

Extending the reach of the East-West flap: a modified technique for larger paramedian nasal tip defects

Expandindo o alcance do retalho East-West: técnica modificada para defeitos paramedianos maiores da ponta nasal

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ABSTRACT

Reconstruction of paramedian nasal tip defects is challenging because of the thick, adherent skin and limited tissue mobility in this region. The East-West advancement flap is a well-established reconstructive technique but has traditionally been limited to defects smaller than 1.5 cm. We describe a modification incorporating a superiorly oriented crescent-shaped extension at the base of the inferior Burow's triangle to redistribute closure tension and preserve adjacent healthy tissue. This modification extends the applicability of the flap to larger defects while maintaining simplicity. In the cases presented, the technique achieved satisfactory aesthetic outcomes without clinically apparent nasal tip distortion or other complications, representing a practical reconstructive option for selected larger paramedian nasal tip defects.

Keywords: Mohs Surgery; Surgical Flaps; Nose

RESUMO

A reconstrução de defeitos paramedianos da ponta nasal é desafiadora devido à pele espessa e aderente e à mobilidade tecidual limitada nessa região. O retalho de avanço East-West é uma técnica reconstrutiva bem estabelecida, mas seu uso tem sido tradicionalmente limitado a defeitos menores que 1,5 cm. Descrevemos uma modificação que incorpora uma extensão em forma de crescente, orientada superiormente, na base do triângulo de Burow inferior, com o objetivo de redistribuir a tensão durante o fechamento e preservar o tecido saudável adjacente. Essa modificação amplia a aplicabilidade do retalho a defeitos maiores, mantendo a simplicidade da técnica. Nos casos apresentados, a técnica proporcionou resultados estéticos satisfatórios, sem distorção clinicamente aparente da ponta nasal ou outras complicações, representando uma opção reconstrutiva prática para defeitos paramedianos maiores e selecionados da ponta nasal.

Palavras-chave: Cirurgia de Mohs; Retalhos Cirúrgicos; Nariz

How do I do it?

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INTRODUCTION

Reconstruction of paramedian nasal tip defects is a surgical challenge due to the thick, adherent skin and limited tissue mobility in the supratip region.¹ The East-West flap, also known as horizontal advancement flap, provides a conceptually straightforward and effective reconstructive option for this area; however, its use has traditionally been limited to defects smaller than 1.5 cm.^{2,3}

We describe a modification of the East-West advancement flap for the reconstruction of larger paramedian nasal tip defects after Mohs micrographic surgery. The modified technique incorporates a superiorly oriented crescent-shaped extension at the base of the inferior triangle. This modification preserves adjacent healthy tissue while reducing excessive tension during closure, thereby extending the applicability of the East-West flap to larger defects.

TECHNIQUE

The traditional East-West flap involves horizontal advancement of the dorsal nasal skin and excision of two Burow's triangles (Figure 1). The superior triangle extends vertically above the defect, whereas the inferior triangle is oriented medially toward the columella. The width of the superior triangle should correspond to that of the defect, with sufficient vertical height to prevent the formation of a standing cone deformity along the nasal dorsum.

In the proposed modification, the straight base of the inferior Burow's triangle is replaced by a superiorly oriented crescent extending from the midpoint of the lateral edge of the defect toward the contralateral side, with a length equal to the horizontal width of the defect (Figure 2). The height of the inferior triangle can be adjusted according to the size and location of the defect and the dimensions of the nasal tip. Narrower nasal

