A delayed Tenzel flap

Francesca Falcinelli,[1] Giovanni Rubegni,[2] Ernesto De Piano[1]

[1]Dermatology Unit, Department of Medical, Surgical and Neurosciences, Siena University Hospital; [2]Ophthalmology Unit, Department of Medicine, Surgery and Neurosciences, Siena University Hospital, Italy

The case

A 71-year-old man presented with a lentigo maligna melanoma (Breslow 0.25 mm) of the left lower eyelid (Figure 1). Complete excision was achieved after three slow Mohs stages, resulting in a quadrangular 1.8x1.2 cm full-thickness defect. After the first stage, upper and lateral margins were found to be histologically infiltrated. Therefore, an additional lateral strip was taken after 3 days, resulting in a tumor-free outcome. Radicalization was completed after another 8 days on the posterior lamella and rim with immediate reconstruction.

Correspondence: Francesca Falcinelli, MD, Department of Dermatology, Division of Medical, Surgical and Neurosciences, University of Siena - Le Scotte Hospital, Viale Bracci 16, 53100 Siena, Italy.
E-mail: f.falcinelli@student.unisi.it

Key words: Tenzel flap; Mohs surgery; lentigo maligna; lower eyelid.

Conflict of interest: the authors have no conflict of interest to declare.

Ethics approval and consent to participate: no ethical committee approval was required for this case report by the Department, because this article does not contain any studies with human participants or animals. Informed consent was obtained from the patient included in this study.

Consent for publication: the patient gave his written consent to use his personal data for the publication of this case report and any accompanying images.

Availability of data and materials: data supporting the findings of this study are available from the corresponding author upon reasonable request.

Received: 26 September 2024.
Accepted: 5 November 2024.

Dermatology Reports 2025; 17:10151
doi:10.4081/dr.2024.10151

Our choice

In the first stage, after local anesthesia, we superficially incised skin with a double-blade scalpel in a quadrangular shape with a safe margin of 1 mm on the upper side and 5 mm on the other three sides. Melanoma excision was completed along the outer scalpel sign, including anterior lamella (Figure 2A). Although melanoma infiltration of the rim was probable, it was temporarily left in place to reduce wound extent. After formalin fixing (Figure 2B), the pre-incised margin strips were resected from the specimen for *en-face* section processing. The residual specimen was processed for vertical (*bread loaf*) routine sectioning. Margin and tumor sections were evaluated together to better assess local clearance (Figure 3 A-E).[1] At the last stage, posterior lamella and rim were excised, and a Tenzel flap was performed (Figure 2 C,D). The first incision was made at the lateral canthal angle and carried superiorly and laterally. After lateral canthotomy and inferior cantholysis, the skin-muscle flap was undermined and advanced medially to close the defect. The flap was fixed to the periosteum of the periorbital rim to prevent late ectropion. Finally, it was sutured (Figure 2E).

The outcome

Sutures were removed after 7 days, and follow-up continued for four years. No recurrences were observed. Delayed reconstruction didn't compromise the final satisfying result (Figure 4 A,B).

Figure 1. Lentigo maligna melanoma of the left lower eyelid.

Figure 2. Wound after first stage (**A**) resulting in a quadrangular specimen (**B**); wound before (**C**) and after third stage (**D**); Tenzel flap reconstruction (**E**).

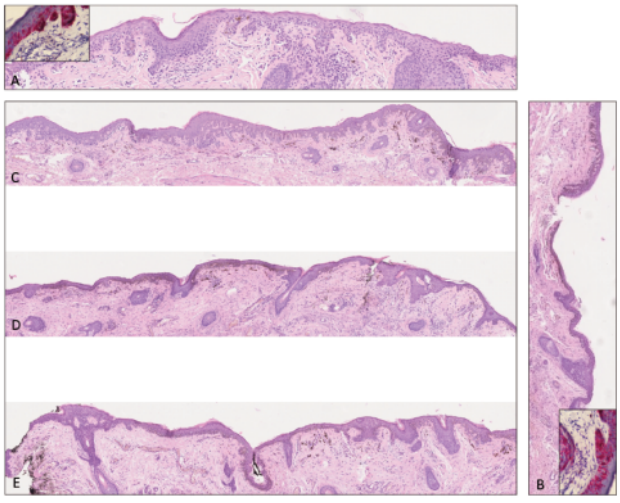

Figure 3. Histology showing remnants of melanoma in the upper (**A**) and lateral (**B**) *en-face* margin sections (Melan-A immunostaining in insets). Incomplete excision was confirmed on three *bread-loaf* sections (**C-E**). (Haematoxylin and Eosin, original magnification x5).

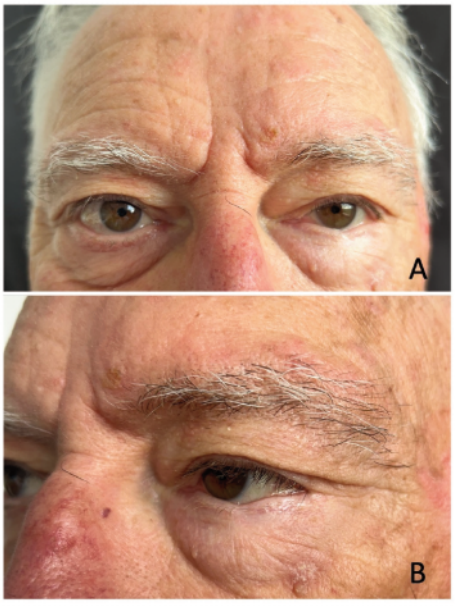

Figure 4. Results four years after surgery: frontal (**A**) and lateral (**B**) view.

Comment

Slow Mohs is an effective treatment for eyelid melanoma.[2] In addition to providing staging information, sectioning of *bread-loaf* melanoma assists pathologists with the challenging task of interpreting *en-face* margin sections in sun-damaged skin by acting as a positive control.[1]

The Tenzel flap was originally described for defects involving 30-50% of the eyelid, although it can also be applied to reconstruct up to 80% of the eyelid with appropriate modifications.[3,4] In some cases where Tenzel flap repair is predictable, it is possible to postpone rim and posterior lamella removal until the last stage to simplify wound management (*e.g.*, avoiding contact lenses to protect the cornea) without compromising slow Mohs validity.[5] The patient was simply instructed to apply petrolatum and keep the area covered with a bandage between stages.

References

1. Etzkorn JR, Sobanko JF, Elenitsas R, et al. Low recurrence rates for in situ and invasive melanomas using Mohs micrographic surgery with melanoma antigen recognized by T cells 1 (MART-1) immunostaining: tissue processing methodology to optimize pathologic staging and margin assessment. J Am Acad Dermatol 2015;72:840-50.
2. Then SY, Malhotra R, Barlow R, et al. Early cure rates with narrow-margin slow-Mohs surgery for periocular malignant melanoma. Dermatol Surg 2009;35:17-23.
3. Tenzel RR, Stewart WB. Eyelid reconstruction by the semicircle flap technique. Ophthalmology 1978;85:1164-9.
4. Levine MR, Buckman G. Semicircular flap revisited. Arch Ophthalmol 1986;104:915-7.
5. Haefliger IO, Tschopp M, Piffaretti JM, Pimentel AR. Delayed reconstruction after eyelid tumor excision. Klin Monbl Augenheilkd 2012;229:391-4.