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Pathogenesis of Asthma Attack in Children and Therapeutic Effect of Asthma Mixture

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Abstract

Objective: to collect and sort out the tutor's experience in the treatment of cough and asthma in children with asthma attack, and to verify the effectiveness of Asthmake external application powder in the treatment of infantile asthma, so as to lay a foundation for further research on the experience of treating infantile cough and asthma with traditional Chinese medicine. Methods: through clinical consultation with teachers and scanning of original medical records, the cases with asthma attack diagnosis and cough and asthma syndrome were collected and sorted out. The scores of main syndromes before treatment and on the 1st, 2nd, 3rd and 6th days after treatment were recorded, and the score reduction rate of main syndrome scores was counted to evaluate the efficacy and effectiveness of Asthmake external application powder in treating cough and asthma syndrome in children with asthma attack stage; the scores of main syndromes before treatment and on the 1st, 2nd, 3rd and 6th days after treatment were recorded for the two groups To compare the difference between the two in improving the main syndromes. Results: the total effective rate of Asthmake external application powder in treating infantile cough and asthma was 100%. On the first day after treatment, the asthma symptoms of children with cough and asthma were relieved, but the symptoms of cough and phlegm were not significantly improved. On the 2nd and 3rd day after treatment, the symptoms of cough, asthma and phlegm were improved. The improvement of asthma was better than that of cough and phlegm. The improvement of cough was more obvious than that of phlegm ($P < 0.05$). On the 6th day after treatment, the symptoms of cough, asthma, phlegm and wheezing were improved, but there was no significant difference in the improvement of asthma and wheezing. The improvement of asthma and wheezing was better than that of cough and phlegm, and the improvement of phlegm was slower ($P < 0.05$). Before treatment, there was no significant difference in the scores of cough, asthma and phlegm cough between the two groups ($P > 0.05$). On the 1st, 2nd, 3rd and 6th day after treatment, there was no significant difference between the two groups ($P > 0.05$). Conclusion: Asthmake external application powder acupoint application combined with maxing Erchen decoction has a significant effect on relieving cough and asthma, and the antiasthmatic effect takes effect quickly, which is an effective method for treating cough and asthma syndrome in children with asthma attack.

Key words: Asthma syndrome, Asthmake, cough, Erchen, phlegm

1 Introduction

Cough and asthma is the main symptom of asthma in children. The repeated attacks of asthma have adverse effects on the growth and development of children and physical and mental health, and also bring heavy economic and mental burden to children's families. To seek a safe, effective and simple scheme for the treatment of cough and asthma in children with asthma is not only the desire of patients, but also the hot spot of traditional Chinese medicine to be inherited and excavated. Traditional Chinese medicine in the treatment of infantile asthma has penetrating theory and

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rich clinical experience. According to the attack stage of asthma, the main treatment is pathogenic excess, the treatment of upper attack evil is urgent, so that the evil can go to Zhengan. It has its own characteristics and advantages in controlling the disease, eliminating symptoms and shortening the course of disease. It embodies the essence of traditional Chinese medicine of "holistic concept, syndrome differentiation and treatment", so it is necessary to excavate TCM treatment with exact curative effect at present, the method of treating cough and asthma syndrome in children with asthma attack is more concerned [1]. This paper aims to collect and sort out the tutor's experience in the treatment of cough and asthma in children with asthma attack, and to verify the effectiveness of Asthmake external application powder combined with internal and external treatment in the treatment of infantile asthma, so as to lay a foundation for further exploring the experience of traditional Chinese medicine in the treatment of infantile cough and asthma [2].

2 Materials and methods

2.1 Research purpose

Objective to collect and sort out the tutor's experience in the treatment of cough and asthma in children with asthma attack, and verify the effectiveness of Asthmake external application powder combined with internal and external treatment in the treatment of infantile asthma, so as to lay a foundation for further exploring the experience of traditional Chinese medicine in the treatment of infantile cough and asthma.

2.2 Clinical data

Through clinical consultation with teachers and scanning of original medical records, the data of patients with asthma attack diagnosis and cough and asthma syndrome were collected.

2.2.1 Case selection conditions

(1) He was admitted to the pediatric clinic of our hospital. (2) The diagnosis was asthma attack stage with cough and asthma syndrome. (3) Age ≥ 2 years old, ≤ 12 years old. (4) There was nofever and serious complications. (5) Asthmake external application powder acupoint application and modified maxing Erchen decoction were used for internal and external treatment. (6) Those with follow-up records.