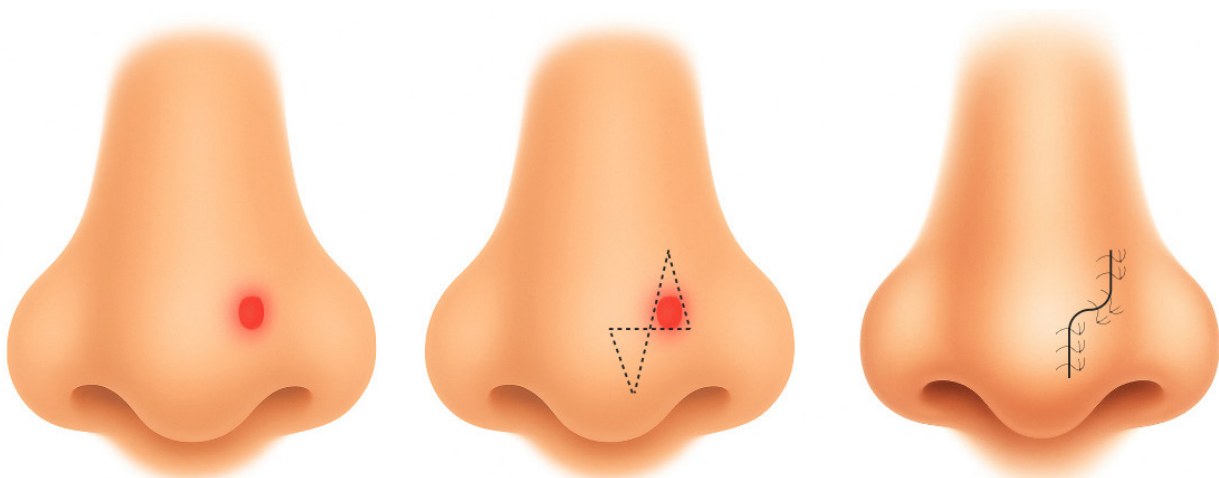


Figure 1: Schematic representation of the traditional East-West flap

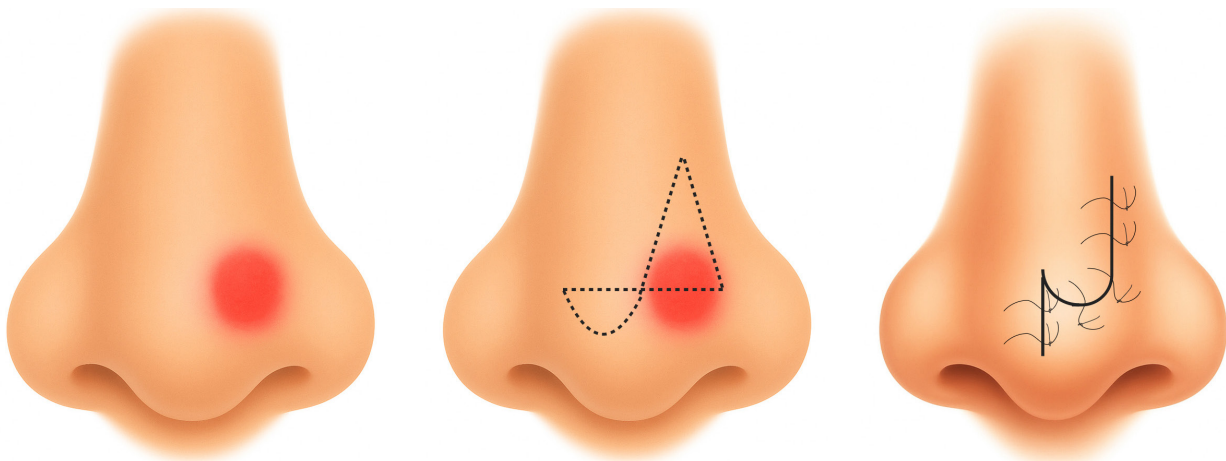


Figure 2: Schematic representation of the modified East-West flap, incorporating a superiorly oriented crescent-shaped extension at the base of the inferior triangle

tips or more distal defects may require a shorter inferior triangle, measuring 50%–70% of the height of the superior triangle.

The procedure begins with excision of the superior Burrow's triangle and the modified inferior triangle with its superiorly oriented crescent-shaped base. Extensive undermining in the sub-superficial musculoaponeurotic system (sub-SMAS) plane across the nasal tip and supratip region is crucial to permit assessment of tip distortion during flap advancement and ensure closure with minimal tension.^{1,5} The resulting cone-shaped flap is then advanced horizontally to fill the defect. Subcutaneous closure with 4-0 or 5-0 absorbable sutures is recommended, followed by superficial closure with 6-0 nylon sutures (Figures 3 and 4).²

Postoperative management consists of conservative wound care. The surgical site is cleansed daily with sterile saline solution, without the need for specialized dressings. Nylon sutures

are removed 7–10 days postoperatively. After suture removal, the scar is supported with micropore tape, and a moisturizing barrier cream is applied for 1 month to provide optimal scar maturation.

DISCUSSION

The East-West flap, initially described by Robins and subsequently by Goldberg, Alam, and others, is a well-established reconstructive option for nasal supratip defects.⁴ The proposed modification preserves the conceptual simplicity of the traditional flap while extending its applicability to larger nasal tip defects. By replacing the conventional straight-based inferior triangle with a crescent-shaped design, the modified technique maximizes the preservation of adjacent healthy tissue while minimizing closure tension and contour distortion.

