

Preschool Wheezing: An Acupuncture Approach

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ABSTRACT

Background: While asthma is one of the causes for wheezing in children, it is not the most common cause. Acupuncture treatment is effective for relieving symptoms in the acute phase and for reducing the frequency and severity of asthma episodes in the chronic phase. In many cases, acupuncture might eradicate the problem totally.

Objective: The aim of this article is to describe the use of acupuncture for treating wheezing in preschool children.

Methods: Acupuncture treatment for wheezing in the acute phase of asthma for symptomatic relief and in the chronic phase to address the underlying Disharmony patterns are discussed, using three illustrative cases.

Conclusions: Good quality studies proving the efficacy of acupuncture for addressing asthma in its acute and chronic phases are lacking at present and are needed.

Key Words: Asthma, Wheezing, Bronchiolitis, Preschool, Pediatrics

INTRODUCTION

WHEEZING IS A WHISTLING SOUND when one breathes when the airways are narrowed and is usually more pronounced during expiration. The narrowing can be caused by bronchospasms, inflammation of the linings of airways, mucus, a foreign body or an abnormal growth.

Preschool wheezing is common. Approximately, 25%–30% of infants have at least one episode of wheezing.¹ By age 3, 40% of children would have wheezed at least once, and, by age 6, 50% of children will have had at least one episode of wheezing.¹

WHEEZING IN WESTERN MEDICINE

Common causes of wheezing include asthma, allergies, gastroesophageal reflux disease, infections (upper respiratory tract infection, pneumonia, bronchitis, and bronchiolitis),² and obstructive sleep apnea. Uncommon causes of wheezing include aspiration of foreign bodies, congenital vascular

and tracheobronchial abnormalities, cystic fibrosis, cardiac failure, immune-deficiency disease, mediastinal masses, vocal-cord dysfunction, tumors, and bronchitis obliterans.²

By definition, a diagnosis of asthma requires objective demonstration of variable limitations of airflow and immediate improvement after inhalation of a short-acting bronchodilator (10%–15% improvement in forced expiratory volume in 1 second [FEV₁]). Spirometry is difficult to perform in preschool-age children.

Two types of wheezing can be distinguished in preschool children: (1) virus-induced wheezing and (2) multitrigger wheezing.

Virus-Induced Wheezing

In virus-induced wheezing, the lungs are essentially normal and the patient is asymptomatic between episodes. Rhinoviruses are the most common triggers of acute wheezing and are predictive of asthma in high-risk children.³ Other viruses implicated are respiratory syncytial virus (clinically diagnosed as bronchiolitis) and, more recently, human metapneumo virus.

Multitrigger Wheezing

Multitrigger wheezing is usually associated with an allergy and is more common in schoolchildren. There is usually a family history of allergies and asthma. Wheezing tends to persist beyond early childhood and is associated with significant defects in lung growth.⁴

Considerations Regarding Wheezing in Preschool Children

The following considerations regarding preschool wheezing are recommended:⁴

- Preschool wheezing should be classified as episodic (virus-induced) or multitrigger wheezing.
- The terms *transient*, *late-onset*, and *persistent* wheezing should not be used clinically.
- It is often difficult to make a definitive diagnosis of asthma in preschool children and, hence, this term is not used in this age group.

History of Wheezing

The history of a preschool child's wheezing is most important, and this should be differentiated from other types of noisy breathing.

Associated allergic disorders—such as eczema, rhinitis, and sinusitis—may be present. The child's personal and family history of allergies, exposure to household smoking, and pattern and triggers of wheezing should be assessed. Wheezing described by parents has considerable variations, and this should be verified by a health professional.

Physical Examination

The results of physical examination may be normal or may show wheezing or decreased air entry.

Diagnostic Investigation

Skin-prick allergy testing may identify allergens, especially if there is a family history or if the wheezing is of long-standing. As noted above, spirometry is difficult to perform in this age group and is not recommended, but impulse oscillometry can be used in children as young as 3 to assess pulmonary functions.⁵ Other investigations should be discouraged unless the wheezing is unusually severe, is accompanied by unusual clinical symptoms, and is resistant to treatment.

Treatment

Acute symptoms respond well to short-acting β -agonists, oral corticosteroids, and, in severe cases oxygen. For prevention, inhaled corticosteroids are useful for addressing multitrigger wheezing but are not recommended in virus-

induced wheezing.⁷ Leukotriene receptor antagonists (montelukast) is more useful in virus-induced wheezing.

