

CLINICAL VIGNETTE

Chronic Urticaria – An Integrative East-West Approach

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The use of traditional Chinese medicine (TCM) has been reported for the treatment of various skin disorders including atopic dermatitis, urticaria, pruritus, psoriasis, acne, rosacea and herpes zoster¹. Here, we describe an integrative East-West approach incorporating therapies such as acupuncture, self-acupressure, TCM-based nutrition and trigger point injections, to treat a patient with chronic urticaria.

Case Report

A 41-year-old male presented with intermittent and pruritic urticaria for seven years, involving multiple areas throughout his body, including his face, neck, torso, upper and lower extremities. Previously, he had an episode of angioedema with swelling of his lips for which he received intramuscular epinephrine. His urticaria was persistent, despite being treated with multiple courses of corticosteroids and antihistamines, including hydroxyzine, cetirizine and diphenhydramine. His symptoms were worse with stress and exposure to hot temperatures. He referred himself to our clinic seeking alternative therapies to help alleviate his symptoms.

Past medical and surgical history included intermittent oral and esophageal blisters, De Quervain's tenosynovitis, erysipelas infection, tonsillectomy and prior history of heavy alcohol use. He worked at a tropical fish store where the ambient environment was kept warm and humid. He often ate red meat as well as barbecued and spicy foods. Dermatographism on scratch test was negative. Complete blood count with differential, electrolytes, blood urea nitrogen, creatinine, liver function tests, erythrocyte sedimentation rate and thyroid stimulating hormone were all within normal limits.

At our clinic, a multi-modal therapeutic approach was initiated, consisting of acupuncture, trigger point injections, self-acupressure, TCM-based nutrition and stress management with the goal of removing "wind" and "heat" from the body². Several key acupuncture points were incorporated, including LI-11 (*Quchi*), Sp-10 (*Xuehai*), Sp-6 (*Sanyinjiao*) and St-36 (*Zusanli*)³. Dietary changes from a TCM perspective were recommended such as reduced intake of "hot" foods (e.g. spicy, barbecued, red meats and alcohol) and increased consumption of "cooling" foods (e.g. fruits and vegetables)⁴. Lifestyle changes were also advised including limiting exposure to hot and humid climates (e.g. his work environment) and commencing stress management techniques.

After his first treatment, he noted marked improvement from "up to 20 hives per day to 1-2 hives per day." After his second visit, he stated that "this is the first time in a long while that I have had back to back days without hives" and he was able to taper down his use of antihistamines. He had complete resolution of his symptoms without the need for medications after a total of eight treatments and, to date, has not had any recurrent episodes.

Discussion

Urticaria, commonly known as hives or welts, are raised, pruritic papules or plaques caused by various stimuli that lead to the release of histamine and other vasoactive substances from mast cells, resulting in extravasation of plasma into the dermis⁵. These can vary in size, ranging from a few centimeters to several inches in diameter, and in color, usually as uniformly red or white. A number of allergic and non-allergic factors can be associated with urticaria including different medications, foods and systemic disorders as well as physical and environmental stimuli⁶. However, in 50% of cases, the cause of

urticaria is unknown and, hence, considered to be idiopathic.

Chronic urticaria is defined by the presence of daily or near-daily hives for greater than 6 weeks. Up to 30-50% of patients may have an autoimmune basis, with autoantibodies acting against either the high-affinity IgE receptor Fc epsilon R1 or, less commonly, IgE⁷. Angioedema, which is swelling of the dermis and subcutaneous tissues, occurs in about 40% of patients and often involves the lips, throat, eyes and gastrointestinal tract.

Conventional Western medical treatment can include any of the following: first and second generation H1 antihistamines, H2 antihistamines, tricyclic anti-depressants, leukotriene receptor antagonists, systemic corticosteroids, immunosuppressants, immunomodulants and even thyroid hormone for patients with anti-thyroid antibodies who may benefit from suppression of autoimmune thyroid activity.

Acupuncture has been reported as a potential therapy for urticaria. Its purported mechanism of action is re-modulation of multiple physiological cascades including the neurohumoral network, hypothalamic-pituitary-adrenal axis, autonomic nervous system and both nonspecific and specific immunity⁸. Acupuncture has also been shown to have a regulatory effect on serum IgE levels in patients with chronic urticaria⁹.

Myofascial trigger points are focal, hyperirritable spots located within a tight band of skeletal muscle and trigger point injection has been shown to be an effective therapeutic modality to inactivate these sites for relief of symptoms¹⁰. There is 95% clinical correspondence between classical acupuncture points and myofascial trigger point sites¹¹. Acupuncture point injection with thiamine hydrochloride (vitamin B1) has been described as an effective treatment for urticaria³. For refractory urticaria, the combination of acupuncture with point injection may provide benefit¹².

