

Progress of Research on External Treatment Methods of Pediatric Asthma in Chinese Medicine

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Abstract: External treatment methods of traditional Chinese medicine (TCM) are characterized by holistic philosophy, evidence-based treatment, symptomatic and fundamental treatment, comprehensive regulation, safeness and effectiveness, which provide new ideas and methods for clinical treatment. However, the external treatment methods of Chinese medicine still need to be further studied and improved in order to better serve the patients. This paper analyzes the advantages of external Chinese medicine applied in the treatment of pediatric asthma through a brief introduction of external Chinese medicine and its characteristics, combined with the pathogenesis of pediatric asthma, and on this basis proposes some specific application methods, providing certain reference for the treatment of pediatric asthma.

Keywords: Pediatric Asthma; External Treatments of Chinese Medicine.

1. Introduction

External treatment methods of Chinese medicine have a long history and unique advantages, and their efficacy has been confirmed by a large number of clinical practices. External treatment methods such as acupuncture, massaging, cupping, moxibustion, herbal application and scrape therapy feature simple operation, wide scope of application and obvious therapeutic effect, which have important therapeutic value for pediatric asthma and other diseases.[1] In clinical practice, doctors should choose the appropriate external treatment method for treatment according to the patient's specific situation and individual differences. Pediatric asthma is a common respiratory disease, and external treatment methods of Chinese medicine have unique advantages in the treatment of pediatric asthma. In this paper, we will review the research progress of pediatric asthma external treatment methods of traditional Chinese medicine in recent years, including acupuncture, cupping, acupoint patch, auricular points pressing, massage, acupoint embedding, Qigong, external application of traditional Chinese medicine and traditional Chinese medicine fumigation, and so on.[2]

2. Introduction to External Treatments in TCM

External treatment methods of Chinese medicine refer to the application of medicines, maneuvers or instruments to specific parts of the patient's body surface or acupoints through non-oral means in order to treat diseases. These methods have a long history and wide application in Chinese medicine and have unique curative effects on some common diseases. They are characterized by holistic philosophy, evidence-based treatment, symptomatic and fundamental treatment, comprehensive conditioning, safeness and effectiveness. These features will be introduced one by one below.

2.1. Holistic Philosophy

External treatment methods of Chinese medicine follow the holistic philosophy of Chinese medicine, which holds that the human body is an organic whole with interconnections and

interactions among various parts, organs, tissues and systems. Therefore, when carrying out treatment, external treatment methods of Chinese medicine not only focus on localized lesions, but also on regulating the whole body in order to improve the overall quality and resistance of patients. External Chinese medicine treatments guided by the holistic philosophy can formulate a more comprehensive and reasonable treatment plan from a holistic perspective. [3]

2.2. Evidence-based Treatment

The external treatment methods of Chinese medicine emphasize evidence-based treatment, that is to say, according to the patient's symptoms, signs and constitution and other factors, a comprehensive analysis is conducted to formulate a personalized treatment plan. Diagnosis and treatment include identifying the cause, nature, location, severity and urgency of the disease, and adopting corresponding external treatment methods according to different situations. [4] For example, different medicines and dosages are selected according to different physiques, or different external treatments are chosen according to the nature of the disease for personalized treatment.

2.3. Symptomatic and Fundamental Treatment

The external treatment methods of Chinese medicine focus on both the symptoms and the root cause of the disease, i.e., in treating the disease. They focus on both the relief of symptoms and the fundamental treatment of the disease. External treatments achieve the goal of treating the root cause of the disease by regulating the functions of the body's Qi and blood, meridians and internal organs. In addition, the external treatment methods of Chinese medicine also emphasize the combination of prevention and treatment, helping patients to establish a healthy lifestyle, improve the body's resistance, and prevent the recurrence of the disease.

2.4. Comprehensive Regulation

External treatment methods of Chinese medicine are characterized by comprehensive regulation. On the one hand, external treatment methods act on the human body through a variety of means, such as medication, acupuncture, massage, cupping, etc., to achieve synergistic therapeutic effects; on the

other hand, external treatment methods of Chinese medicine pay attention to regulating the internal environment of the organism, such as regulating the Qi, blood, meridian and internal organs, so as to make the organism realize balance. This comprehensive regulation of the characteristics of the external treatment of traditional Chinese medicine has multiple roles, which can be widely used in the treatment of various diseases.

2.5. Safe and Effective

External treatment methods of Chinese medicine are characterized by safeness and effectiveness. Most of the external treatment methods of Chinese medicine use natural medicines and physical therapies, which have fewer side effects and higher safeness compared with medicines. In addition, external treatments of TCM emphasize evidence-based treatment and individualized treatment, and can formulate appropriate treatment plans for the specific conditions of patients, so they have more obvious curative effects. At the same time, the operation of external treatment methods of Chinese medicine is simple and easy, which is convenient for patients to use on their own, and has wide application prospects.

