

Retrospect of Inquiry on Treating Infant Bronchial Asthma with Conventional Chinese along with Western Medication

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Abstract: Pediatric bronchial asthma is the most commonplace chronic pulmonary complaint in childhood. It is mainly characteristic of recurrence, continuously impacting the invalid's work, rest and life. Taking timely interventions can escape before slow down the occurrence of complications, for that reason the illness can be reasonably controlled. This paper mainly involves three aspects of China's conventional medication, modern chemical, as well as combined China's conventional and Western medication, expounds and analyzes the curative influence of preventing as well as curing the bronchial asthma in children in the current medical environment.

1. Introduction

Bronchial asthma (BA) is a highly heterogeneous pulmonary disease[1,2], divided into atopic and non-atopic phenotype, frequently characteristic of dyspnea, shortage of breathing, chest tension, together with the dry cough just like important clinical manifestations. Pediatric BA is also the most universal chronic pulmonary illness in childhood, contributing to a significant burden on the current healthcare system[3]. The airway epithelial remodeling is one of the most apparent features of the BA. Therefore, making out specific molecular systems of the airway inflammation along with its remodeling is helpful for the evolution of symptomatic and targeted therapies for BA's treatment. According to the epidemiological survey in my country in 2018, the prevalence rate of BA among infant inhabiting in cities has reached 3%, and it constitutes a relatively severe harm[4].

At present, the diagnosis and therapy of this illness are none the less shortage of modern chemical; hormone drugs are just foremost measures to control symptoms; moreover, symptomatic therapy cannot be implemented based on the illness, so this effect obtained is inevitably limited[5]. Particularly for pediatric invalids, due to the negative effects triggered off the application of hormonal drugs, the invalid's compliance is stricken, and the therapeutic effect is limited at the

same time. BA is principally characteristic of long-standing airway inflammation and high airway re-activity, which is the mechanism of occurrence is fairly sophisticated. Therefore, the prevention and treatment of BA have its limitations merely with current remedy or traditional medication. Solely through this integration of conventional Chinese and Western medication is able to be more beneficial. Prevention of BA in youngster[6].

Chinese medicine owns a long-period history, treated characteristics as well as vital advantages in children's BA prevention and treatment. Nevertheless, in clinic therapy, China's conventional medication therapy means and knowledge of the contemporary medication have not been integrated, which neither reflects advantages of the mixture of China's convention medication as well as western medication, but also has some unreasonable cases of Chinese medicine, giving rise to further security risks. This article emphasizes clinical practicability for composite of conventional Chinese and western chem in children's BA therapy, with the aim of promote standardization of prevention and therapy for children's BA by China's conventional and western medication, ensure security and effectiveness of preventing, and improve medical diagnosis and therapy.

2. Tcm Etiology and Pathogenesis

BA is just one sickness feature of long-standing airway inflammation and BHR (bronchial hyperresponsiveness). It attaches to classification of "asthma syndrome" of TCM, in which this former means sound and this latter means breath. The first mentioned of two must include the latter, for that it is called asthma[7]. TCM believes that onset of asthma includes both internal and exterior causes: the internal cause is greatly on account of lung decline, spleen and kidney functions in bodies, leading to phlegm retention in lungs, thus forming the early root of asthma. Outward causes: humankind body contacts outward surroundings, including foreign body odor (allergen, mites, air, etc.), excessive consumption of salty acid, inappropriate drill, emotional excitement and so on[8]. In traditional Chinese medication, the phlegm is split into seeable phlegm and unseen phlegm. The former refers to the pathological products produced by the body in the process of pathological changes, such as throat phlegm sounds and expectoration sounds, which are tangible phlegm, while the latter, under modern research, represent that the products relevant to the pathogenesis of BA, such as inflammatory cells, cytokines and gene constitution mechanisms, are all relevant to phlegm in China's traditional medicine. It is pointed out that the pathogenesis of BA attack in traditional Chinese medication is mainly give rinsed to external factors, which triggers phlegm to stagnate, and phlegm arises with lung qi; additionally, qi is impeded by means of phlegm, what more affects lung's normal function. Therefore, phenomenons of cough, wheezing, and roaring phlegm when throats emerge if adverse arising of pulmonary QI[8].

