

Nasolabial island transposition flap for upper lip reconstruction

Retalho de transposição nasolabial em ilha para reconstrução do lábio superior

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Abstract

Reconstruction of large partial-thickness defects of the upper lip is challenging due to the limited local skin reserve and the lip's esthetic and functional relevance. We present the case of an 88-year-old female with a partial-thickness defect involving the entire lateral subunit of the upper lip, following Mohs excision of a squamous cell carcinoma. A nasolabial island transposition flap was used for reconstruction. The crescentic-elliptical design allowed an easy adaptation to the surgical defect, and the use of adjacent skin ensured an optimal color and texture match. The excellent functional and esthetic outcome highlights the nasolabial island transposition flap as an option for reconstruction of large upper lip defects involving an entire lateral subunit.

Keywords: Cutaneous squamous cell carcinoma. Mohs surgery. Surgical flaps.

Resumo

A reconstrução de defeitos de espessura parcial de grandes dimensões do lábio superior é desafiante devido à perda de reserva de pele nessa subunidade e à importância estético-funcional do lábio. Descrevemos o caso de uma doente do sexo feminino, 88 anos, com um defeito de espessura parcial de toda a subunidade lateral do lábio superior, após excisão de carcinoma espinhocelular por cirurgia de Mohs. Para reconstrução foi planeado um retalho de transposição nasolabial em ilha. A configuração em crescente/elipse permitiu uma fácil adaptação ao defeito e a utilização de pele adjacente assegurou uma correspondência adequada de cor e textura. O excelente resultado estético e funcional salienta o retalho de transposição nasolabial em ilha como uma opção para a reconstrução de grandes defeitos do lábio superior que envolvam uma subunidade lateral completa.

Palavras-chave: Carcinoma cutâneo de células escamosas. Cirurgia de Mohs,. Retalhos cirúrgicos.

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Figure 1. Squamous cell carcinoma on the lateral aspect of the left upper lip.

Introduction

Reconstruction of large partial-thickness defects involving the entire lateral subunit of the upper lip is challenging due to the limited skin reserve in this area and the lip's esthetic and functional relevance¹. While melolabial transposition, cheek advancement, island V-Y advancement, or modified Yu flaps are commonly used, they can be technically demanding and may risk sulcus distortion or eclabium²⁻⁴. We present a simplified, single-stage alternative, the nasolabial island transposition flap, offering low morbidity and excellent functional and esthetic outcomes. This flap is harvested from the mid-lower facial skin adjacent to the marionette lines, contiguous with the lip's cosmetic subunit. Its crescentic-elliptical design allows easy adaptation to the defect, and direct donor site closure naturally recreates the melolabial sulcus.

Clinical case

We present the case of an 88-year-old female with a partial-thickness defect of the lateral upper lip subunit, following Mohs excision of a squamous cell carcinoma (Fig. 1) under left infraorbital nerve block. A nasolabial island transposition flap was planned for reconstruction. The medial limit of the flap was defined by the melolabial sulcus, and the remaining outline was designed with a crescentic-elliptical shape, with its width corresponding to the height of the defect (Fig. 2). The outer margins were incised, and the flap was dissected through the subcutaneous tissue from its distal extremity toward the mid-portion (Fig. 3). The vascular pedicle was preserved in the upper third



Figure 2. Surgical defect and the planned nasolabial island transposition flap.



Figure 3. Dissection of the flap through the subcutaneous tissue from its distal extremity.

of the flap, which was then raised and transposed to the lateral upper lip subunit (Fig. 4). The upper third was deepithelialized to allow direct closure of the donor site. After adaptation to the lip defect and removal of distal excess skin of the flap, closure was



Figure 4. Transposition of the flap to the surgical defect.



Figure 6. Esthetic result at 3-month follow-up.



Figure 5. Immediate post-operative reconstruction.

performed using 4-0 polyglactin sutures for the subcutaneous tissue and 4-0 polypropylene sutures for the skin (Fig. 5). The post-operative course was uneventful, and at 1 week, the flap was viable with no signs of infection. Sutures were removed on post-operative day 12. At the 3-month follow-up, an excellent functional and esthetic outcome was observed (Fig. 6), with scars lying in natural sulci and aligned with skin tension lines and cosmetic units. No trapdoor deformity, microstomia, or buccal valve dysfunction was noted.

Discussion

In this case, the combination of a large upper lip cutaneous defect and the lack of skin reserve within the same anatomic subunit prompted the use of a nasolabial island transposition flap. Harvesting skin immediately adjacent to the upper lip ensured optimal color and texture match, while placing the scars along the melolabial sulcus and at cosmetic unit junctions contributed to the excellent functional and esthetic outcome with minimal morbidity. Although facial (moustache) hair preservation was not a concern in this patient, it may represent a limitation in male patients.

Conclusion

Overall, this case highlights the nasolabial transposition variant of the island pedicle flap as a valuable single-stage option for large upper lip defects, particularly those involving an entire lateral subunit.

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