Case report

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Unilateral scar sarcoidosis after revision blepharoplasty: a case report

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Scar sarcoidosis is a rare type of cutaneous sarcoidosis that develops at sites of scars caused by surgery, laser treatment, trauma, tattoo removal, herpes zoster, or vaccination but has rarely been reported after blepharoplasty for cosmetic purposes. Most of these reported cases concerned scar sarcoidosis on both sides of surgical sites. However, in our case, it occurred only on the right side, where revision surgery was performed. Histologic examination showed non-caseating granulomatous inflammation consistent with sarcoidosis. Lesions completely resolved within 2 months of treatment with oral prednisolone and intralesional triamcinolone injection. We describe a rare case of unilateral scar sarcoidosis after revision blepharoplasty.

Key words: Blepharoplasty; Scar sarcoidosis

INTRODUCTION

Sarcoidosis is a systemic disease characterized by non-caseating granulomas involving multiple organs including the lungs, lymph nodes, liver, spleen, phalangeal cartilage, eyes, and skin [1,2]. The skin is the second most commonly affected organ in sarcoidosis and is often involved in the initial presentation [3]. Scar sarcoidosis is a rare type of cutaneous sarcoidosis, which develops on the site of previous scars caused by surgery, laser, trauma, tattoos, herpes zoster, and vaccination [4-6]. Scar sarcoidosis has been rarely reported among patients who underwent blepharoplasty for cosmetic purposes. Most cases involve both sides of the surgical site; however, in our case, it occurred only on the right side where the revision surgery was performed. Here, we report a case of cutaneous sarcoidosis that developed unilaterally on the incisional scar after revision blepharoplasty.

A written informed consent was obtained from the patient for the publication of this case report.

CASE REPORT

A 37-year-old female presented with a 3-month history of linear indurated erythematous papules with mild scale on the right upper eyelid (Fig. 1A). She underwent blepharoplasty on both upper eyelids 20 years ago and revision surgery on the right upper eyelid 10 years ago. The patient denied any other history of trauma. She also underwent rhinoplasty 6 years ago; however, no skin lesions were present in the area.

Histologic examination showed non-caseating granulomatous inflammation involving epithelioid cells, Langerhans giant cells, and lymphocytes within the reticular dermis consistent with sarcoidosis (Fig. 2A, B). No significant findings were observed in AFB (Acid-Fast Bacillus),

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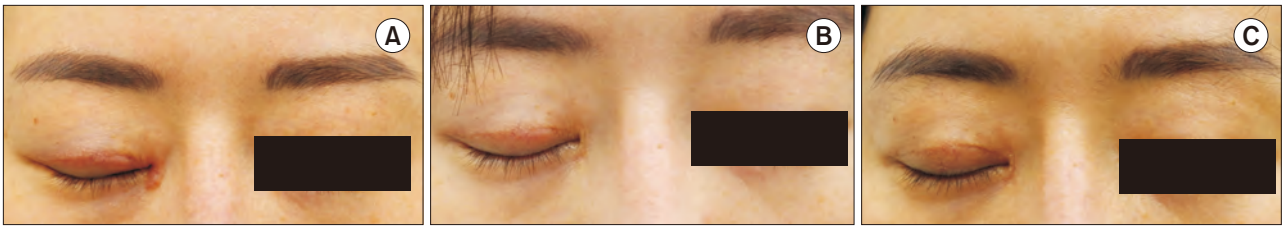

Fig. 1. Clinical images of skin lesions before and after corticosteroid treatment. (A) Indurated erythematous plaque with mild scale on the right upper eyelid. (B) Improvement of skin lesions after 2 months. (C) No recurrence until the 4-month follow-up.