A potential disadvantage of this modification is narrowing of the nasal tip in the horizontal plane. However, this effect

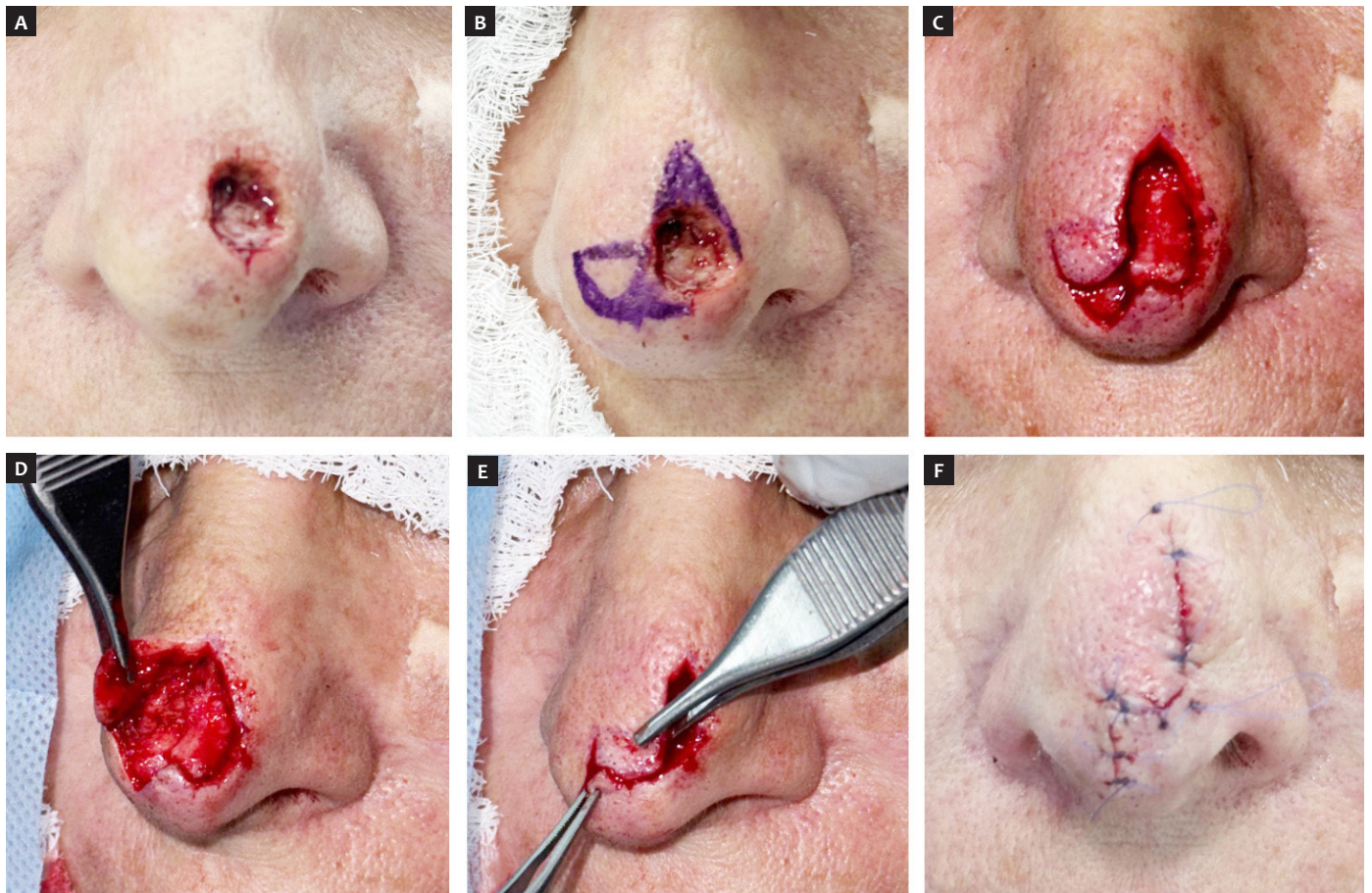


Figure 3: Modified East-West flap for reconstruction of a paramedian nasal tip defect. (A) Paramedian nasal tip defect before reconstruction. (B) Preoperative marking of the modified East-West flap. (C) Excision of the superior triangle and incision of the modified inferior triangle. (D) Undermining of the flap. (E) Horizontal advancement of the flap into the defect. (F) Final closure with the flap sutured in place.

was subtle in our patients and was considered aesthetically acceptable. On postoperative evaluation, no pincushioning or clinically apparent nasal tip deformity was observed. Follow-up at 3 and 6 months demonstrated satisfactory aesthetic outcomes.

