

Analgesic Efficacy of Acupuncture on Chronic Pelvic Pain

Subjects: Others

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Chronic pelvic pain (CPP) is the pain occurred in the pelvic region longer than six months. Acupuncture, an important intervention method in traditional Chinese medicine (TCM), is nowadays practiced worldwide for various diseases, especially in pain management.

Keywords: chronic pelvic pain ; pain management ; acupuncture

1. Introduction

Chronic pelvic pain (CPP) is pain occurring in the pelvic region for longer than six months. CPP can manifest as cyclic or non-cyclic pain that may be associated with symptoms suggestive of lower urinary tract, sexual, bowel, myofascial, or gynecologic dysfunction ^[1]. The prevalence rate of CPP varies around the world. A previous study from the World Health Organization reported that the prevalence rates of non-cyclic CPP ranged from 2.1% to 24%, of cyclic CPP (associated with dysmenorrhea) ranged from 16.8% to 81%, and of intermitted CPP (associated with dyspareunia) ranged from 8% to 21.1% across different countries or regions ^[2]. Another study reported that the prevalence rate of CPP in females may be twice as high as in males ^[3]. A previous study using the United Kingdom primary care database reported that the annual prevalence of non-cyclic CPP in females may have been as frequent as migraine, back pain, and asthma between 1991 and 1995 ^[4]. It has been estimated that the direct annual medical cost (physician visit plus health care expenditure) and indirect economic lost (time lost from work) of CPP in 1994 were 2.8 billion and 555.3 million in the United States, respectively ^[5]. Thus, CPP is a common problem which may cause significant socioeconomic losses.

The management of CPP is challenging. A recent survey of the members of Royal College of Obstetricians and Gynaecologists reported that 45% responders considered the management of CPP in women in the United Kingdom is 'poor' or 'very poor' ^[6]. In addition, more than half (51%) of responders considered that 'Pain management' to be the most important aspect for the care of CPP in women, even above the 'identification of cause of pain'. Non-surgical intervention for CPP often focus on pain relief if the cause of CPP is unknown ^[7]. Pharmacotherapy for the CPP may include prescript of analgesics, hormonal therapies, anticonvulsants, and/or antidepressants to relieve chronic pain and associated mood and sleep symptoms ^[8]. On the other hand, the non-pharmacotherapy also has been recommended to treat CPP, including physiotherapy, cognitive behavioral therapy, dietary therapy, neuromodulation, pain education, and lifestyle advice ^{[9][10]}. However, monotherapy may not be adequate for the management of CPP, and multidisciplinary approaches have been more recommended ^{[9][10][11]}.

Acupuncture, an important intervention method in traditional Chinese medicine (TCM), is nowadays practiced worldwide for various diseases, especially in pain management. An individual patient data meta-analysis study with large sample size (with 17,922 patients) reported that acupuncture intervention has more analgesic effective than sham and no acupuncture intervention for back and neck pain, osteoarthritis, and chronic headache ^[12]. Similar results have been reported in a recent updated analysis (with 20,827 patients) for nonspecific musculoskeletal pain, osteoarthritis, chronic headache, or shoulder pain ^[13]. Furthermore, other meta-analysis studies have also reported superior efficacy of acupuncture intervention for the relief of postoperative pain ^[14], myofascial pain ^[15], cancer-related pain ^[16], as well as primary dysmenorrhea ^[17], endometriosis ^[18], irritable bowel syndrome ^[19], and chronic prostatitis/chronic pelvic pain syndrome (CP-CPPS) ^[20].

2. Analgesic Efficacy of Acupuncture on Chronic Pelvic Pain

Although different pain assessment methods have been conducted, acupuncture intervention has shown better treatment efficacy than control intervention in pain management of CPP. Since almost all acupuncture methods (except laser acupuncture) have revealed better treatment efficacy than control intervention on CPP, the analgesic effect of acupuncture

might be underpinned by multiple mechanisms at different levels of nervous system. Previous studies have indicated that acupuncture analgesia may be associated with neural activity, neurotransmitters, and cytokines in the peripheral, central and autonomic nervous systems [21][22][23]. Although the possible mechanisms between different acupuncture interventions and the possible correlations represented among these RCTs cannot be probed in the present study, it seems that the analgesic effect of acupuncture intervention on CPP may be more contributed from the central mechanisms than the peripheral mechanisms. This notion is supported by the fact that more remote but not local acupoints were selected for acupuncture treatment in these RCTs. In TCM, it is well known that different acupoints may have different effects on the body. These acupoints have been noted for their curative effects that can produce a certain clinical effect regardless of the intervention method applied. Hence, more studies are needed to clarify the possible contributions from central and peripheral mechanisms to optimize the treatment effect of acupuncture.

Moreover, the pain from CPP can be much relieved by acupuncture with monotherapy compared to control interventions. Acupuncture treatment is flexible and widely used, and pain control is one of the main indications of acupuncture treatment, especially for chronic pain [13]. The clinical pain management efficacy of acupuncture, regardless of the intervention method, was better than that of Western medication and TCM medication, and have trans of better efficacy than standard care. It has been suggested that combining different approaches may be one of the more effective treatment strategies for CPP [9][10][11]. Results further reveal that acupuncture can relieve the pain of CPP whether used in adjunctive therapy or monotherapy. In clinical practice, acupuncture has the characteristics of being able to cooperate with other treatment methods, and different acupuncture intervention process and methods can also be combined with each other in most situations. Acupuncture treatment is characterized by low cost and few side effects [24][25]. Acupuncture may not only beneficial for pain management on CPP even conducted with the strategy of monotherapy, but also may lower the direct or indirect huge medical resource consuming and/or personal economic costs.

There are many causes of CPP, including anatomical, functional, degenerative, organic and other different causes [1]. Acupuncture-related treatments can generally alleviate the pain of CPP with different etiologies. Although acupuncture approach is generally effective in the treatment of CPP, there are very few published literatures on specific acupuncture methods. In the future, a focus on specific acupuncture methods for various causes of CPP could be explored. Large-scale or multi-center RCTs can be considered to further verify the clinical efficacy of acupuncture for pain management in CPP. These results may help to gain a better understanding of the underlying mechanisms of acupuncture treatment on CPP and verify the cost-effectiveness between acupuncture compared to other interventions.

3. Conclusions

Acupuncture intervention effectively help CPP patients on their pain management. The various methods of acupuncture, e.g., MA, EA, catgut implantation, moxibustion, abdominal acupuncture, and ear acupuncture, have higher treatment efficacy than Western medication or TCM medication. Moreover, the monotherapy of acupuncture has a higher efficacy for pain management than control interventions for CPP, as well as recommended adjunctive therapy. These results indicated that acupuncture may have beneficial effects for pain management of CPP, even when administrated as a monotherapy. Acupuncture may be potentially advantageous for patients who are intolerant to drugs, experience refractory pain, or have comorbidities, and it may alleviate the psychological symptoms.

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