



## USE OF ACUPUNCTURE AS AN ALTERNATIVE THERAPY FOR ASTHMA IN ADULTS

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### ABSTRACT

Repeated herbal needling of the acupuncture point has been used to relieve recurrence of allergic asthma in China for hundreds of years and is still practiced today. Manifesting that allergic asthma is a chronic inflammatory disease that involves the imbalance of helper cells in the peripheral blood. Therefore, we will identify the importance of the use of acupuncture in asthma, justifying this technique with the benefits appreciated and the safety of the therapy; that is to say, by relieving symptoms, reducing side effects and without hesitation by maintaining the emotional and physical well-being of the patient, thus substantially improving their quality of life.

In the first instance, it was observed that the use of acupuncture as a treatment for asthma is still in previous investigations, for which reason the existing data to date are important to assess whether its therapy is important for future investigations.

In conclusion, with the verification of the points of the acupuncture points for the application of the technique, it was reflected that the most used are Feishu (B113), Dazhui (GV14) and Fengmen (BL12), alone or in combination, emphasizing that the latter has a greater prediction for asthma therapy to be more effective. Since such points regulate the Qi of the lung, for which its characteristic functions will be regulated, being effective for the treatment of asthma.

**Key words:** Acupuncture, asthma, complementary therapy

## INTRODUCTION

Acupuncture, as traditional Chinese medicine, has increasingly become a central aspect for an analgesic purpose and minimization of central sensitization, where they link the meridians of the body that is where vital energy flows. In such a way that acupuncture normalizes the expression of pro-inflammatory proteins and increases the expression of anti-inflammatory proteins. It was discovered in China in 200 BC, and since that date it is used, for which the National Institute of Health (NIH), recognized acupuncture as a therapeutic for asthma (1)(2)(3).

Asthma is established as a chronic, heterogeneous pathology, without a doubt because of its symptoms that will vary depending on the time and degree of it, added to it the restriction of expiratory airflow, is cataloged as a common disease around the world, harming the living condition of people. Therefore, according to studies, it affects 358 million people in the world (4)(5)(6) and according to the World Health Study, it has a prevalence of 3.83% (7) in Ecuador.

50% of the inhabitants of developed nations regularly use alternative medicine for chronic diseases such as asthma, the use of acupuncture with the help of herbs, in five meridian points, minimized the number of asthma relapses, by inhibiting IgE and at the same time regular Th1 and Th2 (8)(9).

Consequently, acupuncture has increased its incidence 76% (10), it has been observed to a greater extent that patients with asthma choose this practice for several reasons such as its safety and benefits; accessibility and availability; for sociocultural, beliefs or socioeconomic purposes; for the influence of family, friends, media or simply because their previous pharmacological treatment did not obtain the expected results. (11).

The present work aims to identify the importance of the use of acupuncture for asthma in adults, to determine its effectiveness and efficacy, based on a scientific judgment with a medical and ancestral basis. The need arises, therefore, for the following question: What is the benefit of acupuncture as an alternative medicine for asthma in adults?

Determining that acupuncture minimizes asthma attacks, and maintaining that asthma in the first instance is an expensive pathology for the subjects who suffer from it, it is emphasized that acupuncture has as its first source of diffusion the informal (family and friends) 98.6% of cases; justifying this technique by the benefits appreciated 84% and its safety 37%; that is, by alleviating the symptoms, reduce side effects and without hesitation by maintaining the emotional and physical well-being of the patient, thus substantially improving their quality of life.

Therefore, there is a need for research to describe the use of acupuncture as an alternative therapy for asthma in adults. In this way, the results of this research will provide an academic contribution, to encourage future deepening work on the subject.