2.2.2 Diagnostic criteria

(1) Diagnosis of bronchial asthma: refer to the "guidelines for diagnosis and prevention and treatment of bronchial asthma in children" revised by the respiratory group of pediatric branch of Chinese Medical Association in 2008.

The diagnostic basis of cough variant asthma is: (1) cough lasts for more than 4 weeks, and often attacks or worsens at night and (or) early morning, mainly dry cough. (2) There was no sign of infection in clinic, or it was ineffective after a long time of antibiotic treatment. (3) The diagnostic treatment of antiasthmatic drugs is effective. (4) Other causes of chronic cough were excluded. (5) The daily variation rate of positive bronchial provocation test and / or PEF (continuous monitoring for 1-2 weeks) ≥ 20%. (6) A history of atopic disease or positive allergen test in individuals or first or second degree relatives. The above four basic conditions were diagnosed.Diagnostic criteria for asthmatic bronchitis: refer to the 7th edition of zhufutang Practical Pediatrics to formulate the diagnostic criteria. If the age is less than or equal to 3 years old, the scoring principle is as follows: (1) after infants suffer from bronchiolitis or asthmatic bronchitis, those with repeated wheezing attacks for more than 3 times are scored as 3 points; (2) wheezing sounds in the lung are counted as 2 points; (3) sudden onset of wheezing symptoms is counted as 1 (4) children with other allergic history 1 point; (5) eczema, dermatitis or asthma history of 1 point in the first and second degree relatives. Asthmatic bronchitis was diagnosed when the total score was more than or equal to 5, and the asthmatic bronchitis was diagnosed as asthmatic bronchitis only twice or less than 4.

2.2.3 Clinical data collection and quality control

The main contents include the name, gender, age, visiting time, chief complaint, current medical history, past history, allergic history, family history, physical examination, TCM diagnosis, western medicine diagnosis, medication, syndrome score before and after treatment, adverse events, etc. Based on the

principle of maintaining the original appearance of the tutor's diagnosis and treatment process, the cases were comprehensively reviewed to ensure the authenticity of the collected information and the accuracy of the evaluation.

2.3.5 Observation indexes

(1) Main outcome measures: the main syndrome scores reflecting the curative effect evaluation were observed, including cough, asthma, phlegm and wheezing sound scores before and on the first, second, third and sixth days after treatment.(2) Safety indicators: adverse events, discomfort after medication; skin allergy and damage after acupoint application.

2.4 Treatment and medication

89 cases of children with cough and asthma were treated by internal and external treatment, that is to say, maxing Erchen decoction was used orally and Asthmake external application powder was applied on acupoints. Among them, budesonide and salbutamol were inhaled through airway in 25 cases.Maxing Erchen decoction consists of moxibustion ephedra, bitter almond, asarum, Poria cocos, Pericarpium Citri Reticulatae, Rhizoma Pinelliae, Belamcandae, Bombyx Batryticatus, semen Raphani and Glycyrrhiza uralensis. Syndrome differentiation and subtraction: frequent sneezing, nasal congestion, runny nose plus Angelica dahurica and Magnolia Flos; phlegm heat plus Houttuynia cordata and Trichosanthes peel; Yin deficiency, add Ophiopogon japonicus; Qi deficiency, add Atractylodes macrocephala and Astragalus membranaceus; throat phlegm obvious with Salvia miltiorrhiza; wet weight with coix seed; pharyngeal red swelling with tissue paper. 1 / 3 Decoction powder of decoction pieces was decocted in water for 3 times and taken after meal for 6 days. According to the analysis of 89 cases of children with cough and asthma, Houttuynia cordata and Trichosanthes kirilowii were the most frequently used, followed by Atractylodes macrocephala, Salvia miltiorrhiza, Ophiopogon japonicus and Astragalus membranaceus. Asthmake external application powder is composed of white mustard seed, asarum, kansui, Gleditsia sinensis, Galla chinensis and borneol in the proportion of 3:2:1:1:3:0.05. Usage: take appropriate amount of Asthmake external application powder, mix with ginger juice, place it in self-adhesive sterile dressing, and apply it to shuangfeishu, shuanggaohuang and Tanzhong points respectively, once a day, for 2-4 hours according to age, once a course of treatment for 3 days.The dosage of budesonide and salbutamol was 2ml: 1mg for budesonide suspension, 0.25ml (including 1.25mg salbutamol) for inhalation of salbutamol sulfate solution under 4 years old, and 0.5ml (containing 2.5mg salbutamol) for patients over 4 years old. Among the 25 children who were treated with atomization inhalation therapy, 19 of them coughed and gasped very much at night. In order to prevent children from having severe asthma symptoms at night, they were given atomization inhalation therapy once; among them, 6 children with obvious asthma symptoms were given atomization inhalation therapy to relieve the symptoms. Band 0.5 π - π); after the second-order decomposition, V_1 is further divided into low-frequency V_2 (frequency band 0-0.25 π) and high-frequency W_2 (frequency band 0.25 π - 0.5 π

