1990;22:19-26.

3. Kalymykov B, Walker S. Cutaneous metastases in breast cancer. *Clin J Oncol Nurs* 2011;15:99-101.

4. Krathen RA, Orengo IF, Rosen T. Cutaneous metastasis: a meta-analysis of data. *South Med J* 2003;96:164-167.

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Transepidermal Elimination of Gold Metals after Face-Lifting Acupuncture

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Dear Editor:

Numerous interventions are offered for skin rejuvenation and anti-skin aging including treatments for facial wrinkles, facial muscle tone, and elasticity¹. Recently, the use of acupuncture for cosmetic purposes has gained popularity worldwide and it has been introduced as an intervention for skin rejuvenation^{2,3}. Although certain amount of previous reports on efficacy are reported, its safety is not yet proved.

A 54-year-old woman presented with tiny multiple erythematous papules with whitish pus on the face (Fig. 1A). She received procedure of face-lifting acupuncture using gold metals a year ago for skin rejuvenation. We performed biopsy from the right cheek and histologic findings showed an epidermal cyst with inflammatory cells infiltration (Fig. 2A). During the procedure of biopsy, a piece of gold metal was collected along with the specimen. She claimed several gold metals had expelled out sponta-

Fig. 1. (A) Asymptomatic multiple erythematous papules and plaques on the face with discharge (arrows). (B) Grouped multiple metal pieces are detected on the radiologic findings (arrows).

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Fig. 2. (A) Well-demarcated cyst in dermis. Keratin materials are filled inside (H&E, $\times 40$). (B) Gold metals extracted out both spontaneously and during the procedure of biopsy.

neously without any traumatic events, and she brought the metals in her following visits as proof. The material was composed of pure 24K gold (Fig. 2B). In the radiologic findings of skull series, more than 100 pieces of radio-opaque lesions were found (Fig. 1B). We warned her that she might experience numerous episodes of relapse. Treatment started with intralesional steroid injections and topical steroid applications, and the patient is currently under close observation.

From her clinical history and histologic features, we hypothesized that epidermal cyst on the acupuncture site and spontaneous expulsion of metals, developed through mechanism of transepidermal elimination. A strongly irritant body, in this case, pieces of metals used in the procedure of acupuncture, will evoke a maximal inflammatory and/or granulomatous response and, if the reaction is superficial enough, the subsequent tissue destruction will lead to necrosis and epidermal degeneration which lead to expulsion of the foreign body to exterior⁴.

Cosmetic acupuncture has gained more attention worldwide with its beneficial uses in health and beauty, especially by revitalizing and rejuvenating the facial skin^{1,4}. Numerous studies are providing relatively strong proves that acupuncture could be used as an adjunct or alternative to surgical approaches^{1,2}. Recently, a couple of cases were reported on the adverse events such as oozing, crusts and scars remaining after acupuncture treatments^{4,5}. However, more attention to its safety is required to elucidate its possible adverse events. In many countries in Asia,

where traditional oriental medicine is still popularly used, possibility in overuse of cosmetic acupuncture is relatively high. After the procedure, the patients might suffer bruise, pain, and even foreign body reactions that might induce formation of epidermal cyst which applies to this case.

Herein, we report a case of transepidermal elimination of gold metals after procedure of face-lifting acupuncture. As far as we are concerned, this is a first case report on the subject. For the appropriate and safe uses of cosmetic acupuncture, large scaled studies on the possible adverse events of the procedure are required.

REFERENCES

1. Yun Y, Kim S, Kim M, Kim K, Park JS, Choi I. Effect of facial cosmetic acupuncture on facial elasticity: an open-label, single-arm pilot study. *Evid Based Complement Alternat Med* 2013;2013:424313.
2. Donoyama N, Kojima A, Suoh S, Ohkoshi N. Cosmetic acupuncture to enhance facial skin appearance: a preliminary study. *Acupunct Med* 2012;30:152-153.
3. 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.
4. Woo TY, Rasmussen JE. Disorders of transepidermal elimination. Part 2. *Int J Dermatol* 1985;24:337-348.
5. Pigatto PD, Guzzi G. Acupuncture needle scars. *Br J Dermatol* 2004;150:364.