

Research on the Treatment of Mesenteric Lymphadenitis in Children with Traditional Chinese Medicine External Therapies

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Abstract:

Mesenteric lymphadenitis in children is a common pediatric disease, mainly manifested by abdominal pain, fever and other symptoms, which is more common in preschool and school-age children. Due to its complex pathogenesis, traditional western medicine treatment is often based on antibiotics and symptomatic support, but there are problems such as high drug resistance and large side effects. In recent years, external treatment of traditional Chinese medicine has been paid more and more attention in the treatment of pediatric diseases. Because of its advantages of simple operation, small side effects and exact efficacy, it has become one of the important methods for the treatment of children with mesenteric lymphadenitis. This article aims to systematically review the application status of external treatment of traditional Chinese medicine in the treatment of children with mesenteric lymphadenitis, and analyze its theoretical basis and clinical effect. Firstly, starting from the basic concept of TCM external treatment, the application characteristics of TCM external treatment in pediatric diseases were introduced. Secondly, to explore the etiology, pathogenesis and clinical manifestations of mesenteric lymphadenitis in children, so as to provide a basis for TCM syndrome differentiation and treatment. Finally, combined with clinical cases, the specific application methods of traditional Chinese medicine external treatment such as Chinese medicine application, moxibustion and massage in the disease were summarized, and their efficacy and safety were analyzed, so as to promote the further development and promotion of traditional Chinese medicine external treatment in the field of pediatrics.

Keywords:

External Treatment of Traditional Chinese Medicine, Mesenteric Lymphadenitis in Children, Chinese Medicine Application, Moxibustion, Massage

1. Introduction

1.1. Research background and significance

Mesenteric lymphadenitis in children is a common pediatric disease, mainly characterized by recurrent abdominal pain, fever and other symptoms, which seriously affects the quality of life and growth and development of children. [1] The disease occurs more frequently in school-age children, especially in the spring and autumn. [2] Its etiology is complex, involving infection, immunity, environment and other factors. In recent years, with the progress of medical technology and the continuous understanding of the advantages of traditional Chinese medicine (TCM) treatment, more and more studies have begun to pay attention to the application value of external treatment of TCM [3] in this disease. As an important part of traditional Chinese medicine, external treatment of traditional Chinese medicine (TCM) has the characteristics of simple operation, small side effects, and exact efficacy, which shows unique advantages in the treatment of pediatric diseases. From the perspective of clinical practice, the external treatment of traditional Chinese medicine can effectively improve the symptoms of children and improve the immunity of the body through local stimulation, meridian regulation, qi and blood operation and other ways. For example, the methods of ointment and rubbing, traditional Chinese medicine hot compress, acupuncture, ear point pressure bean and other methods have been widely used in the treatment of children with mesenteric lymphadenitis, and have achieved certain clinical effects. According to relevant studies, the use of external treatment of traditional Chinese medicine combined with internal treatment of traditional Chinese medicine [4], can significantly shorten the course of disease, reduce the recurrence rate, and improve the cure rate.

From the perspective of traditional Chinese medicine theory, pediatric mesenteric lymphadenitis mostly belongs to the categories of “abdominal pain” and “accumulation”, and its pathogenesis is mainly composed of dampness and heat accumulation, qi stagnation and blood stasis, and spleen and stomach weakness. Therefore, TCM treatment emphasizes syndrome differentiation and treatment, pays attention to overall conditioning, and achieves the purpose of treatment by reconciling the function of viscera, dredging meridians and collaterals, and eliminating pathogenic factors. In recent years, with the deepening of the research on the mechanism of external treatment of traditional Chinese medicine, more and more scholars have begun to explore its specific action path in the disease. For example, some studies have shown that TCM external therapy can play its unique therapeutic role by regulating intestinal microecology, improving local blood circulation, and enhancing immune function.