2.5 Statistical methods

The total frequency band (0 - π) occupied by the original signal $f(t)$ is defined as space V_0. after the first decomposition, V_0 is divided into two subspaces: low-frequency V_1 (frequency band 0-0.5 π) and high-frequency W_1 (frequency

$$V_0 = V_1 \oplus W_1, V_1 = V_2 \oplus W_2, ..., V_{j-1} = V_j \oplus W_j \quad (1)$$

The subdivision of equation 1 ensures that space V_j and space W_j are orthogonal, and that W_j is also orthogonal. In space V_0, there is

A function $\phi(t)$ whose integer displacement

set $\phi(t-k)$ is the orthogonal normalization basis in V_0.

$$\langle \phi(t-k), \phi(t-k') \rangle = \delta(k-k')$$
$$\langle \phi_{0,k}(t), \phi_{0,k'}(t) \rangle = \delta(k-k') \quad (2)$$

Where $\phi_{0,k}(t)$ is the form of $\phi_{j,k}(t)$ at J = 0, which is $\phi(t-k)$. From equation 2, any function in V_0 can be expressed as a linear combination of $\langle \phi_{0,k}(t); k \in Z \rangle$. Then there must be:

$$f_0(t) = \sum_k x_k^{(0)} \phi_{0,k}(t) \quad (3)$$

Where $x_k^{(0)}$ the weight of the linear combination, and the solution is is as follows:

$$x_k^{(0)} = \langle f(t), \phi_{0,k}(t) \rangle \quad (4)$$

In equation 4, $f_0(t)$ is the smooth approximation of $f(t)$ in space V_0, that is, the profile of $f(t)$ at resolution $j=0$, and $x_k^{(0)}$ is called the discrete approximation of $f(t)$ at resolution $j=0$. This approach is to decompose the original signal $f(t)$ in space V_0 to get the low frequency part. According to the two-scale scalability, if $\phi(t) \in V_0$, then $\phi(\frac{t}{2}) \in V_1$. Moreover, if $\phi_{0,k}(t)_{k \in Z}$ is the orthonormalization basis of V_0, then for $\phi_{1,k}(t) = \frac{1}{\sqrt{2}} \phi\left(\frac{t}{2} - k\right)$ there is:

$$\langle \phi_{1,k}(t), \phi_{1,k'}(t) \rangle = \int \frac{1}{\sqrt{2}} \phi\left(\frac{t}{2} - k\right) \frac{1}{\sqrt{2}} \phi\left(\frac{t}{2} - k'\right) dt = \frac{1}{2} \int \phi\left(\frac{t}{2} - k\right) \phi\left(\frac{t}{2} - k'\right) dt \quad (5)$$

Let $t' = \frac{t}{2}$, then equation 5 can be equivalent to:

$$\int \phi(t'-k) \phi(t'-k') dt' = \delta(t-t') \quad (6)$$

From formula 6, it is known that $\phi_{1,k}(t)_{k \in Z}$ is the orthonormalization basis in V_1, so there is:

$$f_1(t) = \sum_k x_k^{(1)} \phi_{1,k}(t) \quad (7)$$

In equation 7, $f_1(t)$ is the smooth approximation of $f(t)$ in space V_1, that is, the profile of $f(t)$ at resolution $j=1$, and $x_k^{(1)}$ is Called the discrete approximation of $f(t)$ at resolution $j=1$. In subspace W_1, function $\psi_{1,k}(t)_{k \in Z}$ is its orthonormalization basis

$$g_1(t) = \sum_k d_k^{(1)} \psi_{1,k}(t)$$
$$d_k^{(1)} = \langle f(t), \psi_{1,k}(t) \rangle \quad (8)$$

