

Clinical Research Progress of Chinese Medicine in Treating Recurrent Respiratory Tract Infections in Children

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Abstract. Objective: To study the effect of traditional Chinese medicine ointment on recurrent respiratory infection in children in cold area, and the effect on the changes of trace elements and serum immune indexes. Methods: 100 cases of children with recurrent respiratory infection were selected from 06 months from 2016 to 06 months in 2017 in our hospital. All the children were divided into the observation group and the control group according to the random digital table method, with 50 cases in each group[3]. The children in the control group were treated with the standard treatment of anti inflammation of Western medicine[7], improving immunity and so on. The observation group was added with Jianpi moistening ointment on the basis of the standard treatment of Western medicine. After 2 weeks of continuous treatment[9], the clinical and laboratory indexes were compared between the 2 groups. Results: the total effective rate of treatment in the observation group was 90%, which was significantly higher than that of the control group (72%), and the difference between the 2 groups was statistically significant ($P < 0.05$). The serum immunologic level of the observation group and the control group were significantly improved after the treatment ($P < 0.05$), but the observation group was better than the control group ($P < 0.05$). Conclusion: traditional Chinese medicine ointment is effective in the treatment of recurrent respiratory infection in children, and it can significantly improve the serum immune level of children. It is worthy of clinical application[5].

Keywords: Integrated traditional Chinese and Western medicine; Children; recurrent respiratory tract infections in children; clinical efficacy; serum immunology level

1 Introduction

Recurrent respiratory tract infection is a common disease in the cold area. The incidence rate is about 20%, which seriously affects the healthy growth of children. It is most common at 2~6 years old. In clinical, 0~2 year old children have more than 7 upper respiratory tract infections within one year; 3~6 years old, more than 6 upper respiratory tract infections occur within one year, which is called "recurrent respiratory infection". Its incidence is the result of many factors such as congenital factors[1], low immune function, deficiency of vitamin and feeding mode, heredity, nursing and living environment. Especially in the northern part of China, it belongs to the high latitudes and alpine regions, and the climate changes obviously in four seasons. Improper treatment can lead to asthma[6,7], myocarditis, nephritis and other diseases, which seriously affect the growth and health of children. It has caused great harm and economic burden to the children's body and mind and their parents[6], which is one of the important research topics in the field of Pediatrics.

2 Data

General data were selected from 06 months to 06 months of 2017 from 2016 to 06 months in 2017 in our hospital. There were 100 cases of recurrent respiratory infection in our hospital. There were 50 cases in the control group and the observation group, including 47 male patients, 53 female patients and 2-11 years old. The average age was 6.7 ± 1.4 years old, and the course of disease was from 5 to 20 days. The average duration of disease was 12.3 ± 3.8 days. There was no significant difference in gender, age and duration between the two groups ($P > 0.05$).

2.1 Giagnostic Criteria

Standard for diagnosis of Western medicine: referring to the eighth edition of Practical Pediatrics, there is no clear definition for repeated upper respiratory tract infection or recurrent bronchitis. The respiratory group of the Chinese Academy of Pediatrics developed the diagnostic criteria for recurrent respiratory infection in 1987, and was revised in 2007 (Table 1). [1.7.6]

Table1. Diagnostic criteria for recurrent respiratory infection in children

Ege	current upper respiratory tract infection (second / year)	current lower respiratory tract infection (second / year)	
		current tracheal bronchitis	current pneumonia
00-2	77	33	22
23-5	66	22	22
56-14	55	22	22

Note: 1. the interval between two infections is at least 7d.

2. if the number of upper respiratory tract infections is not enough, the number of upper and lower respiratory tract infections can be increased. However, if repeated infection is the main respiratory tract, it should be defined as recurrent lower respiratory tract infection.
3. the number of determined times should be observed continuously for 1 years.
4. repeated pneumonia refers to 1 years of recurrent pneumonia more than 2 times, pneumonia should be confirmed by lung signs and imaging, two pneumonia during the diagnosis of pneumonia signs and image changes should be completely disappeared.

Syndrome diagnosis of traditional Chinese medicine: Referring to the "11th Five-Year" national and planning textbook "pediatrics of traditional Chinese medicine" [6](GB/T16751.2-1997, China Medical Publishing House, 2007) and the national standard "clinical diagnosis and treatment terminology of traditional Chinese medicine" (GB/T16751.2-1997). Spleen and lung qi deficiency syndrome: repeated external sensation, face Huang Shaohua, thin body, soft muscle, low breath, short breath, short diet, thirst, sweat, Zeikhan, or loose stool, thin tongue, thin white tongue, weak veins and light fingerprints.