Modern medicine is also deepening its understanding of pediatric mesenteric lymphadenitis. In recent years, high-frequency ultrasonography has been widely used in the diagnosis of this disease, which provides a more accurate diagnostic basis for clinical practice. At the same time, some studies have found that the occurrence of this disease is closely related to factors such as intestinal flora imbalance and immune dysfunction. Therefore, combining the advantages of modern medical methods and external treatment of traditional Chinese medicine, carrying out comprehensive treatment mode has become an important direction of current research.

From the perspective of social needs, with the continuous optimization of medical resources and the gradual promotion of traditional Chinese medicine (TCM) services

in China, more and more families have begun to pay attention to the treatment of TCM, especially in chronic and repetitive diseases. As a common and frequently occurring disease, the treatment of pediatric mesenteric lymphadenitis is not only related to the physical health of children, but also has a profound impact on the family and society. Therefore, it is of great practical significance and promotion value to explore more safe and effective treatment methods, especially the application of external treatment of traditional Chinese medicine.

The treatment of children with mesenteric lymphadenitis still faces many challenges, and external treatment of traditional Chinese medicine is gradually becoming an important treatment option with its unique advantages and good efficacy. In the future, the systematic study of its mechanism of action, clinical efficacy and safety should be further strengthened, and the standardized application of external treatment of traditional Chinese medicine in this disease should be promoted, so as to provide scientific and effective treatment plans for more children.

1.2. Purpose and content of the study

This study aims to systematically review the application status of external treatment of traditional Chinese medicine in children with mesenteric lymphadenitis, analyze its clinical efficacy and mechanism of action, and provide scientific and standardized treatment plans for clinical practice. Mesenteric lymphadenitis in children is a common pediatric disease, mainly characterized by recurrent abdominal pain, abdominal tenderness and other symptoms. It is mostly caused by viral or bacterial infection, and is often accompanied by intestinal dysfunction. According to relevant literature, external treatment of traditional Chinese medicine mainly includes ointment and rubbing method, hot compress of traditional Chinese medicine, acupuncture and moxibustion, ear point pressure bean, cupping, and press needling. These methods can relieve inflammation, reduce symptoms, and promote rehabilitation by regulating the body's qi and blood circulation, dredging meridians, and improving local blood circulation. For example, Li Yifei [5] found in the clinical observation of Xuanshao Sanjie granule in the treatment of children with mesenteric lymphadenitis of phremstasis type that internal administration of traditional Chinese medicine combined with external treatment can effectively relieve the symptoms of abdominal distension and diarrhea in children and improve the treatment efficiency. Hu Jing [6] pointed out that the clinical research results of Chaihu Shugan powder combined with Xiaoluo pills in the treatment of children with mesenteric lymphadenitis (liver-qi stagnation syndrome) showed that this therapy had obvious advantages in improving emotional disorders and regulating gastrointestinal function. At the same time, Cheng Fang [7] used Qingwei-Tongfu prescription to treat children with mesenteric lymphadenitis (abdominal pain of gastrointestinal heat accumulation type), and the clinical efficacy evaluation also showed that oral administration of traditional Chinese medicine combined with external treatment can effectively reduce inflammatory response, improve intestinal microecological balance, and thus improve the overall efficacy. At present, the application of external treatment of traditional Chinese medicine in children with mesenteric lymphadenitis is still in the exploratory stage, and there is still a lack of large-scale and multicenter clinical trial data support. Therefore, based on the theory of traditional Chinese medicine and the results of modern medical research, this study will systematically summarize the indications, treatment methods and efficacy evaluation criteria of external treatment of traditional Chinese medicine in this disease, and discuss its application value in different syndromes. At the same

time, the synergistic effect of external treatment of TCM with other treatment methods (such as western medicine treatment, physical therapy, etc.) will be analyzed to provide clinicians with a more comprehensive treatment idea. The study will also focus on the safety, effectiveness and patient compliance of external treatment of traditional Chinese medicine, and strive to provide a more scientific, reasonable and feasible TCM scheme for the treatment of children with mesenteric lymphadenitis. Through this study, it is expected to further promote the standardized application of external treatment of traditional Chinese medicine in the field of pediatrics, improve its promotion value in primary medical institutions, and ultimately achieve better and safer medical services for children.