It is extended to between V_{j-1} and V_j, W_j, that is to say

$$f_{j-1}(t) = \sum_k x_k^{j-1} \phi_{j-1,k}(t), x_k^{j-1} = \langle f(t), \phi_{j-1,k}(t) \rangle \quad (9)$$

It can be deduced from equation 9 that:

$$\begin{aligned} f_j(t) &= \sum_k x_k^j \phi_{j,k}(t), x_k^j = \left\langle f(t), \phi_{j,k}(t) \right\rangle \\ g_j(t) &= \sum_k d_k^j \psi_{j,k}(t), d_k^j = \left\langle f(t), \psi_{j,k}(t) \right\rangle \\ f_{j-1}(t) &= f_j(t) + g_j(t) \end{aligned} \tag{10}$$

Therefore, $f(t)$ can be expressed as:

$$f(t) = f_j(t) + g_j(t) + g_{j-1}(t) + \cdots g_1(t) = \sum_{k \in Z} x_k^j \phi_{j,k}(t) + \sum_{i=1}^{j} \sum_{k \in Z} d_k^i \psi_{i,k}(t) \tag{11}$$

3 Results

3.1 Classification of disease diagnosis

A total of 89 cases were collected. Among them, 81 cases accorded with the diagnostic criteria of bronchial asthma, 2 cases with cough variant asthma and 6 cases with asthmatic bronchitis. All the 89 cases were suitable for outpatient treatment.

3.2 TCM Syndrome Classification

The TCM syndromes were 11 cases of wind cold binding lung syndrome, 59 cases of phlegm heat obstructing lung syndrome, 7 cases of external cold and internal heat syndrome, and 12 cases of lung excess and kidney deficiency syndrome.

3.3 Gender and age distribution of cases

89 cases were collected, including 72 males and 17 females. The ratio of male to female was 4.235:1. The oldest was 11 years old and the youngest was 2 years old. The average age was 5.20 ± 2.25 years old. 29 cases were 2-4 years old, 27 cases were over 4-6 years old, 23 cases were over 6-8 years old, 6 cases were 8-10 years old, and 4 cases were 10-12 years old. The age distribution is shown in Table 1.

Table 1 age distribution of 89 children

	2-4 years old	To 6 years old	To 8 years old	To 10 years old	To 12 years old
age group	29	27	23	6	4
Proportion%	32.6	30.3	25.8	6.74	4.49

It can be seen from the above table that the majority of children in this group are 2-4 years old ($P < 0.05$). The children's lungs are delicate, and the lungs are often insufficient. The smaller the proportion of the age group. Considering that with the growth of children's age, the physical factors become more stable, the physique is enhanced, and the incidence of disease is relatively reduced.

3.4 Clinical efficacy evaluation

3.4.1 Syndrome curative effect standard

Evaluation of the improvement of clinical symptoms after treatment: according to the guidelines for clinical research of new Chinese medicine in 2002, the severity of main syndromes was divided into four grades: normal, mild, moderate and severe, which were 0, 2, 4 and 6. This help us to understand the techniques with the complete lung issues. The physical factors help us to understand the most stable and important issue with the incidence of the disease. Pelvic inflammatory sequelae (PIS) is a condition in which female pelvic organs, surrounding connective tissue, and pelvic peritoneum become chronically inflamed; it can occur when acute pelvic inflammation is not thoroughly treated or a patient with a weak constitution has a long course of disease. PIS is

a common and frequently-occurring gynecological disease that may include chronic endometritis, chronic salpingitis, ovaritis, and chronic connective tissue inflammation. It create the complete feature of all the main issue of the syndrome. The main clinical syndromes and their grading and scoring standards are shown in Table 2.

