

# Malar Butterfly Flap: Bilateral Melolabial Advancement for Large Dorsal Nasal Defects

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*The authors have indicated no significant interest with commercial supporters.*

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The repair of large dorsal nasal defects are often characterized as surgical conundrums, requiring skin grafting or extensive flap repair and often needing a second stage reconstruction. We present a 67-year-old woman who underwent Mohs micrographic surgery for a morpheaform basal cell carcinoma on the nasal dorsum, producing a large midfacial defect (Figure 1). We employed the malar butterfly flap, a bilateral melolabial advancement flap, to repair the defect.

Sand and colleagues recently described a similar review of this flap and termed it bilateral cheek to nose advancement flap, in which 12 patients with dorsal nasal defects were successfully repaired.<sup>1</sup> This case differs in that more emphasis was placed on remaining primarily within normal anatomic sulci and decreasing scar length. We prefer the term malar butterfly flap in describing this technique in that it implies symmetry with respect to both “wings” of the flap and equal recruitment of tissue from both sides of the midface in maintaining a symmetric aesthetic outcome.

## Method

Incisions are made bilaterally, extending from the defect and then outlining the nasal ala extending distally down the melolabial fold. Burow’s triangles are drawn in the glabella but are not removed until

both flaps are undermined and advanced. In this case, they were not excised but were used to repair the remaining superior portion of the defect (see below).

Lateral dissection is performed in the subcutaneous plane immediately above the superficial muscular aponeurotic system (Figure 2). Care is taken in the superomedial portion of the flap to avoid transection of the angular artery.<sup>2,3</sup> Adequate undermining to approximately the medial border of the zygoma superiorly and the oral commissure inferolaterally is essential to minimize wound tension on both flaps, which will be joined medially (Figure 3). The flaps are anchored to the perichondrium of the nasal root and approximated to one another. Redundant skin



**Figure 1.** 2.8- × 3.1-cm post-Mohs dorsal nasal defect.

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**Figure 2.** Malar butterfly flap dissected in the pre-superficial muscular aponeurotic system plane bilaterally.

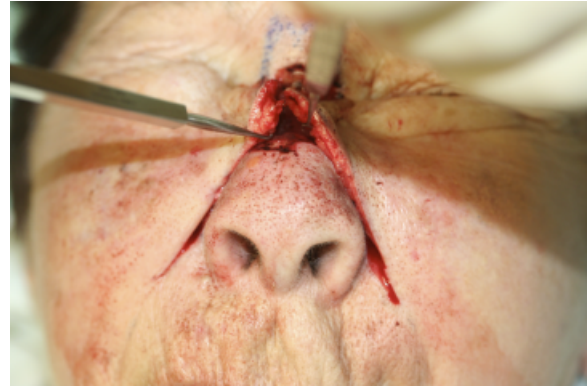
is excised as needed along the nasal crease and melolabial folds.

Of utmost importance is a deep tacking suture placed at the level of the nasal alar crease from the flap to the periosteum of the nasal sidewall to recreate the nasolabial and alar groove in an anatomic fashion (Figure 4). This anchoring of the flap deep to the nose helps restore normal dimensional anatomy and prevents a floating ala.<sup>4,5</sup>

In this case, after both flaps were sutured in place, a small defect remained superiorly. As mentioned previously, this was repaired using skin from the glabella where the Burow's triangles were drawn but not excised. After standard dog ear correction on the right superior corner of the remaining defect, the



**Figure 3.** Medial advancement of both wings of malar butterfly flap.



**Figure 4.** Bilateral tacking sutures placed deep from nasal side wall periosteum to adjacent portion of the flap.

lax glabellar skin was easily approximated to the flaps inferiorly and the defect completely closed (Figure 5).

### Discussion

Glabellar skin possesses the greatest mobility in this region, and thus glabellar advancement flaps are a good option for dorsal nasal defects that are small enough to repair. However, large dorsal nasal defects, such as in this case, may be too extensive to repair with only glabellar skin.<sup>6,7</sup> These cases employ larger flaps from the forehead and glabella, thereby extending scar length. Also, as in cases in which a paramedian forehead flap is performed, a stalk remains, requiring a second-stage excision and



**Figure 5.** Wound margins primarily restricted to area of defect and anatomic sulci (melolabial folds and alar creases). Note slight extension of melolabial lines superiorly.



**Figure 6.** Four months post-operative.

reconstruction at a later time.<sup>8</sup> In contrast, the malar butterfly flap is advantageous in that it requires only one procedure for complete reconstruction, resulting in less patient morbidity than with staged procedures.

The malar butterfly flap for dorsal nasal defects is also advantageous in that scar length is limited to the area of the defect and primarily hidden within normal anatomic sulci (nasal crease and melolabial folds). In this case, there was slight extension of the melolabial fold superiorly, causing small, nonanatomic lines bilaterally. It is the authors' opinions that these lines are acceptable and provide a better cosmetic outcome than the forehead scar extension resulting from glabellar and forehead flaps (Figure 6).

A skin graft would produce a less favorable cosmetic result because of the large area of the defect, as well as color and texture differences.<sup>9</sup> Tissue disparity from a distant donor site is more apparent than adjacent malar skin, which possesses similar color and actinic damage.<sup>10</sup>

A potential drawback of this technique is blunting of the nasal cheek angle. As mentioned earlier, deep tacking sutures are used to lessen this problem and maintain normal dimensional anatomy, although even with such measures, there may be some degree

of distortion of the nasal cheek angle, as can be noted in this case.

Nasal tip rotation is another noteworthy concern when performing this technique. For most elderly patients with some degree of nasal tip ptosis, this is less of a problem,<sup>11</sup> although it should be taken into consideration in patients with increased or normal nasal tip rotation and in younger patients. The surgeon should periodically note the basal view of the nose and look for vertical rotation of the tip or retracted ala. Less tension on the wound could help avoid these potential problems.

Large dorsal nasal defects present a challenge for reconstructive surgeons. The malar butterfly flap (bilateral melolabial advancement flap) is an additional good option in these difficult cases.

Malar butterfly flap (bilateral melolabial advancement flap) key points:

Good technique for large dorsal nasal defects

Single-stage repair

Cicatrix primarily localized to area of defect and anatomic sulci

Forehead scar avoided

Less tissue disparity and better cosmesis than with skin grafts

Variable loss of definition of the nasal cheek angle

Potential nasal tip projection and distortion

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