## 1. MÉTODOLÓGÍA

A narrative bibliographic inquiry was carried out on the topic of the use of the use of acupuncture as an alternative therapy for asthma in adults, through searches in databases such as: Scopus, PubMed and Epistemonikos, where the publications did not have a specific year; in which the journals should have had a great impact on the subject treated, with language in Spanish and English. MeSH terms were used for a bibliographic research in English language and DeCS terms for idioma in Spanish; Complementary Therapies AND Acupuncture AND Asthma, as well as Boolean operators AND.

Once the specific topic of the narrative bibliographic review was verified, this topic was investigated in the various databases with the help of the terms MeSH and DeCS, to rescue valuable scientific articles, where when it was already verified with them, a comprehensive reading of the articles was carried out and data were extracted as title, authors, journal, year of publication, abstract, objective, type of research, population, measurement instrument, variables, statistics, relevant results, conclusion and contributions; to later examine them in an Excel spreadsheet for descriptive analysis and execute the narrative graphic bibliographic review.

## 2. WORK DEVELOPMENT

### ACUPUNCTURE

It is evident that the field of traditional Chinese medicine, such as acupuncture is becoming a central aspect to relieve different types of pain, establishing as a premise in Western ancestral medicine, the existence of several acupuncture points distributed in different parts of the human body and that work with the activation of needles in these points in order to relieve such pain. It is developing rapidly with progressive technology, as it gains a greater understanding of the mechanisms behind ancient methods of traditional Chinese treatments (12).

As emphasized by several studies on the growing development in the field of modern technology, on how the acupuntura acts with its analgesic mechanisms essentially by the presence of integrative processes at the various levels of the central nervous system and the present regions of pain that are linked with afferent impulses and from the same form the impulses of acupuncture points (13).

The main purpose of acupuncture is to insert needles into the human body with reference to acupuncture points that activate myelinated A $\beta$  and A $\gamma$  fibers and transmit nerve signals to the postcentral gyrus in the parietal cortex region. The descending pathways cross inhibitory synapses in the raphe nucleus, the locus caeruleus, the region of the prefrontal cortex, the insula, the region of the cingulate cortex, the caudate nucleus, the amygdala and finally the dorsal nucleus. In this case, the descending pathway has the function of modulating the perception of pain and interferes with central sensitization events (1).

According to the evidence, since the past decades the practice of acupuncture has established a rapid development in 183 territories and countries. Emphasizing the importance of the issue, the WHO recommends it as complementary and alternative medicine. Becoming more common in all regions of the world, it has even attracted the interest of distinguished academic medical centres (14).

Noting the historical literature, acupuncture is illustrated from the Neolithic era. By 1963, the Neolithic or Tou Dao Wa region was discovered in Doolun Banner, Inner Mongolia. A ground stone needle. The systematic practice of acupuncture dates back to 200 BC. in the document "The Classic of Internal Medicine of the Yellow Emperor", which was based on the collaterals and meridians, added to it the use of needles in the specific regions of acupuncture for the treatment of chronic diseases. In such a way that the meridians are connected, regulating the Qi and the blood, and balancing the Ying Yang. (3).

Every year in China it has been represented that 95% of general medical centers, arranging for people to opt for a traditional Chinese medicine ( 15) (16 ).

According to the studies of all its ramifications and indications in relation to the physiological processes and pathological alterations of the meridians and collaterals of the human body, as well as its connections with the organs, it is called the theory of the meridians or channels and their guarantees in the internal environment of the organism. The internal organs, tissues and other organs are all connected by meridians and collaterals, which carry Qi and blood and

control the flow of Yin and Yang. They also extend from the internal organs to the extremities and joints on the outside. It has the function of preserving the harmony of all activities and functions of the body. According to Chinese belief, Qi is represented as a vital energy that moves through the meridians and helps maintain homeostasis of all the functions of the cuerpo (17).

Worldwide, 76% of people regularly use alternative medicine. The main drivers of this use were its advantages and safety, as well as its accessibility and availability, consequently, as well as the influence of friends, family and the media and discontent with conventional medical practices (10) (18) (19).

