

CLINICAL CORRESPONDENCE **OPEN ACCESS**

Surgical Pearls

Reconstruction of a Columellar Defect Following Excision of an Infiltrating Basal Cell Carcinoma

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1 | Initial Presentation

A 65-year-old woman presented with a slowly enlarging nodular lesion on the columella, first noticed several months before. Her medical history reported chronic sun exposure, without any prior history of cutaneous malignancy. Dermoscopic evaluation raised suspicion of a basal cell carcinoma (BCC), which was confirmed histologically following biopsy (Figure 1).

Surgical excision with appropriate oncologic margins resulted in a full-thickness vertical defect of the columella, with bilateral loss of skin under the nostrils. The challenge lay in restoring nasal symmetry and contour while maintaining airway patency and minimizing visible scarring, critical in this functionally and aesthetically important area.

How would you repair this defect?

2 | Resolution

2.1 | Design and Intraoperative Technique

Given the central columellar defect, a bilateral advancement flap approach was selected, using an H-shaped incision pattern.

After infiltration with local anesthetic containing epinephrine, dissection was performed in the subcutaneous plane to preserve flap vascularity. Undermining was extended to allow a

tension-free inset; the inferior flap was advanced in an infero-superior direction from the upper cutaneous lip, while the superior flap was advanced in a supero-inferior direction. This combination allowed tension-free closure with preserved vascularity. No Burrow triangles were removed from either the upper or lower part of the flap. The flaps were approximated in layers, and donor sites were closed primarily (Figures 1 and 2).

2.2 | Postoperative Course and Outcome

The patient received a short course of postoperative antibiotics and was instructed to avoid pressure or manipulation at the surgical site. She experienced no postoperative complications. At 6-month follow-up, the columella preserved its natural morphology, nasal contour was symmetric, scar lines were well hidden in natural creases, and nostril patency was maintained. The patient expressed high satisfaction with both functional and cosmetic outcomes.

3 | Discussion

Reconstruction of columellar defects poses a dual challenge in maintaining nasal patency and restoring aesthetic contour [1–3]. As highlighted by Nowicki et al. [4], the thin anatomy and limited availability of adjacent tissue make this a particularly complex site. The choice of reconstruction depends on defect size, tissue availability, and patient-specific factors.