2. Overview of External Treatment of Traditional Chinese Medicine

2.1. Basic concepts of external treatment of traditional Chinese medicine

The external treatment of TCM [8] is an important part of the theoretical system of TCM. Its history can be traced back to the period of Huangdi's Internal Canon. As early as in the Book Ling Shu, it was mentioned that “the disease occurs on the skin, which is called carbuncle; It is recorded in the book”, “When it occurs in the skin, it is called carcarao; when it occurs in the flesh, it is called abscess”, which reflects the dialectical treatment thought of TCM for external diseases. External treatment of traditional Chinese medicine refers to a treatment method that acts on the body surface or specific parts through drugs, physics, instruments and other means to dredge meridians, reconcile Qi and blood, strengthen the body and dispels pathogenic factors, and restore the functions of viscera. Compared with internal treatment, external treatment has the characteristics of simple operation, small side effects, and direct efficacy, which is particularly common in the treatment of pediatric diseases. There are many kinds of external treatment of traditional Chinese medicine, including external application of traditional Chinese medicine, acupuncture, cupping, scraping, moxibustion, massage, fumigation, ointment, paste application, and medicinal bath. Each method has its own unique indications and mechanisms of action. For example, external application of traditional Chinese medicine is often used to relieve local inflammation, pain and other symptoms. For example, in the treatment of children with mesenteric lymphadenitis, traditional Chinese medicine with the effect of promoting blood circulation and removing blood stasis, deswelling and pain relief is often used for abdominal application. Acupuncture and moxibustion regulate the balance of Yin and Yang by stimulating the meridians and acupoints, improve local blood circulation, and promote the absorption of inflammation. Cupping and scraping are suitable for muscle soreness, qi stagnation and blood stasis caused by wind, cold and dampness. According to the definition of the textbook of “Traditional Chinese Medicine Surgery”, the core of the external treatment of traditional Chinese medicine lies in “general use”, that is, through the action of external forces or drugs, so that the meridian-collaterals are unobstructed and the qi and blood are harmonized, so as to achieve the purpose of disease treatment and prevention. Modern medical research has also shown that external treatment of traditional Chinese medicine can play a therapeutic role by regulating immune function, improving microcirculation, and reducing inflammatory response. For example, some studies have shown that moxibustion can enhance the phagocytic capacity of macrophages and improve the body's immunity, which has a certain adjuvant treatment effect on chronic inflammatory diseases. The clinical application of external treatment of traditional Chinese medicine also pays attention to individual treatment, that is, flexible selection

of treatment methods according to the patient's constitution, condition, seasonal changes and other factors. For example, in the treatment of children with mesenteric lymphadenitis, if the child presents with obvious abdominal pain and thick and greasy tongue coating, the external application or paste of traditional Chinese medicine is often used to clear heat and detoxification, intonate spleen and dampness. If the child is accompanied by fear of cold and cold limbs, abdominal distension and diarrhea, the treatment methods of warming Yang dissipating cold and carrying out qi to relieve pain, such as moxibustion and hot compress. The application of external treatment of traditional Chinese medicine is not only limited to the treatment stage of the disease, but also widely used in the prevention and rehabilitation process. For example, for susceptible people, regular massage and moxibustion can be used to enhance physical fitness and prevent the occurrence of diseases. At the same time, in the recovery period of the disease, external treatment of traditional Chinese medicine can also be used as an auxiliary means to help patients recover as soon as possible. In recent years, with the acceleration of the modernization of traditional Chinese medicine, the research on external treatment of traditional Chinese medicine has been gradually deepened, and more and more clinical practice and experimental studies have confirmed its effectiveness. For example, a meta-analysis on the treatment of simple obesity in children and adolescents with external treatment of traditional Chinese medicine showed that the comprehensive treatment program combined with acupuncture and massage could significantly improve the body mass index (BMI) and blood lipid levels of children, and had fewer adverse reactions. Other studies have pointed out that external treatment of traditional Chinese medicine has shown good efficacy in the treatment of chronic pain, nervous system diseases, digestive system diseases, etc. As a traditional and effective treatment method, external treatment of traditional Chinese medicine (TCM) has a profound theoretical basis and a wide range of clinical applications, especially in the treatment of pediatric diseases. With the further research and promotion of the external treatment of traditional Chinese medicine in modern medicine, its clinical application prospects will be more broad.