3. Advantages of Using External Chinese Medicine to Treat Pediatric Asthma

3.1. Multiple External Treatments Available

There are a variety of external treatments for pediatric asthma in Chinese medicine, such as acupuncture, cupping, acupoint plastering, auricular points pressing, massage, acupoint embedding, Qigong, external application of traditional Chinese medicines, and fumigation of traditional Chinese medicines, etc., which can be chosen according to the specific conditions of the child and individual differences.

3.2. Direct Effect on the Lesions

The external treatment of Chinese medicine acts directly on the acupoints or lesions on the body surface of the child, which can quickly reach the location of disease and directly play the role of dredging meridians and collaterals, regulating Qi and blood, anti-inflammatory, expectorant, asthma and other effects, so as to improve the symptoms of asthma in children. They feature high integrity: external treatment methods of Chinese medicine generally use natural medicines and physical therapies, which will not cause much damage to the body of the child, and compared with the use of drugs, their safeness is higher.

3.3. Improvement of the Immunity of the Child

External Chinese medicine treatments can better prevent and treat pediatric asthma by regulating the immune function of the child and strengthening the body's immunity. At the same time, external treatment methods of TCM not only treat the asthma symptoms themselves, but also focus on regulating the body's internal functions, so that the comprehensive treatment effect is better. In summary, external treatment methods of TCM for treating pediatric asthma have a variety of advantages, including a variety of external treatments to choose from, a direct effect on the lesion, a high degree of safeness, enhancement of the child's immunity, and a good effect of the comprehensive treatment. In clinical practice, doctors should choose the appropriate

external treatment method for treatment according to the specific conditions and individual differences of the children.[5]

4. Major External Chinese Medical Treatments for Pediatric Asthma

4.1. Acupuncture

Acupuncture is an effective treatment for pediatric asthma, and research has progressed rapidly in recent years. The principle of acupuncture in treating pediatric asthma mainly includes regulating neuroendocrine, improving respiratory function, and reducing inflammatory response. [6] By stimulating specific acupoints, it can regulate the body's endocrine system and promote the balanced secretion of hormones, thus improving respiratory function and relieving asthma symptoms. At the same time, acupuncture can also inhibit inflammatory response and relieve airway hyperresponsiveness for asthma treatment. According to the literature, acupuncture treatment points include: Dingchuan, Feiyu, Danzhong, and Zusanli. Acupuncture methods include: millimeter needle, moxibustion, and acupoint injection. A randomized controlled trial showed that acupuncture treatment for pediatric asthma was effective in improving symptoms, reducing the number of asthma attacks, and improving quality of life. It should be noted that in the process of treating pediatric asthma with acupuncture therapy, the following matters need to be paid attention to: strengthening the observation and care, paying attention to the response of the child, and timely responding to the emergence of uncomfortable symptoms; avoiding excessive fatigue, preventing the child from fatigue and resistance to decline due to the higher risk of infection; preventing infections, maintaining a clean environment, avoiding cross-infections; strengthening the protective measures, according to the climate change to put on or off the clothes to avoid too much coldness or heat. At the same time, we should actively search for the triggers and remove the various factors that cause asthma.

4.2. Cupping

Cupping therapy can improve the symptoms of pediatric asthma, and its mechanism may be related to improving immune function, relieving muscle spasm, and promoting local blood circulation. Through negative pressure, cupping can make local tissues congested, edema, capillary rupture and other physiological reactions, so as to regulate Qi and blood, soothe muscle tension, and achieve the effects of anti-inflammatory, cough, asthma and so on. Cupping can improve lung circulation, enhance lung immunity and relieve asthma symptoms, thus treating and preventing asthma attacks. According to the literature, the dosage and duration of cupping treatment varies with individual differences, generally 7-10 days as a course of treatment, daily or every other day. During the cupping process, attention should be paid to the control of negative pressure and cupping time to avoid skin damage. At the same time, it is important to keep the child emotionally stable and avoid crying due to pain or discomfort. During cupping treatment, other risk factors for asthma, such as allergens and chronic inflammation, should be actively treated.