Several alternative techniques are available for reconstruction of nasal tip defects, each with specific advantages and limitations. The bilobed flap provides substantial tissue mobility through double transposition but may result in longer suture lines, trapdoor deformity, and contour irregularities. The crescentic nasojugal flap is another effective option but requires incisions extending along the alar groove, which may be more difficult to conceal.^{4,5} The paramedian forehead flap remains an

important reconstructive option for larger or more complex defects; however, it generally requires a two-stage procedure and entails greater reconstructive complexity.

CONCLUSION

The modified East-West advancement flap represents a promising reconstructive option for selected larger paramedian nasal tip defects. The cases presented suggest that this modification may achieve favorable aesthetic and functional outcomes while preserving nasal contour and adjacent healthy tissue. Further studies with larger patient cohorts and longer follow-up are needed to confirm these findings and better define the indications and limitations of this technique. ●

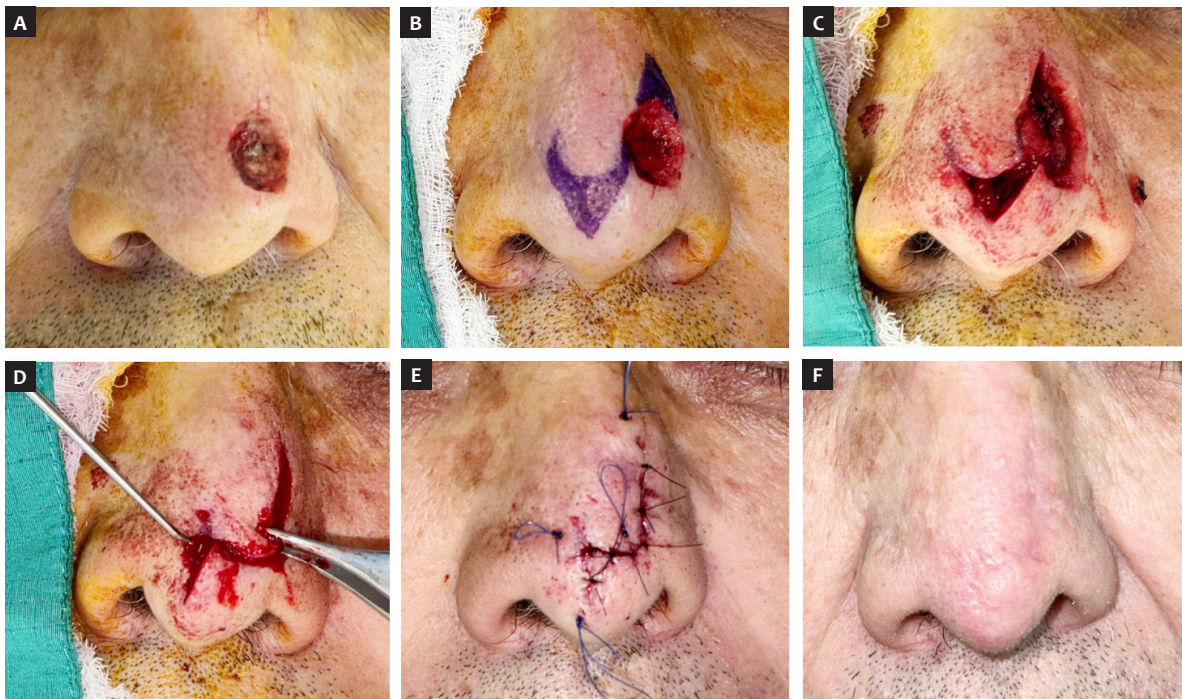


Figure 4: Modified East-West flap for reconstruction of a paramedian nasal tip defect. **A** - Paramedian nasal tip defect before reconstruction. **B** - Preoperative marking of the modified East-West flap. **C** - Excision of the superior and modified inferior triangles, followed by extensive undermining. **D** - Advancement of the flap into the defect. **E** - Final closure with the flap sutured in place. **F** - Clinical appearance 3 months after surgery, frontal view.

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