2.2. Common types and principles of external treatment in traditional Chinese medicine

Common external treatment methods of traditional Chinese medicine include ointment and rubbing method, traditional Chinese medicine hot compress, ear point pressure bean, acupuncture, cupping, scraping, etc. Each method has its own unique theoretical basis and indications.

Ointment and rubbing method: is a kind of external treatment based on traditional Chinese medicine plaster and manual massage. Its principle is to promote local blood circulation, relieve inflammatory reaction and improve pain symptoms through the combination of drug penetration and physical stimulation. For example, Huang Yihao [9] pointed out in his study that ointment and rubbing combined with Xiangsha Pingwei powder in the treatment of children with mesenteric lymphadenitis can significantly reduce the frequency and duration of abdominal pain, and no obvious adverse reactions were observed, suggesting that this therapy has good safety and clinical application value.

Traditional Chinese medicine hot compress: it is a local hot compress using liquid or medicine package after decocting traditional Chinese medicine, which promotes local tissue metabolism and enhances drug absorption through warm effect, and has the effect of activating blood and removing blood stasis, reducing swelling and

relieving pain. Wang Can [10] et al. found in their study that the modified Shaocao-Pingwei decoction combined with the external application of traditional Chinese medicine hot pack in the treatment of children with damping-heat stasis type mesenteric lymphadenitis can effectively improve the symptoms of abdominal distension and abdominal pain in children, and improve the clinical cure rate, indicating that this method has certain advantages in regulating the function of spleen and stomach and removing dampness and heat.

Auricular acupressure is a therapeutic method to regulate body function by stimulating ear acupoints. Its theoretical basis is derived from the theory of meridian and collaterals of traditional Chinese medicine and the theory of ear reflex area. In the treatment of children with mesenteric lymphadenitis, auricular acupressure is often used to relieve pain, regulate the function of the spleen and stomach, and improve the function of the digestive system. Zhang Linlin [11] et al. found in clinical observation that intraderm needling combined with auricular acupuncture in the treatment of mesenteric lymphadenitis in children with liver stagnation and spleen deficiency can significantly reduce the degree of abdominal pain and improve the quality of sleep, indicating that this therapy has a positive effect on soothing the liver and regulating qi, invigorating the spleen and stomach.

Acupuncture and moxibustion therapy is one of the important means of external treatment of traditional Chinese medicine. Its principle is to regulate the circulation of Qi and blood in meridians by stimulating specific acupoints, so as to achieve the purpose of strengthening Zhengzheng and dispelling pathogenic factors and reconciling Yin and Yang. In the gastrointestinal treatment of children with mesenteric lymphadenitis, acupuncture is often used to relieve abdominal pain and improve gastrointestinal peristalsis. Fu Dianyu [12] et al. 's acupuncture at Gongsun and Sixi points combined with Zangfu points can be used for the treatment of gastrointestinal heat junction type, which can regulate and improve gastrointestinal function and regulate serum I-FABP and V1 levels.

Cupping therapy: it promotes local blood circulation through negative pressure, which has the effect of dispelling wind and dissipating cold, promoting qi and activating blood, channeling collaterals and relieving pain. In the treatment of children with mesenteric lymphadenitis, cupping therapy is mostly used in the bladder meridian area on the back to regulate the function of viscera and relieve pain. Liang Hong et al. [13] pointed out in their study that external treatment of traditional Chinese medicine has unique advantages in the application of gastrointestinal dysfunction in critically ill patients, among which cupped therapy can improve gastrointestinal motility and reduce inflammatory response, providing a new idea for the treatment of children with mesenteric lymphadenitis.

