /L	(40-100)×10 <sup>9</sup> /L
WBC	2-3/HP	≤5/HP
Deformity sperm	18%	20%
PH	6.5	

### Treatment

First, put the moxa (Ai De Run natural moxa products co.Ltd, CHINA, 30:1 (20g) into the moxibustion box (with a size of

30cm×17cm×16cm) flatly. The area of the moxa can cover the patient's entire genital (about 17cm×15cm×1cm in our therapy), as shown in Figure 1. Second, light the moxa scatteredly (Figure 2), then close the lid of the moxibustion box, leave one millimeter gap. Third, let the patient lie on the treatment bed, the moxibustion box was placed on the patient's genitals as shown in Figure 3. The burning moxa is about 10cm from the patient's scrotum. Make sure the genitals were fixed to one side to prevent burns. Last, communicate temperature changes with patients at any time, do not let the patient scald. If the patient feels too hot, he also can raise the moxibustion box (about 2-3cm) for a moment by himself. When the moxa burned down, the treatment is over.



**Figure 1: Schematic of Moxa placed.**



**Figure 2: Schematic of Light the moxa.**



**Figure 3: Schematic of moxibustion treatment.**

## Result

Visit 1: Jan 12, 2018. A chiropractor worked with the patient on alignment concerns. The patient did not want to take painkillers, but received physical therapy. He was treated with moxibustion. After the moxibustion treatment, the patient said the pain of the right testicular has been significantly reduced, but palpation still mild pain.

Treatment 2: Jan 14, 2018. The patient said that after the first treatment, his pain did not continue to increase, and always maintained the situation after the first treatment. So he accepted the same moxibustion treatment. After the second moxibustion treatment, the patient said the pain of the right testicular disappeared, palpation without pains too.

Treatment 3: Jan 17, 2018. The patient had no pain at this time. He hoped that the effect can be consolidated, so he came to do the third moxibustion treatment. No further treatment after this treatment.

## Discussion

After listening to the patient's medical history, we made physical examination for the patient. The patient is a well-nourished man, 170cm tall, who weighs 75 kg (T:36.7), HR:76 beats/min, R:16 beats/min, BP:134/86 mmHg. The development of skeletal is normal, pelvic and sacroiliac joints without significant deformity. Scrotum and bilateral testis shows no swelling. There is no significant difference between the sizes of bilateral testis. The tenderness of the right testis is significant. Straight leg lift test (-).

The initial differential diagnosis included epididymitis, varicocele, testicular tumor, and lumbar radiculopathy. No formal imaging was obtained during this time. The patient was treated with moxibustion to help reduce the pain. But after treatment, he reported an obvious pain relief when he stood on the ground.

Under the condition of insufficient imaging examinations, only based on the initial physical examination, and a previous semen analysis report, it is difficult to diagnose a patient's specific etiology of CSCP. But from the perspective of Chinese medicine, we considered the patient had CSCP due to the genital was affected by the cold, wet and the oppression of Long-term riding, causes Qi and Blood of the partial blocked, the condition in Chinese medicine was known as "cold stagnates liver meridian". Because the patient has a genitals cold history, Chinese medicine believes that cold syndrome should be treated by warm method. So patient gets effective treatment. If symptoms had not improved, further diagnostic tests and referral would have been obtained. However, in this case, costs were controlled and the patient had been cured.

Because of its poorly understood pathophysiology and variable response to current therapeutic options, CSCP remains a challenge for clinicians. Up to 50 % of patients will present without identifiable etiology [1, 15-18]. Researchers found that 80% of patients continued to have pain following orchiectomy for idiopathic chronic orchialgia. Therefore, treatment of idiopathic CSCP remains a therapeutic dilemma. Acupuncture and moxibustion doctors working in a wide range of health care settings are likely to encounter different populations. We must be

aware that symptoms can be presented in many ways. If treatment cannot solve the superficial symptoms, we will selectively use tests and techniques to identify causes. In this case, a comprehensive review of all systems was not indicated, because he had no obvious red flags based on the chronicity of the condition. Additionally, after one moxibustion treatment, his pain has been significantly reduced. If there was no change in symptoms that might indicate a possible organ or organ system problem, we would make appropriate medical referral.

The effectiveness of moxibustion mainly comes from patients' physiological responses to heat stimulation generated by burning moxa, and chemical stimulation of the pharmaceutical components in mugwort leaves [19-22]. Thus, possible underlying mechanisms of moxibustion can be explained by these temperature-related and non-temperature-related factors [15]. It is clear that the normal function of the testis is temperature-dependent. The generation of sperm needs a temperature below the abdominal temperature. In most mammals including humans, the human relies on the scrotum outside the body cavity to keep the temperature of the testicular 2 to 8 ° C below the body's core temperature. Although many studies shown that testicular temperature increasing will reduce the quality of semen but some researchers also think short-term heat stress sperm damage is reversible [23-26]. So we believe that a distance and temperature control of short-term moxibustion does not cause irreversible spermatogenic disorders in patients. It is worth trying to treat CSCP. Of course, we also recommend that patients treated with this method should have no plan of birth in the short term, such as within three months.

We will continue to follow-up of the patients in order to observe the long-term curative effect. In addition, we will continue to treat more similar patients. With comprehensive and systematic evaluation of the effect of moxibustion in the treatment of CSCP, we will carry out more relevant basic research to observe the mechanism of its efficacy and the impact on sperm quality.

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