

A-to-T advancement flap or T-plasty for eyebrow reconstruction

Laura Miccio,1 Laura Gnesotto2

¹Ospedale San Bortolo di Vicenza, ULSS 8 Berica, Complex Operational Unit of Dermatology, Department of Medical Sciences, Vicenza; ²Dermatology Unit, Department of Medicine DIMED, University of Padua, Italy

The case

An 84-year-old man was referred with a pinkish lesion on his left eyebrow, showing dermoscopic features of basal cell carcinoma. Consequently, surgical removal with adequate margins was planned.

How would you remove this eyebrow lesion?



Our choice

We chose to use A-to-T advancement flap (or T-plasty).



Design, flap preparation, excision and suture.

Comment

A-to-T (or V-to-T when the defect is inverted) is a bilateral advancement flap, useful for moderate to large wounds higher on the forehead or lower near the eyebrow, to prevent its distortion.^{1,2}

The T-plasty has a simple form and is designed by converting a circular defect to a triangle, with the base incisions extending one defect diameter in each direction and the vertical height of the flap being roughly twice the height of the defect. The incision lines do not have to be perfectly straight and may be adjusted to relaxed skin tension lines (RSTL);¹ in our case, for example, they incorporate an element of rotation according to the eyebrow RSTL.

After trimming the wound to a triangle and extending the incision to the bilateral sides along the bottom edge, the triangle bilateral flaps are pushed inward, and all the edges are sutured.

Two minor incisions of right triangles should be kept at both ends of the base line after internal suture to prevent "cat ear" shaped folds. The "cat ear" area is often extremely tiny and does not necessitate excision.³ In our case, we performed the resection of just one small triangle at the lateral side.

The T-plasty represents a useful solution since the T portion of the flap can be placed along anatomical boundaries, hiding a large part of the scar within a cosmetic junction line, and the flap broad pedicles offer a steady supply of blood vessels.^{1,4}

In our case, the A-to-T advancement flap or T-plasty allowed us to excise the lesion with a minimal loss of healthy tissue and to achieve an excellent cosmetic outcome by placing the base of the flap along the ridge of the orbital bones.



T-Plasty operation process.³



The outcome



2-week (A) and 6-week (B) follow-up

References

- 1. Rohrer T, Cook J, Kaufman A. Flaps and Grafts in Dermatologic Surgery. 2nd Ed. Amsterdam: Elsevier; 2017.
- Gualdi G, Monari P, Apalla Z, Lallas A. Surgical treatment of basal cell carcinoma and squamous cell carcinoma. G Ital Dermatol Venereol 2015;150:435-47.
- Zhao Y, Yang Z, Chen L, Peng Y. Geometrical model establishment and preoperative evaluation on A-T flap design: Finite element method-based computer-aided simulation on surgical operation processes. Front Surg 2022;9:988783.
- 4. Hirshowitz B, Mahler D. T-plasty technique for excisions in the face. Plast Reconstr Surg 1966;37:453-8.