Scraping therapy: by stimulating the body surface meridians and acupoints, it promotes the circulation of qi and blood, which has the effect of clearing heat and detoxifying, dispelling dampness and eliminating phlegm, and dredging meridians. In the treatment of children with mesenteric lymphadenitis, scraping is often used in the abdomen and related areas of the back to relieve abdominal pain and improve digestive function. Liu Lesun [14] et al. pointed out in a meta-analysis that the clinical efficacy of external treatment of traditional Chinese medicine in the treatment of refractory hypertension is good, and scraping therapy has certain advantages in improving microcirculation and regulating autonomic nerve function. This mechanism is also suitable for the treatment of children with mesenteric lymphadenitis.

External treatment of traditional Chinese medicine has a wide range of adaptation and good clinical efficacy in the treatment of children with mesenteric lymphadenitis. Different types of external treatment methods have their own characteristics and scope of application, which should be selected and combined according to the specific condition, constitution and pathogenesis of children. With the in-depth study of modern medicine, more and more clinical evidence supports its effectiveness in the treatment of pediatric diseases, which lays a solid foundation for its further promotion and application in the future.

3. Etiology, Pathogenesis and Clinical Manifestations of Mesenteric Lymphadenitis in Children

3.1. Etiological analysis of mesenteric lymphadenitis in children

Mesenteric lymphadenitis in children is a common pediatric disease, which is mainly manifested by abdominal pain, fever and other symptoms. Its etiology [15] is complex, involving various factors such as external sensation, unhealthy diet, emotional disorders, and weakness of the spleen and stomach. According to the theory of traditional Chinese medicine, the occurrence of this disease is closely related to the invasion of external pathogens and the dysfunction of viscera. Modern medical research has also shown that the disease is mostly caused by viral or bacterial infection, especially after upper respiratory tract infection, pathogens can spread to the mesenteric lymph nodes through the lymphatic system, leading to inflammatory reactions. In clinical practice, most children have a clear history of upper respiratory tract infection, such as cold, pharyngitis, etc., which suggests that exogenous wind fever or wind cold is one of the important predisposing factors. Some children have weakness of the spleen and stomach, and the spleen is mainly transferred. If the spleen is deficient, the water moisture is endogenous, the phlegm moisture blocks the qi machine, and the syndrome of phlegm and blood stasis is formed, which further aggravates the disease. Traditional Chinese medicine believes that the spleen is often insufficient in children, the digestive function is not perfect, and it is easy to be affected by external pathogens. Therefore, spleen deficiency has become an important internal factor of the disease. From the perspective of pathological mechanism, exogenous pathogens first invade lung protection, and then affect the spleen and stomach, resulting in poor qi machine, blocked qi and blood operation, which leads to mesenteric lymph node enlargement and inflammatory reaction. Some children have emotional problems, liver qi stagnation, qi machine adverse, can also lead to qi stagnation and blood stasis, aggravate the disease. Studies have shown that children with large emotional fluctuations are more likely to have recurrent symptoms, which is consistent with the theory of “seven emotions and internal injury” in traditional Chinese medicine. Improper diet is also an important factor inducing the disease. For example, excessive eating of spicy, greasy, raw and cold food can easily damage the spleen and stomach, lead to abnormal operation, dampness and turbidity endogenous, and then trigger inflammatory reactions. Clinical observation found that some children had a history of overeating or eating unclean food before the onset of the disease, which also supported this view. From the perspective of syndrome differentiation in traditional Chinese medicine, mesenteric lymphadenitis in children mostly belongs to the categories of “abdominal pain”, “accumulation” and “bubonic fever”, and its causes can be summarized into two categories: external sensation and internal injury. In terms of external sensation, the main causes are wind heat, wind cold and dampness heat. In terms of internal injuries, it is mainly caused by improper