Emotional stress can exacerbate certain chronic dermatological conditions, such as urticaria, through initiation of the "itch-scratch cycle" as mediated by the mind-skin connection¹³. Stress can also exert an adjuvant effect on skin dendritic cell function via augmentation of primary and memory antigen-specific T cell immune responses¹⁴.

Studies using functional magnetic resonance imaging of the brain have demonstrated that acupuncture can modulate the itch response as well as the limbic system, which is important for emotional processing^{15,16}.

Conclusion

Here, we describe a case of chronic urticaria that was successfully treated using an integrative East-West approach, incorporating therapies such as acupuncture, self-acupressure, TCM-based nutrition and trigger point injections. Clinicians should be aware of the potential efficacy of such treatments for patients with chronic urticaria and consider such interventions in their overall management, especially for those who do not respond favorably to conventional care.

REFERENCES

1. **Koo J, Desai R.** Traditional Chinese medicine in dermatology. *Dermatol Ther.* 2003;16(2):98-105. Review. PubMed PMID: 12919111.
2. **Tan EK, Millington GW, Levell NJ.** Acupuncture in dermatology: an historical perspective. *Int J Dermatol.* 2009 Jun;48(6):648-52. doi: 10.1111/j.1365-4632.2009.03899.x. PubMed PMID: 19538380.
3. **Chen CJ, Yu HS.** Acupuncture treatment of urticaria. *Arch Dermatol.* 1998 Nov;134(11):1397-9. PubMed PMID: 9828874.
4. **Xu Yihou.** *Dermatology in Traditional Chinese Medicine.* Donica Publishing, 2004.
5. **Kaplan AP, Greaves M.** Pathogenesis of chronic urticaria. *Clin Exp Allergy.* 2009 Jun;39(6):777-87. doi: 10.1111/j.1365-2222.2009.03256.x. Epub 2009 Apr 22. Review. PubMed PMID: 19400905.
6. **Craft N, Fox LP, Goldsmith LA, Papier A, Birnbaum R, Rajendran PM, Mercurio MG, Rosenblum M, Miller D, Taylor E, Tumeh PC,** editors. *Visual Dx: Essential Adult Dermatology.* Lippincott Williams and Wilkins, 2010.
7. **Greaves MW.** Chronic idiopathic urticaria. *Curr Opin Allergy Clin Immunol.* 2003 Oct;3(5):363-8. Review. PubMed PMID: 14501436.
8. **Iliev E.** Acupuncture in dermatology. *Clin Dermatol.* 1998 Nov-Dec;16(6):659-88. Review. PubMed PMID: 9949912.
9. **Jianli C.** The effect of acupuncture on serum IgE level in patients with chronic urticaria. *J Tradit Chin Med.* 2006 Sep;26(3):189-90. PubMed PMID: 17078446.
10. **Alvarez DJ, Rockwell PG.** Trigger points: diagnosis and management. *Am Fam Physician.* 2002 Feb 15;65(4):653-60. Review. PubMed PMID: 11871683.
11. **Dorsher PT.** Can classical acupuncture points and trigger points be compared in the treatment of pain disorders? Birch's analysis revisited. *J Altern Complement Med.* 2008 May;14(4):353-9. doi: 10.1089/acm.2007.0810. Review. PubMed PMID: 18576919.

12. **Zhao Y.** Acupuncture plus point-injection for 32 cases of obstinate urticaria. *J Tradit Chin Med.* 2006 Mar;26(1):22-3. PubMed PMID: 16705847.
13. **Koo J, Lebwohl A.** Psycho dermatology: the mind and skin connection. *Am Fam Physician.* 2001 Dec 1;64(11):1873-8. PubMed PMID: 11764865.
14. **Saint-Mezard P, Chavagnac C, Bosset S, Ionescu M, Peyron E, Kaiserlian D, Nicolas JF, Bérard F.** Psychological stress exerts an adjuvant effect on skin dendritic cell functions in vivo. *J Immunol.* 2003 Oct 15;171(8):4073-80. PubMed PMID: 14530328.
15. **Napadow V, Li A, Loggia ML, Kim J, Schalock PC, Lerner E, Tran TN, Ring J, Rosen BR, Kaptchuk TJ, Pfab F.** The Brain Circuitry Mediating Antipruritic Effects of Acupuncture. *Cereb Cortex.* 2012 Dec 4. [Epub ahead of print] PubMed PMID: 23222890.
16. **Napadow V, Makris N, Liu J, Kettner NW, Kwong KK, Hui KK.** Effects of electroacupuncture versus manual acupuncture on the human brain as measured by fMRI. *Hum Brain Mapp.* 2005 Mar;24(3):193-205. PubMed PMID: 15499576.

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