In the city of Cuenca, Ecuador, the use of natural medicine has expanded massively, according to the results 85% of patients are of mixed ancestry and only 15% of indigenous origin; relating it to the therapy of chronic diseases such as asthma (20).

## ASTHMA

Asthma leads to a respiratory clinic such as wheezing, shortness of breath, chest pain and cough, which change depending on time, varying their intensity, with the limitation of airflow in expiration, characterizes asthma as a heterogeneous disease. Later, the airflow restriction could continue. Clinical phenotypes, such as early versus late onset or allergic versus non-allergic manifestations, do not strongly correlate with particular disease processes or therapeutic outcomes (4).

Women carry a significantly high prevalence of asthma (10% vs. 6%), as do people living in poverty (11.8%) and people who identify as belonging to a racial or ethnic minority group, especially blacks (10.2%) and Puerto Ricans who are Hispanic rich (14.9%) (21).

According to the Global Burden of Disease study, asthma is a significant chronic respiratory pathology more prevalent around the world and affects 358 million people. Studies of adult asthma prevalence have been infrequently conducted in Latin America. On the other hand, estimates of the nations that participated in the WHS study revealed the prevalence in recent wheezing in adults varied 3.83% in Ecuador and 22.6% in Brazil (6) (7) (22).

It is stressed that differentiating asthma from other diseases, in particular from chronic obstructive pulmonary disease, which also causes shortness of breath, can be challenging. (5).

Patients diagnosed with asthma and who face psychological problems (anxiety, sadness, anger, etc.) both overt and covert are more likely to have a poor prognosis, including death as they result in a decrease in the patient's quality of life and may facilitate and precipitate asthma exacerbations (23).

A study looking at how asthma affects patients' quality of life came to the following conclusions: having a social support system decreased anxiety and social consequences; knowledge about asthma and medications allowed them to accept asthma as part of their life, rather than their whole life; and encouragement from health professionals increased their confidence in their ability to manage and control your asthma (24).

## ACUPUNCTURE AS A THERAPY FOR ASTHMA

A significant portion of asthma patients struggle every day with a poor quality of life. Muscle relaxants and anti-inflammatories are examples of treatment options currently available but which cannot alter the direction of asthma. Therefore, the need for new treatments for asthma is great, especially for people with severe diseases. To improve their conditions, many asthma patients use alternative therapies. Acupuncture has been used for thousands of years in China to treat asthma. In the United States, its governmental institutes have recommended acupuncture as an adjunctive treatment in comprehensive asthma control programs since the WHO first included asthma as an indication for acupuncture in 1979 (2).

Emphasizing the treatment of asthma with acupuncture, it is obtained that the precise herbs to perform this practice are: Semen Brassicae, Euphorbia kansui, Corydalis tuber, Asarum, Syzygium aromaticum, Lepidium seed, Fructus Gleditsiae, Ephedra and cinnamon. Herbal acupuncture will be applied bilaterally directly to the skin of the extrameridian point Dingchuan (outer meridian B1), Feishu (the foot bladder meridian-taiyang 13), Xinshu (the foot bladder meridian-taiyang 15), Pishu (the foot bladder meridian - taiyang 20) and Shen shu (the foot bladder meridian-taiyang 23). Last but not least, apply desensitization of 5 cm x 5 cm. For a total of 6 weeks, the patches were applied once a week for 8 hours each time. Regular blood tests, as well as liver and kidneys, revealed no abnormalities. The enhanced systemic immune response was shown to increase the ratio of Th1/Th2 cells and decrease IgE and IL-4 levels, effectively preventing asthma recurrence (8).

It was found that the practice significantly decreased the number of acute asthma attacks (1.62 times per year). In addition, forced expiratory volume increased by 1 s and peak expiratory flow, but objectively negative effects such as localized skin reactions, which were generally mild and self-healing, were mentioned (9) (25).