diet, emotional disorders, and spleen and stomach weakness. The symptoms caused by different causes are slightly different. For example, the wind-heat type is more common in summer, which is characterized by severe abdominal pain, obvious fever, red tongue and yellow fur. Wind-cold type was more common in winter, manifested as mild abdominal pain, fear of cold, pale tongue and white fur. The damp-heat type was more common in humid and hot climate areas, manifested as abdominal pain with diarrhea, thirst, short urine and so on. In the treatment process, syndrome differentiation and treatment should be carried out according to the specific cause to achieve the best curative effect. In recent years, with the deepening of research on the external treatment of traditional Chinese medicine, more and more clinical practice has shown that the corresponding external treatment methods for different causes, such as Chinese medicine application, moxibustion, massage, etc., can effectively alleviate symptoms and improve prognosis. For example, some studies have shown that the use of traditional Chinese medicine hot compress combined with acupuncture and moxibustion has a good effect on children with wind and cold, which can significantly reduce abdominal pain and fever symptoms. Some literatures have pointed out that strengthening the body's immunity by regulating the function of the spleen and stomach can help prevent the recurrence of the disease. The causes of mesenteric lymphadenitis in children are diverse, including exogenous factors and internal injury factors, which often interact with each other and act on the body together, leading to the occurrence and development of the disease. Therefore, in clinical diagnosis and treatment, we should comprehensively consider the children's constitution, living habits, seasonal changes and other factors, combined with the principle of syndrome differentiation and treatment of traditional Chinese medicine, formulate an individualized treatment plan to improve the efficacy and reduce recurrence.

3.2. Clinical manifestations and diagnostic criteria

Mesenteric lymphadenitis in children is a common pediatric disease, mainly characterized by abdominal pain, fever, vomiting and other symptoms. Its pathogenesis is closely related to infection, immune dysfunction and other factors. The disease is more common in preschool and school-age children, especially in the spring and autumn season. Clinically, children often visit the hospital due to sudden abdominal pain, which is mostly located around the umbilicum or in the right lower abdomen, and is paroxysmal or persistent. Some children may be accompanied by gastrointestinal symptoms such as nausea, vomiting and loss of appetite. Some children may also have low or moderate fever, and the body temperature is generally not more than 38.5 °C, and there is no obvious shivering. On physical examination, abdominal tenderness is prominent, especially in the right lower quadrant or periumbilical region, but there is usually no rebound tenderness or muscle tension, suggesting that the peritoneum has not been involved. In some patients, enlarged lymph nodes were palpable on palpation and were leathery in texture with good mobility, without overt tenderness or redness. At present, the diagnosis of this disease mainly relies on the combination of clinical manifestations, laboratory tests and imaging examinations. Among them, ultrasound examination is the most commonly used auxiliary diagnostic method, which is non-invasive, fast and accurate. High-frequency ultrasound [16] can clearly show lymph node enlargement in the mesenteric region, which is manifested as multiple hypoechoic masses with clear boundaries, regular morphology, uniform internal echo, and blood flow signals in some cases. According to relevant research data, the accuracy of high-frequency ultrasound in the

diagnosis of mesenteric lymphadenitis in children can reach more than 90%. In terms of laboratory tests, routine blood test can find a slight increase in white blood cell count and the level of C-reactive protein (CRP) may also be increased, but these indicators lack specificity and cannot be used as independent diagnostic basis. In clinical practice, doctors usually make a comprehensive judgment based on the patient's medical history, symptoms, signs, and imaging findings. According to the diagnostic criteria in Practical Pediatrics, the diagnosis of mesenteric lymphadenitis in children is mainly based on the following points: (1). Typical abdominal pain symptoms, especially recurrent periumbilical or right lower quadrant pain; (2). Abdominal tenderness, especially in the right lower abdomen or periumbilical area; (3). Enlarged mesenteric lymph nodes on high-frequency ultrasonography; (4). Exclude other diseases that may cause similar symptoms, such as acute appendicitis, gastroenteritis, urinary tract infection, etc. In recent years, with the development of medical technology, a wealth of clinical experience has been accumulated in the treatment of children with mesenteric lymphadenitis with external treatment of traditional Chinese medicine. However, in the practical application process, it is still necessary to pay attention to individual differences and choose the appropriate treatment method according to the specific condition of the child. In general, the clinical manifestations of children with mesenteric lymphadenitis are typical. Combined with modern medical diagnosis methods, early recognition and timely intervention can be achieved to avoid further development of the disease. At the same time, as a safe and effective treatment method, external treatment of traditional Chinese medicine has been more and more recognized and applied in clinical practice.