3. Modern Medical Research

Thanks to the in-depth research on the pathogenesis of BA in up-to-date chemical, it is pointed out that BA is a kind of chronic airway inflammatory disease lead to the joint participation of various inflammatory cells (such as eosinophils, hypertrophic microorganisms, neutrophils, etc.) and bacterial components. Its pathogenesis is complicated, and its pathology and physiology characteristics and clinical investigation phenotype has certain diversity. Additionally, there are interactions between genetic ingredient and surrounding and immunomodulatory factors that jointly bears upon the occurrence and evolution of BA[9].

3.1 Correlation between t Lymphocytes and Ba

As far as the current circumstance is concerned, abnormal separation of helper T lymphocytes

(Th) is a requisite part of the absence of inflammatory factors, and perform a great function in the pathogenesis of BA. Under the influence of various characteristic threats, Th lymphocytes are gradually separated into Th1 and Th2 bacterial subgroups with the capability to release various cytokines and organisms[9,10]. The first mentioned of two primarily composes IL-2, IFN- γ and other cytokines, while the latter mainly produces IL-4, IL-10, IL-13 and other cytokines, which playing a role of autoimmunity. During the urgent BA samples onset, levels of IL-2 and IFN- γ in blood samples were passively linked to BA's onset level, while levels of IL-4 and IL-5 were actively associated. It represents that there are two types of hyperactivity and disappointment[11]. Additionally, Zhu Tianji et al. also found that the increase of ECP content in serum samples of BA invalids was positively correlated with the severity of the disease[12].

3.2 Correlation between Serum Periosteal Protein, Mir-155 and Ba

Contents of serum periosteal protein (Periodin) as well as miR-155 within blood samples of infants suffering from acute BA obviously exceeded those of wholesomely youngsters and children suffering from chronic BA, which confirmed that both of them were involved in the generation and progression of asthma. Periosteal is one kind of cellular matrix protein, distributed on the cellular surface and communicates with assorted integrin substances to sustain humanity cellular growth and reconstruction[13]. In ASMC (airway epithelial cells, for short), Periodin adjusts level of relevant cytokines through autocrine effect and exert a part during airway fibrosis, confirming its mechanism in the pathogenesis of BA[14]. With the comprehension and exploration of miRNA, it performs a regulatory function in assorted clinical pathological and physiological biological changes; furthermore, its expression level can relatively manifest the incidence of varied complaints. MiR-155 exerts a pivotal part in T cellula differentiation. In the course of the pathogenesis of BA, its level is abnormally high, thus the detection of miR-155 level can make a visual assessment of the severity of the illness[15].

4. Current Status of Treatment in Modern Medicine

Contemporary remedy has an insurmountable advantage in the control of acute BA symptoms in infants. Glucocorticoids and short-acting β -2 receptor agonists are the preferred first-line chemical in clinical practice, which can achieve rapid anti-inflammatory, spasms, alleviate the symptom such as hypoxemia. Provided that requisite, they can be repeatedly administered. Their dosage forms are diverse, and they can be administered orally, inhaled and intravenously according to the needs of the sickness. Moreover, antihistamines and antiasthmatic drugs can be added corresponding to symptoms in time of the acute attack period. Nevertheless, in semester of clinic management of BA's chronic duration and clinic alleviation, present medication treatment is not satisfactory.

5. Combination of China's Conventional and Western Medication Therapy

Though the current medication has the advantages of fleeting effect and convenient administration, disadvantages of large side effects are also manifest. The effectiveness of traditional Chinese medication on BA is weaker than that of modern medicine, but it can fundamentally eliminate the accumulation of pathological products, strengthen the physique and improve the disease resistance. To sum up, the mixture of the conventional Chinese and western chemical can complement each other, thereby enhancing BA's clinical medical efficacy[16].

The primary functional ingredients for the treatment of BA can be found in single Chinese herbal medication, such as icariin (ICA), the main valid ingredient extracted from Epimedium in a modern way. After a progression of experimental analysis, it was deduced that ICA can effectively improve

the heart Vascular function, induction of tumor cell differentiation and promotion of bone growth. According to animal tests, ICA can regulate the production and release process of changing growth element-beta1(TGF- β 1), VEGF (vascular endothelial growth factor), IL-13 (interleukin 13), along with endothelin-1(ET-1). And indirectly control the activity of MAPK (mitogen-activated protein kinase)/Erk signaling pathway to alleviate ASMC proliferation in addition to fibrosis in the airway of mice remodeling induced using ovalbumin (OVA) in animal duplicates[17].