4.3. Acupressure

Acupressure therapy achieves the purpose of treating

pediatric asthma through the dual action of drugs and acupoints. The principle of acupoint patch therapy for pediatric asthma mainly includes two aspects: acupoints and drug absorption. First, by stimulating the corresponding acupoints, it can regulate the body's endocrine system and promote the balanced secretion of hormones, thus improving respiratory function and alleviating asthma symptoms. Secondly, the medication can be absorbed through the skin to exert its anti-inflammatory, asthma-relieving and cough-relieving effects, further relieving asthma symptoms. [7] In addition, drugs can also stimulate acupoints and achieve the effects of harmonizing Qi and blood and balancing Yin and Yang through meridian conduction. According to the literature, commonly used drugs include: semen brassicae, rhizome corydalis, radix kansui, and asarum, etc. The general course of treatment is about 3 months. A randomized controlled trial has shown that acupressure therapy can significantly improve the symptoms of pediatric asthma, reduce the number of asthma attacks, and improve the quality of life. In recent years, many clinical trials and research institutes have conducted in-depth studies on acupressure therapy for pediatric asthma. Among them, a study that included 160 cases of pediatric asthma indicated that, after a 6-month treatment with acupoint compresses, the number of asthma attacks, the degree of coughing, respiratory rate and other indicators of the children in the test group were significantly better than those of the control group, and the relapse rate was lower within 1 year after the end of treatment. In addition, several other studies have shown that the therapeutic effect of acupressure on pediatric asthma is accurate and has fewer adverse reactions. However, further large-sample, double-blind, randomized controlled trials are still needed to verify its efficacy and safety.

4.4. Auricular Points Pressing and Acupoint Embedding

Auricular points pressing therapy is used to regulate the function of internal organs and treat pediatric asthma by stimulating acupoints on the auricle. According to the literature, commonly used medications include: cowherb seeds and magnetic beads, etc. The typical course of treatment is 5-7 days. A randomized controlled trial revealed that auricular points pressing therapy can improve the symptoms of pediatric asthma, reduce the number of asthma attacks, and improve the quality of life. Acupoint embedding therapy treats pediatric asthma by burying the catgut into specific acupoints for the purpose of long-term stimulation of the acupoints. According to the literature, the commonly used operation methods include: thread injection, thread implantation, and puncture, etc. The treatment is usually performed every 20-30 days. [8] A randomized controlled trial showed that acupoint thread implantation therapy can significantly improve the symptoms of pediatric asthma, reduce the number of asthma attacks, and improve the quality of life.

4.5. Massage

Massage can relieve the symptoms of pediatric asthma, and its mechanism may be related to improving immune function, relieving muscle spasm, and promoting local blood circulation. According to the literature, the operation methods of massage therapy include: kneading, pinching, rubbing, pressing, etc. Usually, the treatment is once a day, and 5-7 days as a course of treatment. A randomized controlled trial

showed that massage therapy can improve the symptoms of pediatric asthma, reduce the number of asthma attacks, and improve the quality of life. Qigong therapy can improve the symptoms of pediatric asthma, and its mechanism may be related to regulating respiratory function and enhancing immunity. According to the literature, the operation methods of Qigong therapy include: static Qigong, dynamic Qigong, and guiding exercises, which are usually practiced 1-2 times a day for 30-60 minutes each time. A randomized controlled trial showed that Qigong therapy can improve the symptoms of pediatric asthma and improve the quality of life. [9]

4.6. External Application of TCM

The external application therapy of traditional Chinese medicine achieves the purpose of treating pediatric asthma through the dual action of drugs and acupoints. According to the literature, the commonly used drugs include: ephedra, cinnamon sticks, semen brassicae, and asarum, etc., and the general course of treatment is 7-10 days. A randomized controlled trial showed that the external application of Chinese medicine can significantly improve the symptoms of pediatric asthma, reduce the number of asthma attacks and improve the quality of life. In addition to external application of Chinese medicines, Chinese medicine fumigation is also an effective method. Chinese medicine fumigation therapy relieves pediatric asthma symptoms through the action of Chinese medicine steam on the skin and mucous membranes of the respiratory tract. According to the literature, commonly used medications include: ephedra, cinnamon sticks, almonds, and licorice, etc., and the typical course of treatment is 10-15 days. A randomized controlled trial revealed that herbal fumigation therapy can improve the symptoms of pediatric asthma and improve the quality of life. [10]

5. Conclusion

In conclusion, external treatment methods of Chinese medicine have unique advantages and good efficacy in pediatric asthma treatment. A variety of methods, such as acupuncture, cupping, acupoint patch, auricular points pressing, massage, acupoint embedding, Qigong, external application of traditional Chinese medicine, and traditional Chinese medicine fumigation, have achieved significant efficacy in the treatment of pediatric asthma. However, these studies are based on mostly small sample sizes and short-term observations, and their long-term efficacy and safety still need further observation and research. In clinical practices, doctors should choose appropriate external treatments according to the specific conditions and individual differences of the children.

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