WHEEZING IN CHINESE MEDICINE

In Chinese Medicine, wheezing (*Xiao*) is described as a whistling or snoring sound and is often accompanied by breathlessness (*Chuan*). *Chuan* includes difficulty in breathing, breathing with an open mouth, lifting the shoulders when breathing, and difficulty in breathing while lying down. Often wheezing and breathlessness are considered together as *Xiao-Chuan*.

The Concept of Phlegm

The main pathologic factor in wheezing is Phlegm stored in the lungs. Phlegm is potentially the cause of various disorders such as goiter, nodules, masses, and breast lumps, which may be benign or malignant. The main cause of Phlegm is Spleen Deficiency. The Spleen is responsible for the normal transport of body fluids and when Spleen function is Deficient, the fluid tends to accumulate and this results in Dampness. As the process continues, the Stagnant fluid condenses, becomes thicker—this is *Phlegm*. This is best seen on the tongue as swelling on the sides, extending to the middle of the tongue where the Spleen is represented. The tongue in this presentation will have a sticky coating, and, because there is fluid retention, the pulse is perceived as if one were feeling the pulse through a medium of fluid. In addition, the pulse slips under the fingers—this is a *slippery pulse*.

Phlegm combines easily with other pathogenic factors, such as Heat or Cold, producing Hot Phlegm or Cold Phlegm. Other features of Phlegm are oppression in the chest, a feeling of heaviness, dizziness, and mental confusion in the head.

When considering wheezing, one has to differentiate between the acute phase and the chronic phase. The acute phase is caused by Cold Phlegm or Hot Phlegm. In chronic cases, there is an associated Spleen, Lung or Kidney Deficiency.

Acute Phase

Acute phase caused by Cold Phlegm. Wheezing, oppression in the chest, scanty Phlegm, feeling cold, and feeling worse in cold weather are the main features. The tongue is swollen with a white coating, and the pulse is slippery. Reduce the following points:

- LU 6—the accumulation point of Lung
- BL 13—the *Back Shu* point of Lung
- LU 1—the *Front Mu* point of Lung
- LU 7—the connecting point of Lung.
- CV 22, ST 40, and PC 6—resolve Phlegm
- CV 17—facilitates movement of Qi in the chest.

The Chinese herbal treatment is *Belamcanda*–*Ephedra* Decoction (*She Gan Ma Huang Tang*).

Acute phase caused by Hot Phlegm. Wheezing, yellow sticky sputum, red face, bitter taste and feeling of heat are the main features. The tongue is red with a yellow sticky coating and the pulse is slippery and rapid. Reduce the following points:

- LU 6—the accumulation point of Lung
- LU 1 and BL 13—the *Front Mu* point and *Back Shu* point, respectively, of Lung
- LU 5—reduces wheezing
- LU 10—reduces Phlegm Heat from Lungs
- LI 11—reduces Heat in general
- ST 40—reduces Phlegm
- CV 22—resolves Phlegm from the chest.

Chinese herbal treatment is the Stopping Breathlessness decoction (*Ding Chuan Tang*).

Chronic Phase

Chronic phase caused by Lung Deficiency. Wheezing, cough, runny nose, susceptibility to catching colds, a pale tongue, and a weak pulse are the features. Reinforce the following points:

- LU 9—the tonification point of Lung
- BL 13—the *Back Shu* point of Lung
- GV 12—tonifies Lung Qi
- LU 7—Reduces wheezing
- ST 36 and CV 6—tonify Qi in general.

Chinese Herb treatment is Jade Windscreen Powder (*Yu Ping Feng San*).

Chronic phase caused by Spleen Deficiency. Fatigue, intolerance to certain foods, wheezing, abdominal distension, a pale tongue, and a weak pulse are the main features. Stomach and Spleen points are often used together. Reinforce the following points:

- ST 36—tonifies Spleen
- SP 6 and SP 3—tonify Spleen
- BL 20 and BL 21—*Back Shu* points of Spleen and Stomach, respectively
- CV 12—*Front Mu* point of Stomach
- LU 7—connecting point
- LU 9—source point
- BL 13—*Back Shu* point stimulates Lung
- ST 40—reduces Phlegm.

Chinese herb treatment is Six Gentlemen decoction (*Liu Jun Zi Tang*).

Chronic phase caused by Kidney Deficiency. Inspiratory wheeze, low-back pain, shortness of breath, tinnitus, impotence, and poor memory are the general features. To these add the following: *Kidney Yang Deficiency* (chilliness, a pale tongue, and a deep weak pulse) and *Kidney Yin Defi-*

ciency (a feeling of Heat, a red tongue without a coating, and a floating empty pulse). Reinforce the following points:

- KI 3—source point of Kidney
- BL 23—*Back Shu* point of Kidney
- KI 25—relieves inspiratory wheezing of Kidney Deficiency
- SP 6 and CV 4—tonify Kidney
- BL 13 and GV 12—tonify Lungs.

