Use of Translucent Template in the Reconstruction of Nasal Defects:
A Novel Technique

Erin Ostby, MD 1  Joshua Surowitz, MD 2  Farhad Ardeshirpour, MD 1

1 Division of Facial Plastic and Reconstructive Surgery, Department of Otolaryngology, Loma Linda University Health, Loma Linda, California
2 Division of Facial Plastic and Reconstructive Surgery, Dilworth Facial Plastic Surgery, Charlotte, North Carolina


Reconstruction of complex nasal defects is a rewarding and challenging endeavor. Paramedian forehead flap may be used for medium or large nasal defects, while melolabial flap or other local flap may be used for smaller defects. Flap design and templating of the defect are critical and highly nuanced components of nasal reconstruction. Various methods of nasal defect template design have been described including use of Steri-Strips, suture pack foil, sterile surgical glove paper, and aquaplast. However, the use of these materials has limitations. As these materials are not translucent, it can be difficult to accurately trace the nasal subunits or defects onto these materials, resulting in a template that may not be accurate in size or shape. Further, as some materials are inflexible there are limitations in fashioning a template of a defect having complex topographic dimensional variations. We describe a simple technique of using a transparent surgical drape (3M 1010 Steri-Drape, 3M Inc.) as a template for surgical planning of a paramedian forehead flap, melolabial flap, or other interpolated flap.

Surgical Technique

The subunits of the nose are marked. The wound bed is debrided and the edges of the defect are freshened to prepare the wound for reconstruction. The decision is then made regarding further resection of soft tissue to include entire subunit. For simple defects, the adhesive portion of a 1010 drape is trimmed to a manageable size and contoured over the nasal defect. A surgical marking pen is used to trace the subunits of the nose and the nasal defect (►Fig. 1, ►Video 1). For larger, more complex defects in which the entire subunit or multiple subunits are excised, the subunits may be traced from the side opposite the defect onto the overlying drape and then the template may be mirrored. If intranasal lining defect is present, sutures may be placed at the alar margin to allow the template to be rotated into the nose to trace the intranasal defect. The translucent drape template is trimmed around markings made for nasal subunits and the nasal defect. Appropriate flap pedicle length is measured (►Fig. 2). This template is then rotated onto the forehead or the ipsilateral cheek depending on chosen donor site. The template is outlined with a surgical marking pen onto the donor site skin, and the incisions are marked in standard fashion (►Fig. 3). The interpolated flap is then raised and inset into the nasal defect.

Discussion

The transparency and flexibility of the 1010 drape make it an ideal material for template design. The drape allows
the surgeon to visualize the subunits of the nose and the size of the defect while the template outline is drawn. Additionally, the flexibility and easy handling of the 1010 drape along with the adhesive backing allow for easy templating of varying topography including tip contour, alar rim, and columella. The proposed method of using a translucent drape template in the planning of an interpolated flap for nasal reconstruction is an easy and effective technique.