3.3. Treatment effect and clinical case analysis

The application of traditional Chinese medicine external treatment in children with mesenteric lymphadenitis has been gradually verified. Through local stimulation, dredging meridians, mediating qi and blood and other mechanisms, it has significant effects on relieving abdominal pain, improving digestive function, and regulating the immune system in children. In recent years, a number of clinical studies have shown that the total effective rate of external treatment of traditional Chinese medicine in the treatment of this disease is generally high, and some research data show that it can reach more than 85%. For example, Li Yifei [5] pointed out in his study that the total effective rate of Xuanshao Sanjie granule combined with external treatment of traditional Chinese medicine in the treatment of children with phlegm-stasis type of mesenteric lymphadenitis reached 87.5%, which was significantly better than that of the simple western medicine treatment group. The study of Huang Yihao [9] showed that the clinical effect of ointment and rubbing combined with Xiangsha Pingwei powder was significant in the treatment of this disease. The abdominal pain symptoms of children were significantly relieved within 3 days after treatment, and there were no obvious adverse reactions, indicating that this method was safe.

In clinical practice, the commonly used external treatment methods of traditional Chinese medicine include acupoint application, hot compress of traditional Chinese medicine, acupuncture, massage, scraping, moxibustion, etc. Among them, the acupoint application method is widely used in pediatric clinical practice because of its simple operation and small side effects. For example, Wang Yalei [17] et al. found in their study that the use of traditional Chinese medicine plaster in the treatment of acute mesenteric lymphadenitis in children can effectively reduce the degree of abdominal pain, shorten the course of disease, and improve the comfort of children.

Meanwhile, the study of Zhao Xiaomin [18] et al. also showed that heat-sensitive moxibustion as an adjuvant treatment for children with acute mesenteric lymphadenitis and abdominal middle-cold syndrome significantly decreased the pain score of children after treatment, and the clinical cure rate increased to more than 80%. The symptoms returned to normal, and no recurrence was observed during follow-up.

Intradermal needling combined with auricular acupuncture has also been used to treat mesenteric lymphadenitis in children. Zhang Linlin [11] et al. found in clinical observation that the pain scores of children with liver depression and spleen deficiency were significantly different before and after treatment, and the emotional state of children was also significantly improved, indicating that this therapy can not only relieve abdominal pain, but also regulate the overall state of children.

From the perspective of efficacy evaluation indicators, external treatment of traditional Chinese medicine is mainly evaluated by abdominal pain relief time, hospital stay, recurrence rate, and complication rate. According to the study of Wang Can [10] et al., the average abdominal pain relief time of the modified Shao Cao Ping Wei decoction combined with the external application of traditional Chinese medicine heat pack in the treatment of children with damping-heat stasis was 2.5 days, which was about 1.2 days shorter than that of the simple western medicine treatment group, and the recurrence rate within 3 months after treatment was only 12%, which was significantly lower than 30% of the control group. This data indicated that the external treatment of traditional Chinese medicine has certain advantages in reducing the recurrence rate.

It is worth noting that the efficacy of external treatment of TCM is also affected by individual differences, the severity of the disease, and the treatment cycle. For children with mild disease, external treatment of traditional Chinese medicine can be used as the first choice of treatment. For patients with severe disease or complicated with other diseases, western medicine should be combined to achieve the best curative effect. Some studies have shown that external treatment of traditional Chinese medicine also has certain advantages in improving the quality of life of children, reducing drug dependence and enhancing immunity, which provides theoretical basis and practical support for its wide application in the field of pediatrics.

4. Conclusions

External treatment of traditional Chinese medicine shows good efficacy and safety in the treatment of children with mesenteric lymphadenitis, especially has unique advantages in relieving abdominal pain, regulating physique and preventing recurrence. In the future, multi-center and large-sample clinical studies should be carried out to evaluate its efficacy and promotion value more comprehensively.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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