



CHRONIC / ACUTE CONDITIONS

## Treating Angioedema With Acupuncture

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*Angioedema* refers to a rare disorder characterized by recurrent episodes of abrupt swelling of the skin and/or the mucous membranes, lasting from hours to three days, when the site of involvement returns to normal. The swelling may occur on the face, hands, feet, genitalia, lips, eyes, tongue, and the upper respiratory and gastrointestinal tracts. Angioedema and urticaria/hives are seen more commonly together.<sup>1</sup>

Rapid increases in permeability of submucosal or subcutaneous capillaries with localized plasma extravasation lead to angioedema. Most causes of angioedema are dependent upon the release of either histamine or bradykinin. Some angioedema patients may show autoimmune etiology evidence, while others' causes remains unknown.

Angioedema: Types, Standard Treatment & Potential Complications

There are different types of angioedema, such as hereditary angioedema, acquired angioedema, and C1 inhibitor [INH] deficiency angioedema. Peter Delves, PhD, suggests the symptoms and signs of hereditary and acquired angioedema are similar to those of other forms of bradykinin-mediated angioedema.<sup>2</sup> Hereditary angioedema affects about 1:50,000 individuals. The incidence of ACE-induced angioedema is about 0.1-0.2 percent.<sup>1</sup>



Treatment for acute allergic angioedema includes antihistamines, corticosteroids and epinephrine. The most important treatment happens during the first few hours of angioedema development. An EpiPen can be recommended.

Angioedema can be life-threatening when laryngeal edema or tongue / pharyngeal edema obstructs the airway. Anaphylaxis is a severe, potentially life-threatening allergic reaction that may occur as a result of angioedema related to an ACE inhibitor or C1 INH deficiency. Intubation or tracheostomy will be necessary.<sup>1</sup> Few providers, including ER personnel, are familiar with its treatment.<sup>3</sup>

#### Case Presentation

There is a need to develop effective preventive intervention to reduce the acute angioedema attack severity and frequency. I had the opportunity to treat three patients with angioedema with hives. One of them had a clear diagnosis as non-hereditary, idiopathic angioedema. After the patient engaged in acupuncture treatments, acute angioedema attack severity and frequency realized significant improvement. This patient's progress encouraged more interest and confidence in managing angioedema and angioedema-related symptoms / conditions with acupuncture.

#### Health History

Patient is a 62-year-old, female, scientific writer with idiopathic non-hereditary angioedema for about 14 years as primary complaint. She experiences facial swelling and skin rashes. The swelling most affects her face, lips, jaws and tongue. Her skin rashes are red, itchy, raised above the skin and appear in buttocks and under the arms primarily. She experiences the swelling attacks 1-2 times per week, each time lasting for about 2-3 days.

Asthma attack might be a trigger. She has been taking antihistamines (Claritin and Zyrtec), 2-3

pills per day for her seasonal allergy, and up to eight pills per day during angioedema attacks, which does not seem to make much difference for the swelling and rashes. The patient has no known allergic reaction to detergents, soaps, cleaners, waxes, and chemicals.

Her medical history includes seasonal allergy and asthma for more than 20 years; high cholesterol and high blood pressure for five years. All managed well with medications. Menopause was at 50 years old. She describes herself as proactive and reliable. Her ANA, C1 and C4 inhibitors, hormone, and renal function panel tests were normal. Her most recent CBC, CMP, lipid panel and urinalysis were all within normal range. Her tongue is red and swollen, with white coating. Pulse is thin and rapid.

### TCM Diagnosis

The TCM disease name of angioedema with urticaria is *Feng Zhen*. The pattern diagnosis is wind heat with liver, kidney and spleen deficiency.

The main symptoms are: facial swelling and skin rashes, characterized as coming and going with itchiness, representing the wind pathogen. A 20-year history of allergy and asthma indicates a wind obstruction in the lungs. Red rashes, red tongue and rapid pulse represent heat. The primary diagnosis is wind heat.<sup>4</sup>

The patient was 48 years old at the onset of her primary complaint. According to females' seven-year cycles, her three yang channels started to decline when she was 42 years old. By age 48, her *ren* and *chong* continued declining, and at the very beginning of *tian gui* exhaustion. *Tian gui* exhaustion is associated with liver, kidney and essence deficiency. The kidney stores *jing*. If the kidney function is weak, its storage capability will become inhibited and *jing* will leak from the body. Saliva is a different transformation of the *jing*.<sup>4</sup>