Table 2 scoring standard of main syndrome of children

	normal	light	moderate	severe
	(0 points)	(2 points)	(4 points)	(6 points)
tosse	nothing	Intermittent coughing during the day or at night	Intermittent cough day and night	Frequent cough day and night
asthma	nothing	Occasional asthma	Paroxysmal asthma is more frequent	Frequent attacks of asthma, blue around the lip or three concave sign
Expectoration	nothing	Few phlegm or occasionally phlegm in throat	There was much phlegm and obvious phlegm in throat	Day and night expectoration, throat phlegm sound percolate

3.4.2 Disease efficacy criteria

According to the "guiding principles for clinical research of new Chinese medicine" in 2002, the overall efficacy evaluation was divided into four grades: clinical cure, marked effect, effective and ineffective. Clinical cure: cough and asthma disappeared, symptom score decreased more than 95%. Significant effect: cough and asthma disappeared, 70% ≤ symptom score decreased < 95%. Effective: relieving cough and asthma, 30% ≤ symptom score reduction < 70%. Ineffective: the symptoms and signs of cough and asthma did not improve or even worsen, and the symptom score decreased by less than 30%. The calculation formula (monidipine method) was: [score before treatment - integral after treatment) / score before treatment] × 100%

3.5 Efficacy and time effect analysis

(1) The main syndrome scores of the first day before treatment, the first day, the second day, the third day and the sixth day after treatment are shown in Table 3.

Table 3 main syndrome scores of 0, 1, 2, 3 and 6 days of treatment

	tosse	asthma	Expectoration	Wheezing sound	Total points
Day 0	4.63±1.11	2.90±1.09	4.27±0.75	3.53±1.65	15.37±3.08
Day 1	4.58±1.10	1.01±1.00	4.27±0.75		
Day 2	4.00±1.24	0.43±0.82	4.02±0.71		
Day 3	3.12±1.09	0.15±0.54	3.48±0.88		
Day 6	2.22±0.88	0.11±0.40	2.43±0.97	0.02±0.21	4.81±1.88

As the patients were collected from outpatient department, it was difficult to auscultate the changes of lung wheezing sound every day, on the 1st, 2nd, 3rd and 6th day after treatment, the reduction rates of cough, asthma and phlegm stridor were shown in Table 4.

Table 4 reduction rate of cough, asthma and phlegm in children on the 1st, 2nd, 3rd and 6th day after treatment

	tosse	asthma	Expectoration
Day 1	0.75±4.97	69.67±31.64	0
Day 2	12.73±20.10	85.96±27.17	4.87±13.34
Day 3	31.09±22.36	93.26±21.57	17.04±22.47
Day 6	49.81±20.81	94.38±20.56	42.13±23.98

(3) On the 6th day after treatment, the reduction rate of wheezing sound and the total score reduction rate are shown in Table 5.

Table 5 the reduction rate of wheezing sound and total score on the 6th day after treatment

	Wheezing sound	Total points
Day 6	99.44±5.30	68.02±12.31

It can be seen from table 4 and table 5 that the score reduction rate of cough on the first day after treatment was p = 0.1, > 0.05, without statistical significance; the score reduction rate of other symptoms was p < 0.05, with statistical significance. It showed that the symptoms of asthma were improved on the first day after treatment, but the symptoms of cough and phlegm were not significantly improved. On the second day after treatment, the symptoms of cough, asthma and phlegm were improved, and the symptoms were improved, asthma > cough > phlegm (P < 0.05). On the third day after treatment, the symptoms of cough, asthma and phlegm were improved, and the symptoms of asthma > cough > phlegm were improved (P < 0.05). On the 6th day after treatment, the symptoms of cough, asthma, phlegm and wheezing sound were improved, and the reduction rate of asthma and wheezing syndrome was p = 0.08, > 0.05, the difference was not statistically significant, indicating that the symptoms of wheezing and wheezing were improved on the 6th day after treatment. On the 6th day after treatment, the symptoms of asthma, wheezing, cough and phlegm were improved (P < 0.05).

(4) The total curative effect of 89 children after treatment is shown in Table 6.

Table 6 overall efficacy

	Clinical cure	Remarkable effect	Effective	invalid
Number of cases (n)	2	44	43	0
Proportion (%)	2.25	49.44	48.31	0

It can be seen from the above table that the total effective rate of Asthma Ke external application powder in treating cough and asthma syndrome in children with asthma attack stage is 100%.

3.6 Comparison of curative effect between non application of atomization inhalation therapy and application of atomization inhalation therapyAmong 89 cases of children with cough and asthma, 64 cases were only treated with the internal and external treatment of traditional Chinese medicine that is, the application of maxing Erchen decoction and point application of Asthmake external application powder.