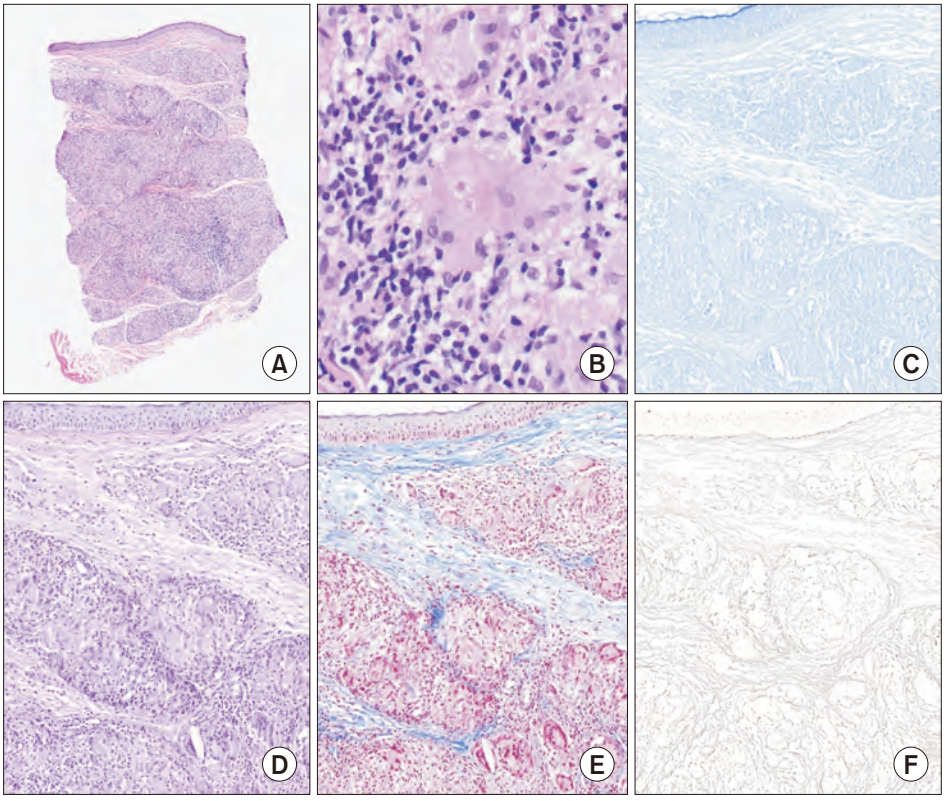

Fig. 2. Histopathologic findings of punch biopsy. (A) Nodular aggregates of epithelioid histiocytes surrounded by sparse lymphocytes, showing a typical "naked tubercle" granuloma (H&E, ×20). (B) Histiocytes, lymphocytes, and multinucleated giant cells containing asteroid bodies (H&E, ×400). No significant findings in (C) AFB (×60), (D) PAS (×60), (E) Masson's trichrome (×60), and (F) reticulin staining (×60).

PAS (Periodic acid–Schiff), Masson's trichrome, and reticulin staining (Fig. 2C-F). The patient did not complain of other systemic symptoms, and there were no abnormal findings in subsequent screening tests such as chest X-ray and serum ACE and serum calcium measurements.

Under the diagnosis of scar sarcoidosis localized to the skin without systemic involvement, treatment with oral prednisolone for 3 weeks was provided with two injections of 2.5 mg/ml intralesional triamcinolone. The lesions completely resolved within 2 months (Fig. 1B), and no further recurrence was observed at the 4-month follow-up (Fig. 1C).

DISCUSSION

Cutaneous lesions of sarcoidosis usually present as erythematous papules, plaques, or subcutaneous nodules [7,8]. The exact mechanism for scar sarcoidosis has not been identified; however, previous contamination with foreign bodies and hypersensitivity reaction are suggested as possible causes [5]. It is known to reactivate in old cutaneous scars after a latency period ranging from 6 months and 59 years [6]. Several cases of scar sarcoidosis after blepharoplasty have been reported, and both bilateral and unilateral development of lesions can be observed. The asymmetric development of lesions is likely attributed to differences in the preoperative condition of the upper eyelid, operator skill, and postoperative care

[1,4].

For the treatment of cutaneous sarcoidosis, various modalities such as topical, intralesional, and systemic corticosteroids as well as systemic administration of cytostatic drugs are applied. Also, several types of laser therapy can be selected as alternative treatment options [9]. Among them, pulsed dye lasers appear to be effective and safe for the treatment of cutaneous sarcoidosis by selectively targeting vascular supply of the lesion [10].

In our case, application of oral prednisolone and intralesional triamcinolone injection showed a significant improvement that there was no need for any additional laser or other treatments.

We report this as a rare case of scar sarcoidosis, which developed on the revision blepharoplasty site. Physicians should be aware of this uncommon disease entity in cases of revision surgery, and long-term follow-up is necessary following diagnosis due to the risk of systemic involvement.

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AUTHOR CONTRIBUTIONS

Conceptualization: KHY. Project administration: YGK. Supervision: SHS. Visualization: SHS. Writing–original draft: WGL. Writing–review & editing: all authors.

CONFLICT OF INTEREST

Kwang Ho Yoo is the Editor-in-Chief of the journal, but was not involved in the review process of this manuscript. Otherwise, there is no conflict of interest to declare.

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DATA AVAILABILITY

None.

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SUPPLEMENTARY MATERIALS

None.

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