The swelling most affects the patient's lips and jaws, where the saliva glands are located. The jaw / salivary gland swelling is related to kidney function. The spleen opens to the mouth and manifests in the lips. The kidney regulates the body's water assembles along with lung and spleen. The temporary swelling is a manifestation of water metabolism malfunction as a result of overall deficiency and imbalance of the liver, kidneys and spleen.<sup>4</sup>

The kidneys helps the lungs to inhale air. The symptoms come and go, representing internal wind, which is related to liver function. Kidney and liver weakness will have a negative impact on lung function. The obstructed wind, a hiding pathogen, is likely to emerge, causing the rashes and swelling after an asthma attack.<sup>4</sup>

### Treatment Protocol

TCM-based treatments were offered for symptom management, regulating stress and improving immune system function as follows.

*Acupuncture*: Acupuncture treatment was offered with the following treatment principles and point selections:

- Disperse wind heat: Bl 11,12,13, LI 4, TW 5, GB 20
- Circulate blood and clear heat: Sp 10, Four Flower, LI 11, GV 14
- Strengthen kidneys and spleen, regulate water metabolism: Ki 3,10, LV 8, Sp 6,9, 3,4, St 36
- Regulate *qi*: Five *du* points, *Da Hui Huan* (based on Liu's scalp acupuncture and Wei Liu's treatment protocol), Four Gates

*Other:* Cupping was applied periodically along the spine based on muscular tension and presence of hives. Dietary recommendations were to eliminate caffeine, alcohol, seafood and shellfish, foods containing spices and MSG. Lifestyle recommendations included yoga, *qi gong* and meditation.

The patient was very engaged in the treatment. As suggested, she stopped taking her daily cinnamon and turmeric tea, replaced with *Mai Men Dong* and *Lian Zi Xin* tea. She started daily stretching and yoga exercise.

### Clinical Results

Right after the initial visit, the patient felt very relaxed. She described the feeling as "being drugged," which suggested a positive response to the treatment. The patient then underwent two treatments per week for three weeks, followed by one treatment per week for two weeks. By week 10, she had received 10 treatments in total.

The first two weeks, she experienced no episodes, no symptoms. Her antihistamine intake decreased from eight pills per day to two pills daily. By week 2.5, she had the first attack of swelling, which was much milder, without hives, without increased medication use. By week four, she had two attacks in total with no hives and no need to increase medication. Starting from week six, she was taking one antihistamine pill every other day; three pills per day during attacks.

The patient continued acupuncture once every 2-4 weeks until the end of the year (10-week initial treatment ended in late May). The angioedema attacks remained at lower frequency, ranging from one every 2-3 weeks for most of the time. When she was under higher stress, such as taking care of her mother, angioedema attacks increased to once per week. After resuming weekly acupuncture treatment, it was well-managed.

### Discussion / Takeaway

The patient does not have allergic etiology. Routine laboratory screening tests independent of the patient's history and physical examination provided little value in discovering the cause of the reactions.<sup>5-6</sup>

Angioedema is a complicated condition with multiple subgroups and various mechanisms. Angioedema accompanies chronic urticaria in 40 percent of patients, and approximately half have an autoimmune mechanism.<sup>1</sup> It is possible that the presence of angioedema is affected by or affects other conditions, such as menopause and mental status.

Studies have shown that stress is a major contributor to autoimmune disease, chronic urticaria and recurrent angioedema.<sup>7-8</sup> During reproductive years, most women become accustomed to their own hormonal rhythm. When this rhythm is disrupted during perimenopause, mood changes may result. Menopause has been suggested to affect onset or activity of certain autoimmune diseases. Premature menopause can be a symptom of an autoimmune disease, such as thyroid disease or rheumatoid arthritis.<sup>9</sup>

For angioedema patients, menstruation history and stress status should be reviewed. Perimenopause symptoms, stress and mental health issues should be addressed as part of the TCM acupuncture treatment plan. Acupuncture has been proven to improve autoimmune function by activating the defense systems.<sup>10</sup> There is evidence that acupuncture decreases the stress response in both human and animal subjects.<sup>11</sup>

For symptom management, cupping is a great option in conjunction with other treatments. Studies show the benefit of cupping for chronic urticaria.<sup>12</sup> A clear correlation between the decrease of CRP, alleviation of the CU/angioedema symptoms and wet cupping therapy was observed.<sup>13</sup>

The treatment strategies used in this case, such as acupuncture, cupping, dietary modification and physical exercise, can be applied to similar cases with reasonable modification. The success of this case validates the role of acupuncture in managing angioedema and autoimmune disorders. The acupuncture treatment plan was based on a classic TCM approach.

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