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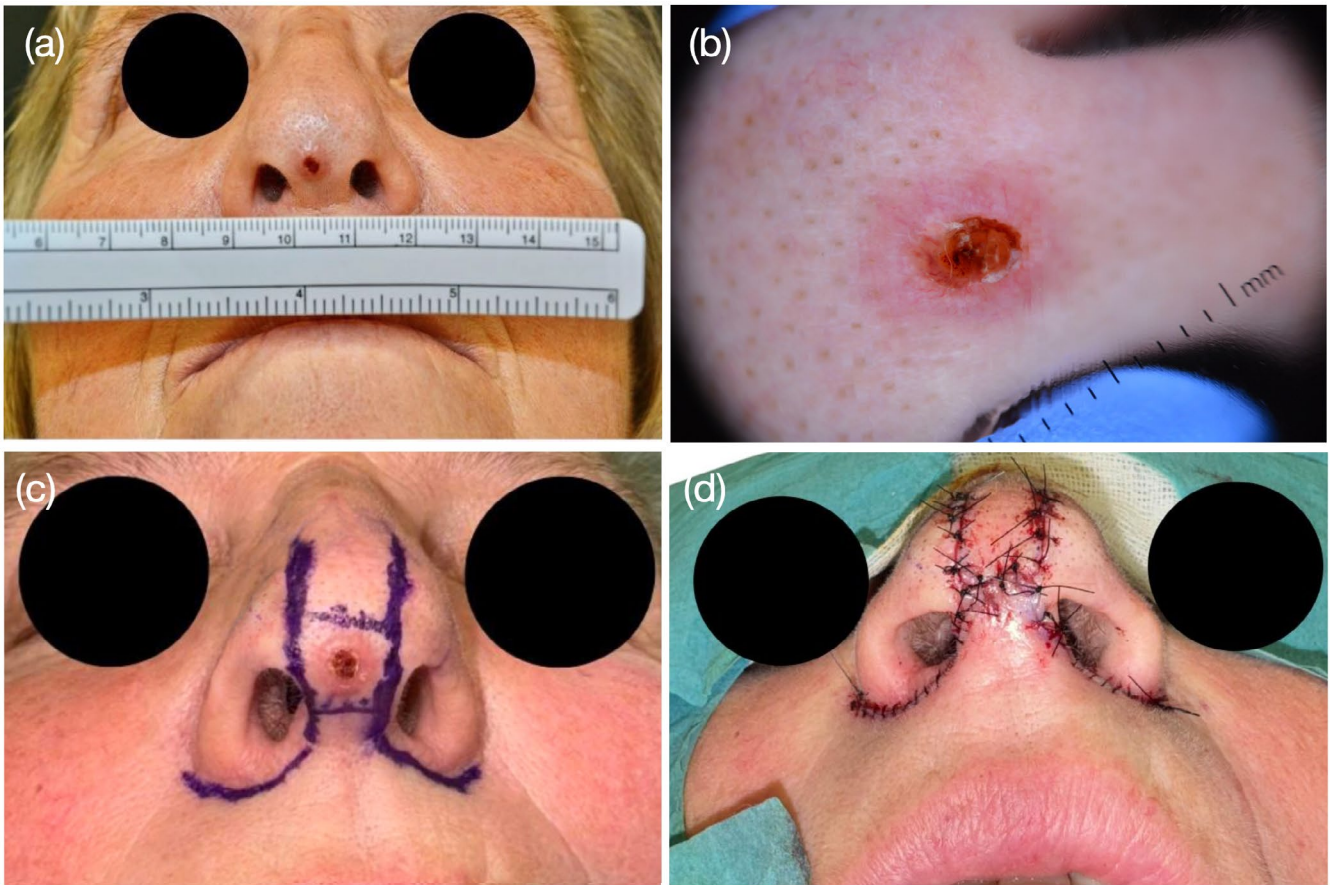


FIGURE 1 | (a) Preoperative clinical image and (b) dermoscopic image of the columellar BCC. (c) Markings of the intended repair and (d) immediate postoperative appearance after bilateral advancement flap reconstruction.



FIGURE 2 | Six-month follow-up demonstrating the aesthetic contour and the nostril symmetry in frontal (a) and inferior view (b).

Reconstructive options include: (a) Composite grafts (cartilage-cutaneous): simple procedure with good color and texture match; limited in size and risk of necrosis if vascularization is insufficient; (b) Local flaps (nasolabial, vestibular, lip-lift flap): good tissue match and low risk of visible scarring; drawbacks include risk of retraction, loss of nasal projection, and longer operative times. (c) Regional flaps (paramedian forehead flap, scalping flap): provide robust vascularization and allow cartilage reconstruction; disadvantages are technical complexity, visible scars, and staged procedures.

In this case, the bilateral advancement flap represented a relatively simple, single-stage solution, commonly used

in dermatologic surgery but, to our knowledge, not previously described for columellar reconstruction. This may offer colleagues a useful alternative when managing similar challenges.

Key factors for success include wide undermining to minimize tension, meticulous dissection to preserve vascular supply, and incision placement along natural aesthetic subunit boundaries [5]. Minimal skin removal along the nasal sill (1–2 mm) allowed flap advancement without functional impairment, while producing a subtle aesthetic improvement similar to a mild lip lift. This approach offers a single-stage reconstruction with minimal morbidity and highly satisfactory outcomes for both patient and surgeon.

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The authors have nothing to report.

Ethics Statement

All procedures performed in this study were in accordance with the ethical standards of the institutional and national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The patient in this manuscript has given written informed consent to publication of her case details.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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