



# Large Edematous Purpuric Plaques after Lipolysis Acupuncture

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Dear Editor:

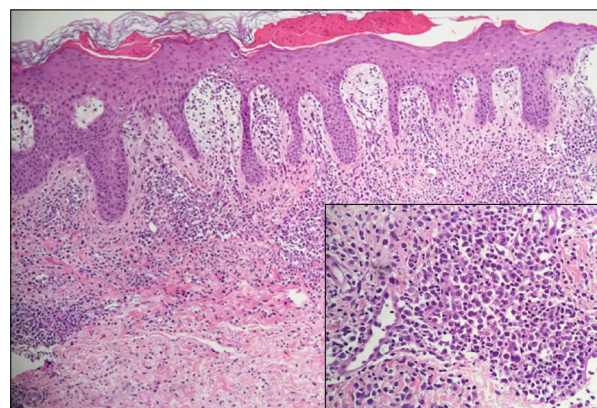
Acupuncture is included in the National Council for Reliable Health Information, and the major mechanism of acupuncture is stimulation of the skin by needle insertion. However, various adverse effects of acupuncture have been reported, such as multiple epidermal cysts<sup>1</sup> and other dermatoses that can cause significant discomfort to the patients. We report herein a case of acupuncture-related reactive skin reaction.

A 27-year-old female presented with pruritic erythematous and edematous plaque surrounded by a pinkish margin

around a markedly purpuric lesion on both her inner and outer thighs. The 10-cm-diameter lesions were first noticed at a size of 1 cm (Fig. 1). The patient complained that the skin lesions appeared right after lipolysis acupuncture therapy performed at local oriental medical clinic 5 days prior. Histologically, there was mild acanthotic psoriasiform hyperplasia in the epidermis and perivascular lymphocytic and eosinophilic infiltration. Infiltrated lymphocytes were present in high density and presented atypical and bizarre morphologies (Fig. 2). Immunohistochemical staining was performed and showed high reactivity on atypical lymphoid cells with Ki67 and positive reactions for CD3 and CD20 but not CD56. The histopathological



**Fig. 1.** Pruritic erythematous and edematous plaque surrounded by a pinkish margin around a markedly purpuric lesion.



**Fig. 2.** Acanthotic psoriasiform hyperplasia in the epidermis and perivascular lymphocytic and eosinophilic infiltration (H&E,  $\times 100$ ). Infiltrated lymphocytes showed high density and presented atypical morphologies (inset: H&E,  $\times 400$ ).

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findings were compatible with a reactive skin reaction. Most of the skin lesion was resolved after oral methylprednisolone therapy (12 mg/d) for one week; no recurrence was observed.

Acupuncture has been practiced in oriental countries for thousands of years. In Western countries, it has gradually gained acceptance as an alternative medical treatment especially for chronic pain syndrome<sup>2</sup>. Some acupuncturists use live bee acupuncture therapy for pain control by applying the venom components to the skin lesion<sup>3</sup>.

In addition to pain control, acupuncture is applied for cosmetic purposes in Korea. Lipolysis acupuncture, also called electrolipolysis, is currently being used to reduce localized obesity and other fat-accumulating conditions at oriental medical clinics. The principles of electrolipolysis are based on degradation of fat cells into free fatty acids and glycerol by heat produced from a current and increased circulating catecholamine release from sympathetic nerve endings<sup>4</sup>. Studies are currently being performed to determine effectiveness of electrolipolysis. However, lipolysis acupuncture is not a formally established treatment in modern medicine for the purpose of cosmetically reducing fat accumulation. One of the common side effects of electrolipolysis is easy swelling and frequent urination during the first few days after the procedure. Itching as a side effect may occur under the electrodes, which is current<sup>5</sup>. Side effects about electrolipolysis have barely reported in the literature. In the presented case, the skin lesion was compatible with a reactive skin reaction with a histologically atypical nature. Even though serious adverse events requiring admission are not common, doctors should be aware of possible adverse effects of acupuncture treatments. In some patients,

the venom used in acupuncture can cause anaphylaxis when it acts as an allergen<sup>3</sup>.

Most of the acupuncture therapies have insufficient medical evidence regarding effectiveness and depend mostly on long-term experience. To minimize adverse events, doctors and acupuncturists need to be aware of the possible risks of the procedure and receive appropriate training on proper care of patients who need acupuncture therapy.

## CONFLICTS OF INTEREST

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The authors have nothing to disclose.

## REFERENCES

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1. Park KY, Jang WS, Kim IS, Ko EJ, Seo SJ, Hong CK. Multiple epidermal cysts as a complication of gold acupuncture. *Ann Dermatol* 2014;26:405-406.
2. Brinkhaus B, Witt CM, Jena S, Linde K, Streng A, Wagenpfeil S, et al. Acupuncture in patients with chronic low back pain: a randomized controlled trial. *Arch Intern Med* 2006; 166:450-457.
3. Park JS, Lee MJ, Chung KH, Ko DK, Chung H. Live bee acupuncture (Bong-Chim) dermatitis: dermatitis due to live bee acupuncture therapy in Korea. *Int J Dermatol* 2013; 52:1519-1524.
4. Kim HJ, Chung SH, Lee JS, Kim SS, Shin HD. The principles of electrolipolysis in obesity: a literature study. *J Orient Rehab Med* 1999;9:55-64.
5. Health Beauty and Fashion. Electrolipolysis-How is it safe? [Internet]. *Health Beauty and Fashion*; 2014 May 21 [updated 2016 Sep 23; cited 2016 Oct 7]. Available from: <http://fashion-newest.com/electrolipolysis-how-is-it-safe>.