Scar sarcoidosis following blepharoplasty: a case report

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Few cases have been previously reported regarding scar sarcoidosis following blepharoplasty. We report the case of a patient that developed sarcoidosis of a scar following a blepharoplasty procedure. A 41-year-old woman had a one-month history of bead-shaped masses along her right upper eyelid. The patient underwent blepharoplasty 20 years ago. We performed excisional biopsy. Histopathological examination revealed a chronic non-caseating granuloma. Results of other tests were normal, including urinalysis, blood tests, and chest radiograph. Polymerase chain reaction (PCR) did not demonstrate evidence of tuberculosis, and a culture test for microbes showed no evidence of infection. She was diagnosed with sarcoidosis of the eyelid, and was prescribed an oral steroid. Once no evidence of recurrence was noted 3 months after the operation, the oral steroid dose was tapered off over an 8-week period. This case represents a rare occurrence of sarcoidosis that developed in the incisional scar after blepharoplasty. Sarcoidosis of the incisional scar should be considered as a differential diagnosis for an unusual mass that develops in a scar following blepharoplasty.

Keywords: biopsy; blepharoplasty; case report; excision; sarcoidosis; scar

Background

Sarcoidosis is a non-caseating granulomatous disease of unknown [1]. Twenty-five percent of sarcoidosis cases develop with ophthalmic lesions [1], and the most common ophthalmic related condition is anterior uveitis [2]. Sarcoidosis can develop in multiple organs, such as the lungs, lymph nodes, liver, spleen, phalangeal cartilage, eyes, and skin. Cutaneous sarcoidosis can develop in scars, although this is rare [3]. The causes of scar sarcoidosis include prior surgery [4], trauma [5], tattoos [6], a history of a herpes zoster infection, foreign tissues, and vaccinations. Nonetheless, there are no published reports of scar sarcoidosis developing after blepharoplasty. As such, it is difficult to consider scar sarcoidosis as a differential diagnosis for an unusual mass in a scar following blepharoplasty. We present

a case of a patient with scar sarcoidosis who developed a bead-like appearing lesion after blepharoplasty.

Materials and methods: case summary

A 41-year old female patient presented with a 1-month history of bead-shaped masses on the right upper eyelid, despite a two-week course of oral steroid. A bilateral blepharoplasty was performed 20 years prior, with an insignificant history of trauma.

Erythema and tenderness to palpation were noted on physical examination. Diffuse, erythematous masses along the incision were noted on the ocular examination (Fig. 1A, B), and were confirmed by contrast computerized tomography (Fig. 1C). No specific findings were noted on slit-lamp microscopy.

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Fig. 1. A firm bead-shaped masses. (A,B) are visible along upper eyelid scar, and computed tomographic scan (C) show masses on upper eyelid. A photomicrograph of biopsy showing the numerous, noncaseating granulomas (arrow) with lymphocytes (D).

Fig. 2. Three month after treatment, there was dramatic resolution of the lesions of upper lid. And also there was no evidence of recurrence.

We prescribed 30 mg of oral prednisolone to treat the inflammation reaction. Although the swelling started to subside, the size of the masses increased once the oral steroid dose was tapered to 10 mg; thus, we prepared for surgical intervention.

Results

Histopathologic examination revealed multiple non-caseating granulomas on H&E staining, which was consistent with a diagnosis of scar sarcoidosis localized to the eyelid (Fig. 1D). Additional studies were performed to assess for systemic involvement. IgG subclass 4 level was within normal range, at 20.55 mg/dl. All other relevant findings from laboratory studies and chest radiograph were normal. A polymerase chain reaction (PCR) test excluded tuberculosis, and no growth was noted on the microbial culture test.

The lesion recurred 1 month following the operation. We prescribed 40 mg of oral steroid, tapered over an 8-week period. There was no evidence of recurrence at 3 months postop (Fig. 2).

Discussion

Sarcoidosis is a granulomatous inflammatory disease that can involve multiple organs. Additionally, 25% of sarcoidosis patients develop cutaneous lesions and 25% are specific to the ophthalmic region. Most cases present with bilateral lymphadenopathy and restrictive lung disease. Several cases regarding eyelid scar sarcoidosis have been reported in the field of dermatology, but there is a paucity of literature regarding incisional sarcoidosis of the eyelid in the field of ophthalmology [7].

Incisional sarcoidosis following blepharoplasty is a rare occurrence. The patient in this case had blepharoplasty on her upper eyelids bilaterally, with masses along the incision isolated to her right eye. Sarcoidosis is often a diagnosis of exclusion. However, non-caseating granulomas on histopathologic evaluation increase suspicion, once other granuloma forming diseases have been excluded. In this case, a non-caseating granulomatous lesion was noted on H&E staining, and negative findings were noted for tuberculosis infection via PCR, as well as micro-

bial cultures. Based on these findings, we diagnosed this patient with scar sarcoidosis.

The first line therapy for sarcoidosis localized on the eyelid involves the administration of oral steroids. The recurrence rate of sarcoidosis is only 7% after the administration of steroids with tapered dose [8]. When the patient does not respond to oral steroids, immunosuppressants such as methotrexate, can be used. In addition, local steroid injections can be effective [9]. In this case, we prescribed 30 mg of an oral steroid, with dose tapered over 8 weeks. The recurring lesion led to us to perform an excisional biopsy. The patient was then administered 40 mg of an oral steroid, which was gradually tapered over 8 weeks. No evidence of recurrence was noted 3 months after treatment.

Conclusion

Scar sarcoidosis following blepharoplasty is rare occurrence- but we believe that sarcoidosis should be considered as a differential diagnosis of masses that develop on blepharoplasty scars.

Conflicts of interest

The authors have nothing to disclose.

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