### 2.1 RESULTS

According to the review proposed on the use of acupuncture as an alternative therapy for asthma in adults, 10 articles were considered, taking into consideration the author, year of publication, acupuncture point and effectiveness of the therapy. (Table 1).

No.	Author (year)	Type of item	Acupuncture point		Effectiveness of therapy
			No.	Number	
1	Shang et al. <sup>(26)</sup> (2022)	Original article	BL13	Feishu	Decreased serum levels of IgE*, IL-2R+*, T-lymphocyte counts and peripheral blood eosinophils. Decrease in soluble IgA* and total IgA in saliva and nasal secretions.
			GV14	Dazhui	
			BL12	Fengmen	
2	Yang et	Original	BL13	Feishu	Decrease in IgA and total IgA in

	al. <sup>(27)</sup> (2013)	article	GV14	Dazhui	saliva and nasal secretions and total IgE in serum. Decrease in IL-2R+ T lymphocytes and eosinophils in peripheral blood.
			BL12	Fengmen	
3	Wu et al. <sup>(28)</sup> (2015)	Original article	BL13	Feishu	Decreased cellular inflammation and lung inflammation
			BL12	Fengmen	Qi Meridian Regulation*
4	Liu et al. <sup>(29)</sup> (2018)	Original article	BL13	Feishu	Decreased inflammation.
5	Wei et al. <sup>(30)</sup> (2015)	Original article	BL13	Feishu	Decreased airway hyperreactivity. Attenuation of the infiltration of inflammatory cells, plus mucus around and inside the respiratory system.
			GV14	Dazhui	
			BL12	Fengmen	
6	Yutong et al. <sup>(31)</sup> (2023)	Original article	GV14	Dazhui	Decrease in asthma attacks. Increased quality of life. Decreased IgE levels.
			BL13	Feishu	
			BL15	Xinshu	
			BL17	Geshu	
			BL20	Pishu	
			BL23	Shenshu	
7	Zhang et al. <sup>(32)</sup> (2019)	Original article	CV22	Tiantu	Improvement in lung function, FEV1
			GV14	Dazhui	
			BL13	Feishu	
			EX-B1	Dingchuan	
8	Xing et al. <sup>(33)</sup> (2017)	Original article	BL13	Feishu bilateral	Dispersion of pulmonary Qi. Relief of wheezing.
			Gv14	Dazhui	
			BL12	Fengmen bilateral	
*IgE: Total immunoglobulin E, *IL-2R+: Interleukin 2, *IgA: Immunoglobulin A, *Qi: body energy flow, *IgE: Immunoglobulin E, *FEV1: Forced expiratory volume					

**Source:** Author's own elaboration

## 2.2 DISCUSSION

It is emphasized that, for the alternative therapy of asthma, it is more beneficial to combine several acupuncture points for a greater benefit in the therapy for it in the first instance it is highlighted that the "Therapy of three acupuncture points and five needles", where Dazhui, Feishu and Fengmen are used; It is the most used since its effectiveness for the treatment of asthma was in proportion of 85%, emphasizing that patients after treatment had a decrease in IgE, IL-2R+, Tlymphocyte recu ento and peripheral blood eosinophils. This minimizes soluble IgA and total IgA in saliva and consequently nasal secretions of subjects with asthma (26).

It is worth mentioning that several studies mention that IgA is directed with the objective of defense, being the first line for mucosal immunity, so it will increase in subjects with asthma.

Therefore, in the following proposed study they used the three acupuncture points mentioned above, where it is verified that this therapy gives significant results in asthma, bearing in mind that after 3 years of the respective treatment the clinical control rate of the patients was 22.22% (27).

Regarding the Fengmen acupuncture point, as mentioned by the authors is used subtly because it allows to stimulate the flow of the so-called Qi meridian, which has the function of balancing the flow of energy of the human body, which is destabilized in patients with sma and in such case this point always correlates with the Feishu, This, as mentioned by the authors, allows the reduction of cellular and pulmonary inflammation respectively (28).