Chinese Herb treatment is Golden Chest Kidney Qi Pill (*Jin Gui Shen Qi Wan*) to address Kidney Yang Deficiency. The Eight Immortals Longevity Pill (*Ba Xian Chang Shou Wan*) is used to address Kidney Yin Deficiency.

Auricular Acupuncture

Auricular points are mostly used in the acute phase. The most important points are Lung, Kidney, Adrenal, Sympathetic and Stop Wheezing. Other useful points include Trachea, Bronchi, *Shen Men*, Sympathetic Autonomic point, Adrenal Gland C, Lung 1, and Lung 2.

ILLUSTRATIVE CASES

Case 1

A 4-year-old girl had a recurring wheeze (about once per week as recorded by her mother) for ~3 years. She was prescribed a salbutamol inhaler to use when needed, budesonide twice daily, and, on occasion, oral prednisolone. This patient had a tendency to catch colds, and was treated in the emergency department (ED) of a public hospital on several occasions for recurrent wheezing. Between these episodes, her chest examination results were clear. Her tongue was pale and her pulse was empty, especially in the right front position (Lung). There was no family history of asthma.

This is a case of recurrent wheezing caused by Lung Qi Deficiency. A slight shortness of breath and an empty Lung pulse were sufficient to make this diagnosis. The following points were used:

- LU 9—source point
- LU 7—connecting point
- BL 13—*Back Shu* point
- CV 6—to tonify Qi
- GV 12—to tonify Lung Qi.
- ST 36 and CV 12—to tonify Stomach and Spleen, respectively (thus tonifying Earth to nourish Metal).

It is the author's practice to support acupuncture treatments with homeopathic dilutions of Schüssler's biochemical salts, calcium phosphate, and natrum sulfate (30c) at twice-weekly intervals in all cases of wheezing. This helped to reduce the number and duration of acupuncture treatments. In severe cases acupuncture treatments are used on alternate days.

This patient was treated twice weekly with acupuncture for 2 months and then monthly for 1 year. The inhalators were gradually withdrawn and she had no further wheezing episodes. During the first 2 months of treatment, she had one additional ED visit.

Case 2

A 4-year-old boy had recurrent wheezing (1–2 times per week) with a sticky yellow nasal discharge for >2 years. He was given salbutamol and budesonide inhalers (salbutamol when needed and budesonide twice daily). There were no Lung signs between episodes. This patient's tongue was swollen on the sides with a yellow coating, and his pulse was generally slippery and rapid. There was no family history of asthma.

The diagnosis was Phlegm Heat with underlying Spleen Deficiency. His rapid pulse and a sticky yellow tongue coating indicated Phlegm Heat, and the swellings on the sides of his tongue were the result of Spleen Deficiency. The points used were:

- LU 7—the connecting points of Lung
- LU 9—the source point of Lung
- ST 40—to resolve Phlegm
- SP 6, BL 20, BL 21, and CV 12—to tonify the Spleen.

Calcium phosphate and natrum sulfate were used as in Case 1 to support acupuncture. Treatment was given twice weekly for 2 months and then once per month for 18 months with near-total resolution of his symptoms. The inhalers were gradually withdrawn. His response to treatment was nearly complete with a return of very mild wheezing triggered by viral infections, which required just a few days of salbutamol inhalations.

Case 3

A 5-year-old boy had severe recurrent wheezing for >3 years. He was given salbutamol and budesonide inhalers and required oral prednisolone to relieve his wheezing on many occasions. He had several ED visits. Between episodes, his chest was clear. His tongue was slightly red with a yellow sticky coating. His pulse was deep and weak in the rear position. His father has a history of asthma.

The child's diagnosis was wheezing caused by Phlegm Heat with underlying Spleen and Kidney Deficiency. His red tongue with the sticky yellow coating indicated Phlegm Heat caused by Spleen Deficiency and his weak rear pulse indicated Kidney Deficiency. The points used were:

- LU 7 on the left and KI 6 on the right—to open the Directing vessel to tonify the Kidney and restore the descending of Lung Qi
- LU 5 and CV 22—to resolve wheezing
- ST 40—to resolve Phlegm
- PC 6—to resolve wheezing

- SP 6, CV 12, BL 20—to tonify the Spleen
- BL 23, KI 3, CV 4—to tonify the Kidney.

This patient was treated twice per week for 2 months and once per month for 6 months, but the response was not satisfactory. A second course of acupuncture was given twice per week for 2 months and then monthly for 2 years. The frequency and severity of his wheezing showed considerable improvement, but he needed to continue budesonide inhalation and salbutamol when needed. There were no ED visits during the follow-up period.