Among them, 25 cases were treated with budesonide and salbutamol via airway on the basis of internal and external treatment of traditional Chinese medicine. According to the application of atomization inhalation therapy, 89 cases of children were divided into application

group and application group. The scores of main syndrome before treatment and on the first, second, third and sixth days after treatment were recorded, and the score reduction rate of main syndrome scores was counted to compare whether there was any difference between the two groups in improving the main syndromes. (1) The comparison of syndrome score before treatment is shown in Table 7 [3].

Table 7 Comparison of syndrome scores before treatment

grouping	N	tosse	asthma	Expectoration	Wheezing sound	Total points
Not applied	64	4.50±1.01	2.78±1.05	4.25±0.76	2.97±1.42	14.5±2.75
application	25	4.32±1.25	3.20±1.15	4.32±0.75	4.96±1.31	17.5±2.90

It can be seen from table 7 that before treatment, cough symptom P = 0.52 (P > 0.05); asthma symptom P = 0.12 (P > 0.05); phlegm cough symptom P = 0.69 (P > 0.05), indicating that there is no significant difference in cough, asthma and phlegm cough symptoms between the two groups before treatment. Before treatment, wheezing score P = 0.00 < 0.05, total score before treatment P = 0.00 < 0.05, the difference was statistically significant, not comparable. Therefore, we only made further analysis and evaluation on the symptoms of cough, asthma and phlegm.

(2) After treatment, the reduction rate of cough, asthma and phlegm was 8.

Table 8 Comparison of cough symptom reduction rate after treatment

grouping	N	Day 1	Day 2	Day 3	Day 6
Not applied	64	0.52±4.17	13.54±20.76	30.47±21.93	50.26±19.8
application	25	1.33±6.67	10.67±18.56	32.67±23.80	48.67±21.47

It can be seen from table 8 that the reduction rate of cough, asthma and phlegm in the two groups on the first, second, third and sixth day after treatment was compared, and the result was p > 0.05, with no statistical significance. The results showed that the symptoms of cough, asthma and phlegm stridor in children with and without atomization inhalation were almost the same.

4 Discussion

4.1 Medication characteristics of cough and asthma syndrome in children with asthma attack

(1) Differentiation of constitution and medication

Traditional Chinese medicine has a long history of understanding of constitution. As early as in Huangdi Neijing, it has been recorded that "those who are human are superior to kidney qi" and "those who are strong in quality are used by autumn and winter". The book discusses the physical characteristics and difference rules of individuals and different groups, involving the formation factors of constitution, the type of constitution, the relationship between constitution and disease, prevention and health preservation, etc. The constitution theory of traditional Chinese medicine. According to Qian Yi · "pediatric medicine syndrome Zhijue" that "children are prone to deficiency and excess, spleen deficiency is not affected by cold and warm, taking cold generates cold, taking warm generates heat", and puts forward the physical

Characteristics of children: weak viscera, easy cold and hot, easy deficiency and easy excess, and spleen weakness. In the clinical diagnosis and treatment of infantile cough and asthma syndrome, the tutor distinguishes the constitution type according to the children's plain performance, and on the basis of syndrome differentiation and prescription, often combined

with the constitution type of children. Based on the theory of infantile Yin and Yang, normal children should avoid excessive sweating to hurt Yin, or use cold and cold to seriously injure the spleen and stomach; phlegm dampness type children are polymorphy, fat tongue, greasy fur, loose stool, etc., supplemented with drugs for resolving phlegm, strengthening the spleen and drying dampness; children with Yin deficiency syndrome are characterized by emaciation, night sweats, red tongue and less moss or flower peeling, etc., supplemented with herbs for nourishing yin and clearing heat, such as Ophiopogon japonicus, light bamboo leaves, reed root, etc., and Magnolia officinalis should be used with caution For children with Qi deficiency syndrome, they usually have less complexion, less movement, lazy speech and more sweating, and are supplemented with Astragalus membranaceus and Atractylodes macrocephala and other drugs to invigorate the spleen and replenish qi; for children with special nature, the lower eyelids are often covered with blood stasis, and cough and asthma cannot be cured or repeated repeatedly. Therefore, it is necessary to use Bupleurum and Platycodon grandiflorum [4].