In an experimental study, the use of Feishu acupuncture pu nto was further proven, where its results were transcendental, since they suggested that it could decrease the nerve neurotransmitter acetylcholine from its synthesis to release in order to reduce irritation of the respiratory apparatus, so it has a characteristic clinical significance (29).

Objectifying once again the results of another experimental study where the three most used acupuncture points mentioned above were used, the effectiveness of the treatment in asthma is highlighted once again, this without hesitation since in this case the hyperreactivity of the airways was minimized, with the observation of the mitigation of the infiltration of inflammatory cells plus mucus around and inteornente inthe respiratory system ( 30).

Respectively the most used points in chronic respiratory pathologies (asthma), are: Feishu (BL13), Dazhui (GV14), Xinshu (BL15), Pishu (BL20), Geshu (BL17), Guanyuan (CV4) and Shenshu (BL23), which with the specific targeted substances in the precise meridians, have the objective of producing a characteristic effect so that the lungs are heated to eliminate phlegm and resolve the stagnation of liquids inside. In this case in this study it was observed that, with the combination of more acupuncture points, with a duration of two hours, it was observed that the number of attacks reduced, with excellent clinical significance, improving the standard of living of the patients and with the asthma allergy index that was measured with serum levels of IgE decreased, therefore, its results are potentially satisfactory (31).

As Zhang et al. (32) explain, their study emphasized that its therapeutic efficacy index had to be over 90% for the treatment to indicate a cure, where the application of acupuncture had a duration of four hours / 1 time per week, for six weeks. The points with a higher rate of therapeutic efficacy 95.0% after a month were: Feishu (BL 13), Dazhui (GV 14) and Tiantu (CV 22), added to these Dingchuan (EX-B1).

Deepening the method of Professor Shao Jing-ming directed to asthma, where he uses three characteristic acupuncture points such as: Dazhui (GV 14), bilateral Feis hu (BL13) and bilateral Fengmen (BL 12), to treat the basic purpose of the pathology that is aimed at deficiencies in the lung, spleen and kidney; and undoubtedly what is most significant in the disease, wheezing. In this perspective, unlike the other studies expressed previously, this one states that with a smaller number of acupuncture points therapeutic is more beneficial, although of course it must be emphasized that in this case other forms of treatment such as moxibustion should be increased (33).

Summarizing the literature with more up-to-date studies such as that of Yutong et al. (31), it is agreed that the treatment should have the main objective of improving the remission of asthma attacks and without hesitation that the subject recovers his quality of life in the long term. All that with a western therapy such as acupuncture, where as your study indicates a treatment with



the combination of more acupuncture points is more beneficial at the time of effectiveness, in addition to this is added the benefits that it is an economical, safe technique and that its side effects are minimal and controlled, where, despite the limitation of the studies, which do not show us the most precise points for the technique or the duration of the application, their data are synonymous with efficacy.

#### 4. CONCLUSIONS

The use of acupuncture as an alternative therapy for asthma in adults, implies in the first instance the verification of acupuncture points for the application of the technique, where it was reflected that the most used are Feishu (BL13), Dazhui (GV14) and Fengmen (BL12), alone or in combination, emphasizing that the latter has greater prediction for asthma therapy to be more effective. In context, according to the aforementioned studies, these points regulate the Qi of the lung, so its characteristic functions will be regulated.

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## 6. GLOSSARY

**IgE:** Inmunoglobina E total

**IL-2R+:** Interleucine 2

**IgA:** Inmunoglobina A

**Qi:** flow of energy from the body

**Ying Yang: symbol that** represents the harmony product of the stability that exists between the interaction of the two opposite energies that are needed and complement.

**MeSH:** Medical Subject Headings

**DeCS:** Health Sciences

**WHO:** World Health Organization

**WHS:** World Health Study