A case of cutaneous fistula at the incision site following external dacryocystorhinostomy in a patient with rheumatoid arthritis and reconstruction via bilobed flap technique

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Key words: Bilobed flap, corneal perforation, external dacryocystorhinostomy, fistula, rheumatoid arthritis

A 71-year-old female patient who underwent external dacryocystorhinostomy (Ext-DCR) presented with a cutaneous fistula 8 × 4 mm at the incision site [Fig. 1a and b]. Primary resuturing was performed several times, which had never healed. Intranasal endoscopy revealed extreme nasal mucosal atrophy, pallor, and the crusts [Fig. 2]. Elective bilobed flap surgery was planned to close the defect. However, a day before surgery, the patient reported vision loss in the left eye. Corneal perforation, possibly due to rheumatoid arthritis, was detected [Fig. 3a]. The operation plan was changed from elective to emergency. Corneal perforation was treated with cyanoacrylate tissue adhesive and the nonhealing fistula at the Ext-DCR incision site was repaired in the same session via a bilobed flap technique [Fig. 4a]. In the first postsurgical week, the flap was well perfused and the Seidel test was negative [Fig. 3b]. The cutaneous fistula was closed with minimal scarring of the flap at 6 months after surgery [Fig. 4b].

Cutaneous fistulas following Ext-DCR have been reported previously in two patients with Wegener's granulomatosis.[1] Ali recently suggested that dacryocystectomy should be considered as an alternative to dacryocystorhinostomy to prevent the development of cutaneous fistulas in patients with granulomatosis along with polyangiitis or similar autoimmune diseases, like rheumatoid arthritis in our patient.[2]

Discussion

The bilobed flap is a cutaneous flap and this technique has many advantages, including a randomized blood supply pattern and color matching.[3] It is beneficial in regions with limited skin mobility, so it is commonly used in the face and neck reconstruction.

At the end of Ext-DCR, the suturing of the incision is an important determinant of wound healing, as well as for maintaining the lacrimal pump function performed by the orbicularis oculi and lacrimal diaphragm.[4,5] In patients with autoimmune diseases such as rheumatoid arthritis, the orbicularis oculi and lacrimal diaphragm should be sutured meticulously.

We would like to emphasize the importance of strict suturing of the lacrimal diaphragm and periosteum before closing the skin in cases with diseases, like autoimmune conditions, that can delay wound healing and a bilobed flap technique was an effective alternative method for incision defect repair after Ext-DCR. Surgeons should inform the patients about any autoimmune diseases and possible related ocular complications before the operation. Dacryocystorhinostomy is the procedure of choice in patients with nasolacrimal duct obstructions secondary to autoimmune diseases; however, dacryocystectomy should be considered as an alternative to prevent the development of cutaneous fistulas.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

Access this article online	
Quick Response Code:	Website: www.ijo.in
	DOI: 10.4103/ijo.IJO_463_20

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Received: 13-Mar-2020 Revision: 20-May-2020
Accepted: 16-Aug-2020 Published: 26-Oct-2020

Cite this article as: Mangan MS, Ozturan SG, Ocak SY, Arici C, Uyar Y. A case of cutaneous fistula at the incision site following external dacryocystorhinostomy in a patient with rheumatoid arthritis and reconstruction via bilobed flap technique. Indian J Ophthalmol 2020;68:2520-1.

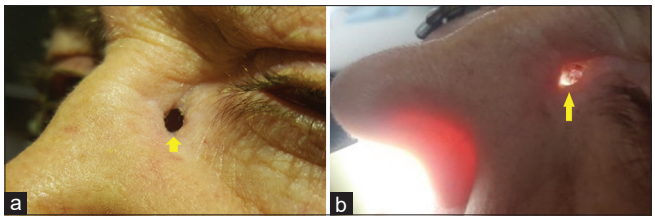

Figure 1: (a) Cutaneous fistula 8 × 4 mm at the incision site following external dacryocystorhinostomy. (b) Retro-illumination image of the cutaneous fistula

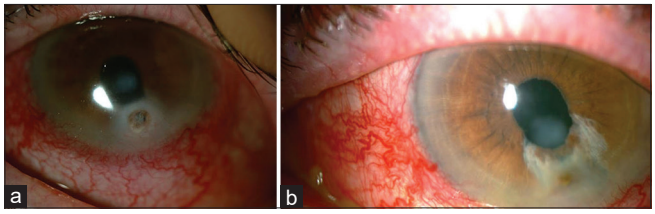

Figure 3: (a) Biomicroscopy examination revealed a corneal perforation in a 1–2 mm area of the cornea at the 5th quadrant, 2 mm from the limbus. (b) The Seidel test was negative after treatment with cyanoacrylate tissue adhesive

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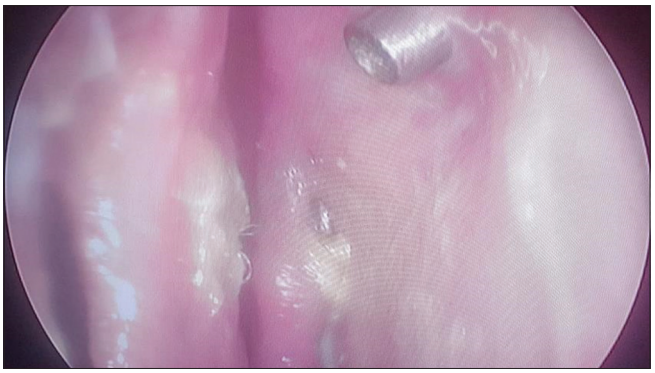

Figure 2: Intranasal endoscopic view – extreme nasal mucosal atrophy, pallor, and the crusts

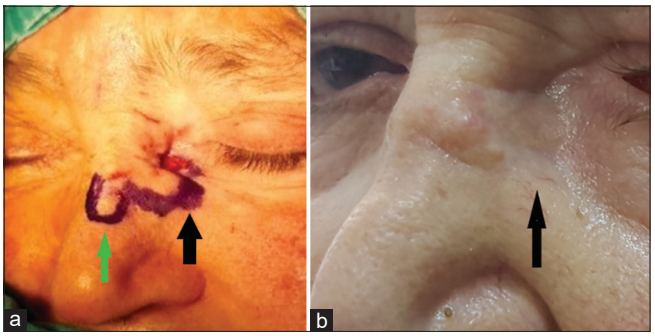

Figure 4: (a) Bilobed flap. The first flap is indicated by a black arrow and the second flap is indicated by a green arrow. (b) At the 6th-month postsurgery, the flap area showed minimal scarring