(2) Comply with the lung and promote qi circulation

The teacher of cough and asthma thought that the Lung Qi was lost. "Plain questions" said "lung bitter, Qi upward." "San Yin Fang" says, "the husband's five internal organs all have asthma cough 100 pulse takes Qi from the lung, wheezing means moving Qi, so the lung is mainly used. Children's external defense is not solid, feeling the external evil, external evil invading the lung, lung loss, hair, Su Jiang, adverse Qi, and cough and asthma. The spreading and descending of lung are restricted by physiology and affected by pathology. Based on this, the tutor in the diagnosis and treatment of cough and asthma syndrome in children should comply with the physiological characteristics of the lung, regulate the propaganda and depression of the lung, make it suitable for the promotion and fall, and smooth the qi movement, then cough and asthma will be calmed. The tutor is good at using roasted ephedra and almond to release and lower lung qi. The two drugs are compatible, one for purging and one for lowering, to adapt to the opening and closing of lung qi. Moreover, almond can prevent the malpractice of latent phlegm induced by roasted ephedra. The roasted ephedra focuses on relieving asthma and relieving cough, and its sweating effect is gentle to prevent excessive sweating, which conforms to the physiological characteristics of children with lung deficiency.

(3) Medication by stages

In the early stage of cough and asthma in children, the main symptoms are cough, expectoration and asthma. The main prescription is maxing Erchen decoction. When the cough and asthma symptoms disappear and the cough is significantly reduced, the symptoms are eliminated and the remaining phlegm is not exhausted. Therefore, Jinshui Liujun Decoction should be added or subtracted to adjust the treatment time according to the condition.

(4) Prescription light

The tutor took the physiological characteristics of children into consideration, and the medicine taste was less and the dosage was light. All the products with severe cold and great bitterness are easy to hurt Yang Qi, so we should be careful to use bitter and cold medicines, such as Radix Isatidis, Rhizoma Coptidis, Cortex Phellodendri and Scutellaria baicalensis. Children are the body of childish Yin and Yang. Abusing bitter cold to attack not only destroys the stomach, but also cuts down the Qi of children's hair. Therefore, the tutor emphasized that the spleen and stomach Yang. Qi should be taken care of in clinic, and the drugs of honeysuckle, light bamboo leaf, huhuanglian and reed root should be used for clearing heat.

(5) How to use Salvia miltiorrhiza

"On the origin of various diseases" said that "phlegm, which is blocked by blood vessels, drinking water gathered but not dissipated, so it became phlegm." "On blood syndrome" said that "blood stasis is long, but also can turn into phlegm and water". The tutor believes that "blood is not conducive to water", phlegm and stasis related, the treatment of cough and asthma in children with phlegm, plus Salvia miltiorrhiza blood circulation to achieve good results. Salvia miltiorrhiza was first recorded in Shennong materia medica classic, which has the function of promoting blood circulation and

dispersing stasis. According to the method of "promoting blood circulation and promoting diuresis", it can promote the transformation of water and phlegm, and make blood Huo lead to phlegm [5].

Analysis of the basic prescriptions of cough and asthma syndrome in children with asthma attack treated by tutor. Maxing Erchen decoction is an experienced prescription for treating infantile cough and asthma. It is based on the ancient prescription Erchen decoction and Xiaoqinglong decoction.

It is composed of two kinds of traditional Chinese medicines, namely, Taiping decoction, Wumei decoction, Huijiang decoction, Huijiang decoction, etc. The original book did not record its efficacy, later generations summarized its function as dry dampness to dissipate phlegm, regulate qi and moderate. Zhu Danxi highly praised Erchen decoction for the treatment of phlegm [6].

The cases collected in this study mostly belong to phlegm heat obstructing lung syndrome, and the modified maxing Erchen decoction can also achieve good curative effect. The tutor believes that the pathogenesis of phlegm heat obstructing lung syndrome is phlegm dampness, wind evil, depression and heat, inducing latent phlegm, phlegm obstructing Qi, and cough; children are the body of young Yang, phlegm is Yin evil, easy to hurt Yang Qi, non-warming cannot change, warming can not only warm lung phlegm, but also warm yang to change Qi, restore the normal physiological function of water metabolism, and put an end to the source of phlegm. Therefore, according to the evolution of the disease, children feel wind evil, depression and heat, resulting in phlegm heat obstructing lung type of cough and asthma, the treatment should not be bitter cold and heat clearing, should be based on maxing Erchen decoction warming lung phlegm, with Houttuynia cordata and Trichosanthes peel clearing heat. After long-term clinical use and this study proved that maxing Erchen decoction is an effective prescription for the treatment of infantile cough and asthma. It is safe to use and has good taste, and children are willing to accept it [7]. Advantages of Asthmake external application powder in treating cough and asthma syndrome in children with asthma attack.The results of this study show that Asthma Ke external application powder has significant clinical effect in the treatment of cough and asthma syndrome in children with asthma attack. The asthmatic symptoms of children with cough and asthma were relieved on the first day after treatment, and the asthma symptoms were basically relieved on the third day after treatment, and the curative effect of TCM combined with internal and external treatment was similar to that of atomization inhalation therapy. It shows that Asthmake external application powder combined with maxing Erchen decoction has better antiasthmatic effect and takes effect quickly. Cough and phlegm were improved on the third day after treatment, and significantly improved on the sixth day after treatment. On the 6th day after treatment, the wheezing sound of lung disappeared [8].

