A lower eyelid and cheek defect reconstruction

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The case

A 91-year-old woman presented with a recurrent cutaneous squamous cell carcinoma (CSCC) involving the right lower eyelid and cheek. Recurrence occurred after one month from an incomplete surgical excision: histology reported a tumor infiltration of the subcutaneous tissue and deep margin. Moreover, immediately after surgery, a cicatricial ectropion of the right lower eyelid was observed. (Figure 1a).

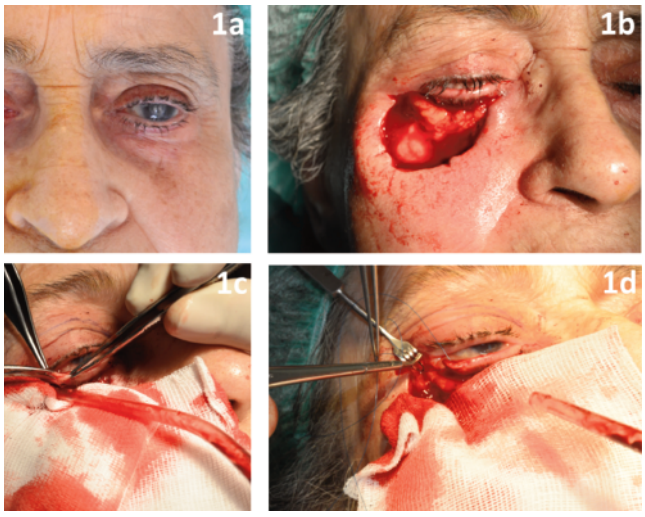

Figure 1. Cicatricial ectropion of the right lower eyelid after surgery.

Our choice

After local anesthesia with 2% mepivacaine, we applied Mohs Micrographic Surgery (MMS) with frozen sections. Excision was histologically completed after the first stage (Figure 1b). Inferior tarsus was spared during the procedure, so we performed a Tarsal strip procedure in order to correct ectropion: after lateral canthotomy and inferior cantholysis, the free margin of the inferior tarsus was released and de-epithelized (Figure 1c). The resulting tarsal strip was reattached with a 5/0 polydioxanone stitch to the periosteum of the lateral orbital wall superior to the insertion of the lateral canthal tendon (Figure 1d).[1]

The primary defect was repaired with two different flaps. For lower eyelid reconstruction, we performed a myocutaneous transposition flap from the upper eyelid (Figure 2a).[2] It was drawn with a properly wide pedicle and length, then was dissected and transposed in the lower eyelid (Figure 2b). The secondary defect in the upper eyelid was directly sutured with a 5/0 polypropylene. The flap was sutured to the inferior tarsus. The remaining defect was temporarily reduced by a purse string suture (Figure 2c), covered with a hemostatic dressing and the patient was released. The next morning, local anesthesia was repeated and reconstruction continued with a cheek rotational flap. The flap was incised along the temple until the preauricular region, was properly undermined and rotated to cover the defect (Figure 3). During the procedure, an anchoring suture with a 3/0 polydioxanone stitch was placed along the zygomatic arch to reduce tension on the eyelid and avoid ectropion recurrence. The flap was sutured with 4-0 polypropylene (Figure 4a).[3]

Figure 2. Myocutaneous transposition flap from the upper eyelid.

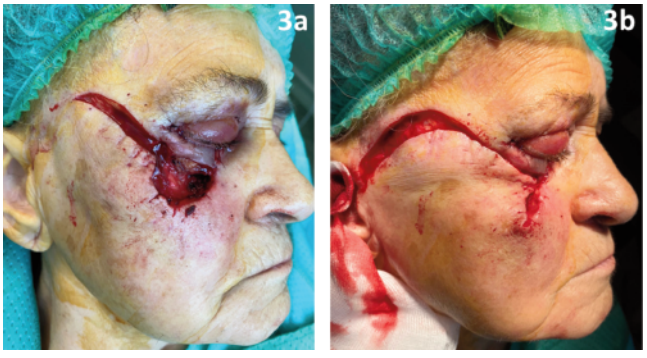

Figure 3. Incision of the flap along the temple until the preauricular region.

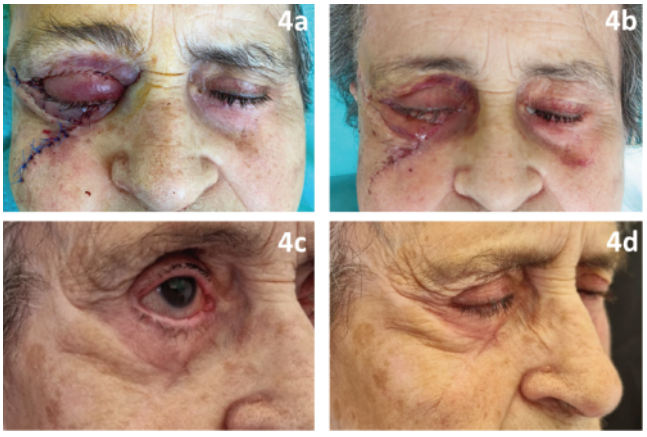

Figure 4. A) The flap was sutured with 4-0 polypropylene; **B**) remotion of stitches after 7 days; **C-D**) the ectropion correction was maintained two years after surgery.

The outcome

Stitches were removed after 7 days (Figure 4b). No complications occurred. Ectropion correction was maintained two years after surgery (Figure 4c-d).

Comment

MMS is considered the primary treatment option for CSCC and local recurrence rates have been reported to be significantly lower with MMS compared to standard excision.[4]

Mustardé rotational flap is usually performed for reconstruction of defects involving both lower eyelid and cheek. However, we applied it for cheek repair only. Eyelid defect was indeed reconstructed separately with a Tripier myocutaneous transposition flap. This approach allows to preserve the normal anatomic borders between the two involved subunits with the aim of improving the aesthetic outcome. In addition, the first flap, by reducing the size of the primary defect, also reduces the amount of tissue to be undermined to rotate the Mustardé flap, and consequently also the risk of bleeding and hematoma formation. Finally, anchoring sutures to the periosteum serves to prevent ectropion recurrence.[1,3]

References

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