Taking Mahuang Tang as an illustration, according to literature reports, Mahuang Tang can inhibit the regulatory mechanism of SP1. SP1 performs an great function in the race sickness, as a key gene from DNA methylation and asthma gene expression, along with the FGFR3 (fibroblast growth factor receptor 3) is just the gene[18] adjusted by Sp among bladder carcinoma cells. Coincide to Wei L[19] et al. among spontaneous diabetes animal modes of long-standing asthma triggered by OVA, Mahuang Tang can down regulate SP1 expression and inhibit FGFR3 transcription, thus bringing about inactivation of PI3K/AKT signal pathway. Through this mechanism, Mahuang decoction can alleviate symptoms of the airway inflammation as well as its remodeling within the asthmatic rats through impeding ASMC proliferation. What's more, in terms of using Mahuang decoction combined with montelukast, we concluded that the latter was an effective leukotriene receptor antagonist in pharmacology, which can achieve the means of treating BA by interfering and controlling the leukotriene synthesis process and inhibiting the leukotriene binding to the corresponding receptor[20,21]. Research results represent that montelukast can reduce phenomenons of the asthma attack and enhance the lung function through impeding the inflammatory response as well as decreasing cytokines secretion[22]. Although it is crucial in the treatment and control of BA, there is a lack of etiological treatment, and for the frail infants, drugs tolerance is stricken. In command to give full play to the viscera's conditioning as well as its etiological treatment, yin and yang from bodies by conventional Chinese medication, this combined utilization of those two can improve disease in a greater way; additionally, it also proves safety and reliability of China's conventional medicine under the rational usage of it.

For children with BA in illness's remission, the so-called spleen disharmony will lead to quite a few sicknesses. Therefore, in clinical disciplines, we should pour attention into regulating the spleen and protecting the five internal organs. Weakness of the spleen is also the vital pathogenesis of BA. With the help of online pharmacological research[23], we found that Shenling Baizhu Powder can not only treat BA, but also protect the spleen, prevent and promote the recovery of the complaint. At this equivalent time, the classic formula Yupingfeng Powder is able to be used to assist BA therapy for the sick person suffering through AR (allergic rhinitis), so as to better alleviate the disease and improve the lung function of patients; Yupingfeng Powder can improve humanity immune ability, alleviate allergic reaction and other pharmacological effects, and correct the immune state of human disorder[24,25].When the clinical symptoms of BA are controlled and improved, it will enter the chronic development stage of the disease. At this time, Ointment in the party can give full plays to its advantages. The traditional principle of applying the cream in a quantitative attitude can be used to give full play to the treatment approach of a wide range of efficacy, slow release and lasting, and overall treatment, so that the symptoms can quickly enter the remission stage. Many clinical practices represent that patients not only prone to have stable asthma after receiving the ointment, but also gradually diminish the variety, dosage and time of receiving drugs, or else even quit taking drugs [26,27].

6. Conclusion

BA is a relatively sophisticated complaint. Although quite a few medical workers have gone through many explorations, the current clinical measures are still unsatisfactory, from drug's

therapy to non drug therapy, from the conventional medicine, together with the present medicine to the compound of them two, from internal therapy to external therapy: ①There is still a lack of more effective solutions outside the first-line treatment in the current clinical practice. Although new drugs are constantly emerging, it's hard to implemented broadly in the clinic practice; ② Although the effect of hormone control BA is obvious, adverse reactions are still unavoidable; ③ The conventional Chinese medication is difficult to emphasize its benefits as well as features in clinic therapy. At present, BA treatment mostly relies on decreasing the clinic reaction, postponing onset time as well as improving living conditions of invalids, etc. Nevertheless, with the further improvement and innovation of disease diagnosis technology and medical skills, it also brings hope to alleviate the ache and stress of children. To summarize, the pathogenesis and clinical diagnosis of BA still needs to be further discussed, and further survey is needed. It is believed that with the deepening of disease research and treatment, it will eventually bring a fresh life to patients.

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