5 Summary

On the first day after treatment, the asthma of the children with cough and asthma was relieved, but the cough and phlegm cough were not significantly improved. On the 2nd and 3rd day after treatment, the symptoms of cough, asthma and phlegm were improved. The improvement of asthma was better than that of cough and phlegm, and the improvement of cough was more obvious than that of phlegm ($P < 0.05$). On the 6th day after treatment, the symptoms of cough, asthma, phlegm and wheezing were improved, but there was no significant difference in the improvement of asthma and wheezing. The improvement of asthma and wheezing was better than that of cough and phlegm, and the improvement of phlegm was slower ($P < 0.05$). No adverse events were found during the treatment. It was found that about 1 / 4 of the children with cough and asthma were treated with budesonide and salbutamol via airway. The results showed that there was no significant difference in the scores of cough, asthma and phlegm before treatment between the two parts of children who did not use atomization inhalation therapy and those who applied atomization inhalation therapy had comparability; the scores of wheezing sound and the total score of syndromes in children with atomization inhalation therapy were slightly higher than those of children without application, and there was no comparability. On the 1st, 2nd, 3rd and 6th day after treatment,

there was no significant difference in the improvement of cough, phlegm and asthma between the two groups. In conclusion, the application of Asthmake external application powder acupoint application and maxing Erchen decoction plus internal and external treatment of cough and asthma syndrome in children with asthma attack has significant clinical effect, and can quickly improve the symptoms of asthma.

References

[1] Inoue, T., Akashi, K., Watanabe, M., Ikeda, Y., Ashizuka, S., & Motoki, T., et al. Periostin as a biomarker for the diagnosis of pediatric asthma. Pediatric Allergy and Immunology, 27(5), 521-526(2016).

[2] Booster, G. D., Oland, A. A., & Bender, B. G. Psychosocial factors in severe pediatric asthma. Immunology & Allergy Clinics of North America, 36(3), 449-460(2016).

[3] Harb, H., Alashkar Alhamwe, B., Garn, H., Renz, H., & Potaczek, D. P. Recent developments in epigenetics of pediatric asthma. Current Opinion in Pediatrics, 28(6), 754 (2016).

[4] Xu, X., Wang, H. Y., Zhang, Z. W., Han, H., & Wang, Y. Effect of massage therapy on pulmonary functions of pediatric asthma: a systematic review and meta-analysis of randomized controlled trials. European Journal of Integrative Medicine, 8(2), 98-105(2016).

[5] Nadir?Bahceciler, N., Galip, N., & Babayigit, A. Steroid sparing effect of sublingual immunotherapy: real life study in mono/polisensitized children with asthma. Immunotherapy, 9(15), 1263-1269(2017).

[6] Shim, J. U., Lee, S. E., Hwang, W., Lee, C., & Koh, Y. I. Flagellin suppresses experimental asthma by generating regulatory dendritic cells and t cells. Journal of Allergy & Clinical Immunology,137(2), 426-435(2016).

[7] Ahanchian, H., Jafari, S. A., Ansari, E., Ganji, T., & Kianifar, H. A multi-strain synbiotic may reduce viral respiratory infections in asthmatic children: a randomized controlled trial. Electronic Physician,8(9), 2833-2839(2016).

[8] Jerome, N., Emilia, U., Ibanga, E., & Godwin, E. Health risks associated with oil pollution in the niger delta, nigeria. International Journal of Environmental Research and Public Health, 13(3), 346(2016).