Treatment group: 450g, Radix Astragalus 300g, tuckahoe 450g, Atractylodes 450g, Zizyphus jujube 360g, Radix Ophiopogon 450g, Radix Ophiopogon 450g, Platycodon 360g, orange peel 300g, Fructus Lycii 240g, Fructus aurantii 300g, wood fragrance, Jiao Shen Qu, broiled Gump grass. Preparation: soak 12h, decoct 3 times (first boil with fire, then boil with small fire), filter, concentrate (let the juice slowly turn into thick extract), add tortoise glue 300g, malt sugar 450g, boil to thick, put the ointment container to cool 12h. Method of use: 2~6 years old, 5mL/ times, morning fasting, warm water, 3 times /d; 7~14 years old, 10mL/ times, morning fasting, warm water, 3 times /d. Take it two times in the morning and evening. Control group: children take Anlyn, 1 Sticks / times, 1 times /d; take before going to bed. Two groups of courses were taken for 12 weeks, and the end of the course was followed up for 48 weeks. The number of episodes of respiratory tract infection, the duration of each attack, each disease, and the level of serum immunization and trace elements in the laboratory were also recorded [7].

2.2 Evaluation Criteria

Observation index (1) record the number of episodes of upper respiratory tract infection, the duration of each attack, and the duration of each disease within 48 weeks after the treatment. (2) the main symptoms and signs were scored according to the guidelines for diagnosis and treatment of common diseases in pediatrics of Chinese medicine, and 1 times were evaluated before and after treatment. Monitoring the levels of serum immunoglobulin, vitamin ADE and calcium[9], iron, zinc and lead in the experimental group and the control group.

Evaluation criteria According to nimodipine method, the total curative effect of TCM syndrome was evaluated: the curative effect index (n) = (before treatment, after treatment) and before treatment (100%). Clinical cure: the clinical symptoms and signs of TCM disappeared or basically disappeared, and the integral of syndromes decreased by more than 95%.

Markedly effective: the clinical symptoms and signs of TCM improved significantly, and the syndrome score decreased by more than 70%. Effective: the clinical symptoms and physical symptoms of Chinese medicine improved, and the score decreased by more than 30%. Invalid: the clinical symptoms and body syndromes of Chinese medicine did not improve significantly or even increased[6], and the integral of syndromes decreased by <30%.

Statistical analysis was carried out by SPSS17.0 software. The measured data were expressed by mean standard deviation (+ s), t test was used, the count data were expressed as percent (%), χ^2 test was adopted, and $P < 0.05$ was statistically significant.

3 Results

Clinical therapeutic effect of 2.1 and two groups After 2 weeks of treatment, the total effective rate of the control group was 70%, the total effective rate of the observation group was 90%. The total effective rate of the observation group was significantly higher than that of the control group. The difference was statistically significant, $P < 0.05$ (Table 2).

Table 2. Clinical therapeutic effects of two groups of patients (n,%)[9]

Group	Nnt	Obvious	Effective	Invalid	Total
Control group	50	19	17	14	72.0
Observation group	50	26	19	5	90.0
P value	-	-	-	-	<0.05

4 Discussion

The northern part of our country belongs to the high latitudes and high cold regions.[7] Most of the children are the virtual constitution. Professor Zhang Wei believes that the key of the recurrent respiratory infection is the positive and evil invading. The treatment should take the positive and dispel evil, the specimen should be taken into consideration. Therefore, the treatment principle is to strengthen the spleen and replenishing qi, and to fill the lung and fix the health. Under the guidance of the guiding ideology and according to many years of clinical experience, the spleen moistening plaster suitable for children in cold area was made. The radix ginseng, Radix Astragali, Radix Astragali, lung qi, lung qi, gas generation and regulation depend on the normal function of the lung. Chen PI, Radix Ophiopogon, nourishing the spleen and nourishing the stomach, Amomum and Radix aromaris are wet, wet and invigorating the spleen, the lungs and spleen are the dirty of mother and son, that is, the soil can produce gold, the lung qi depends on the splenometive water valley, the spleen is strong, the spleen is weak, the lung is weak, and the golden water is raw[3.4.7]. Chinese wolfberry and Chinese yam nourish kidney and nourish yin, lung and kidney are related, and lungs and kidneys are interbreeding and interdependent. Kidney deficiency can not bear the lung, lung deficiency can not be nourished to nourish the kidney, lung disease must be injured and kidney[6], kidney yin deficiency, kidney is congenital, the spleen is the nature of the day, the Qi must be nurtured to nourish the natural gas, and the gas of the future must rely on the temperature of congenital gas. The results of the study showed that after 2 weeks of treatment, the total effective rate of the patients in the observation group was significantly higher than that of the control group ($P < 0.05$), and the improvement of serum immune level in the observation group was better than that of the control group ($P < 0.05$). Therefore, we believe that traditional Chinese medicine ointment is effective in treating recurrent respiratory tract infections in cold areas, and is worthy of wide clinical application.

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