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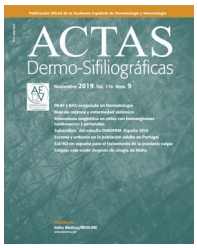

VIDEOS OF SURGICAL PROCEDURES IN DERMATOLOGY

[Translated article] Double Confluent Dermal-Fat Flap for Direct Closure: A Technique for Avoiding Depression at the Center of the Ellipse

Doble colgajo dermograso confluente en el cierre directo o cómo evitar la depresión central de la elipse

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Introduction

In dermatology surgery, a malignant lesion or one with suspicion of malignancy should be completely resected, leaving a sufficient safety margin, which will vary according to the particular case. Once the lesion has been resected, we should consider closing the surgical defect by directly closure, flap advancement, or a graft.

Direct closure is the most widely used reconstruction in simple resections and up to 35% of defects arising after Mohs surgery.[1] To do this appropriately, two apical symmetric and opposing Burow triangles are resected to generate an ellipse whose total length is 3–4 times the original defect to avoid a dog ear defect.[2] In addition, the long axis of the ellipse should be aligned in parallel to the relaxed skin tension lines.

Once these details have been taken into account in the design, the borders are brought together by suture. However, this movement is not the same for all points of the ellipse. The central points of the ellipse are displaced further than the ends to meet in the center. As a result, this central skin (epidermis–dermis–subcutaneous tissue) will lose some of its thickness because it is subject to greater tension. This will lead to a central depression in the wound which may contribute to a worse cosmetic outcome. This defect is more evident on the convex surfaces of the body.

Description of the technique

To minimize this defect, we propose a double dermal-subcutaneous confluent flap to provide filling and project to the center of the ellipse.

Following the procedure shown in Appendix, for the purposes of description, we can identify four steps:

1. The relaxed skin tension lines are located and the Burow triangles are aligned with these. With a cold scalpel (blade #15), the epidermis and superficial dermis of both Burow triangles are resected. As this is a region with hair, this step should reach down to the deep dermis to avoid interference with the hair bulbs.

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2. Two flaps are constructed from the central subcutaneous pedicle in the bed of both Burow triangles. To this end, the periphery is cut down to the muscle fascia or a safe anatomical plane, such that the resulting flap will include the dermis and subcutaneous fatty tissue. Vascularization of these flaps will occur via the perforating arteries of the underlying muscle. It is helpful that the flap includes the dermis to provide structural collagen support and thus improve the central projections of the scar.
3. Both flaps are rotated in the vertical plane such that the two apices coincide in the center, which we then suture with resorbable thread. The aim of this step is to give the central area of the ellipse extra volume to improve the projection.
4. Finally, we dissect the sides as we would with any direct closure and bring the two sides together with subcutaneous and transcutaneous sutures according to the site and defect in question.

Indications

In mid-sized defects following repair by direct closure, particularly in convex areas.

Contraindications

In anatomical areas where producing such a deep flap might be associated with risk of vascular and/or nervous lesions.

Complications

Those usually associated with basic dermatology surgery (infection, dehiscence, bleeding, etc.).

Conclusions

In this video, we describe a new and simple technique to avoid a central depression in repairs by direct closure. This technique does not require any special training and can be performed by any dermatologist who carries out basic surgical procedures. This technique is particularly useful in convex anatomical areas.

Conflicts of interest

The authors declare that they have no conflicts of interest.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.ad.2023.10.020.

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2. Perez MM, Stoehr JR, Chwa E, Connor L, Gosain AK. Dog ears in wound closure: can they be minimized? Ann Plast Surg. 2022;89:581–90.