The mineral salts, calcium phosphate and natrum sulfate, were also given to the patient.

When there is a background of Kidney Deficiency, the response to treatment will be slow.

Summary of the 3 Cases

All three cases were treated using a Helium Neon Laser (5mw/633nm), with an exposure time of 60 seconds for each point. The points used were generally the same in each session, with minor variations as the situation demanded. All cases were treated at the current author's office. The response to treatment and the frequency of use of salbutamol were assessed by the parents at home. Apart from the inhalants and biochemical cell salts, no other medications were used. There was no history of exposure to tobacco smoking or pets in any of these cases.

DISCUSSION

Wheezing in children is a common but confusing problem for most clinicians, and some parents equate wheezing with asthma. It is important to teach the parents about the various causes of wheezing and that, in most cases, it is not the result of asthma. Having said that, asthma medications have a role if the wheezing is recurrent. In Chinese Medicine, the approach to wheezing is the same, whether it is caused by asthma or not, as far as symptomatic relief is concerned (in the acute phase). Subsequent treatment in recurrent cases will depend on the underlying Disharmony patterns. Because of the fear related to side-effects of modern biomedicine treatments, especially steroids, many parents turn to acupuncture, despite the fact that, even after thousands of years of use, there is no robust evidence to confirm its effectiveness for treating wheezing.^{8–10}

Of the three illustrated cases in this article, the first two represent the usual response in the author's practice. The third case is shown only to highlight that there will be some cases that are not so easy to manage, but such cases are rare. Chu et al. reported 3 cases of immediate bronchodilation following acupuncture.¹¹ It could be argued that the response was the result of nonspecific psychologic factors, but psychologic factors causing wheezing are rare in children. Such quick responses are useful in the acute stage, but, to

have a lasting effect in recurrent cases, acupuncture will have to be repeated frequently and for a prolonged period of time. This is the reason why many acupuncturists resort to Chinese herbal medicines to support acupuncture. The current author uses Schüssler's biochemical salts because of their safety. Untoward side-effects of herbal medicines are always a concern, and this is especially so when they are given to children. In the current author's experience, the combination of acupuncture with the biochemical cell salts has been remarkably effective in almost all cases, with rare exceptions.

Wilhelm Heinrich Schüssler, MD (1821–1898 AD), a German doctor, theorized that the body requires certain essential mineral salts in proper balance the cells for them to function efficiently.¹² Any imbalance in the distribution of these salts would cause illness. The fundamental aim of acupuncture is to restore this lost equilibrium; the concomitant use of these simple mineral salts (biochemical cell salts) would be complementary to the acupuncture treatment. The two cell salts mentioned have been very useful in the current author's experience as a complement to acupuncture for treating pediatric wheezing and asthma. In adult patients, the responses have not been so dramatic. Schüssler's biochemical salts are pure mineral salts with no added substances. The homeopathic dilutions do not supply the actual mineral salts but balance their distribution. Whatever the theory is, these salts work well in children and the response appears unlikely to be a placebo response.

No attempt was made to assess the efficacy of acupuncture alone in chronic recurrent cases because that would involve treatment at too-frequent intervals. Moreover, these patients were not part of a study; the aim was to relieve their symptoms as efficiently as possible. The cases described are examples of how the current author treats pediatric patients with wheezing. All the treatment steps described are according to Chinese Medicine principles. In the acute phase, when a patient is seen while wheezing, acupuncture alone has been effective for relieving wheezing in the majority of cases as shown by Chu et al.¹¹

The success of treatment will depend on the correct selection of points, especially in chronic cases, based on the underlying Disharmony pattern. Combination patterns are common. The natural tendency in many cases of preschool wheezing is to resolve over a period of time. However acupuncture often elicits quick responses to treatment by reducing the severity and frequency of wheezing soon after the therapy starts.

CONCLUSIONS

Wheezing is common in preschool children, and in most cases, is not caused by asthma. It is impossible to predict which patients will develop asthma later; a positive family history or a dramatic response to bronchodilator could be

guiding factors. Whether a child has bronchiolitis caused by viral infections or true asthma, the acupuncture treatment will be the same, treating the Phlegm in the acute phase and the Disharmony in the chronic phase. The response to treatment is often very satisfactory. In the 3 illustrative cases, acupuncture was remarkably effective for reducing the frequency and number of wheezing episodes in the first 2 cases and to a lesser extent in the third case. Large-scale studies are needed to confirm these kinds of responses.

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AUTHOR DISCLOSURE STATEMENT

No conflicts of interest exist.

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