A 65-YEAR-OLD man was referred for Mohs micrographic surgery of two basal cell carcinomas on the left cheek. Both the superior and the inferior sites were free of tumor after two stages. The superior basal cell carcinoma resulted in a defect measuring 2.2 × 1.1 cm. The inferior basal cell carcinoma left a resultant defect of 2.4 × 1.1 cm (Figure 1). How would you reconstruct this surgical defect?

Figure 1. Two cheek defects after Mohs micrographic surgery.
Resolution

Mohs micrographic surgical excision of tumors resulted in two moderately sized defects located in close proximity. The proximity of these defects represents a unique surgical challenge when considering reconstruction. A number of repair options can be used to close the two defects either simultaneously or individually. There are several methods for closing defects on the cheek, each with advantages and potential complications. When considering repair options, the surgeon must evaluate both the functional anatomy and the esthetic result.

Secondary intention is a reparative option best used to heal concave areas. It is, however, not the most favorable choice for cheek lesions because it may result in a hypertrophic scar in a prominent facial area. Additionally, the proximity of the two defects to the free margin of the eyelid creates the possibility of scar contracture and resultant ectropion.

A side-to-side primary closure can be a relatively simple closure option for most surgical defects. In this case, we considered both a vertical side-to-side primary closure and a horizontal side-to-side primary closure. A vertical side-to-side closure would require the excision of the tissue separating the two defects and two large Burow's triangles. Ultimately, the patient would be left with a long linear repair running perpendicular to natural skin folds. Furthermore, a vertical side-to-side closure could potentially put tension on the lower eyelid and result in an ectropion. Another option would be two horizontal side-to-side primary closures. This would result in two linear closures running parallel to the relaxed skin tension lines. However, the closure would result in a degree of tension between the closed wounds and may lead to dehiscence of the incision and potentially an untoward result.

Full-thickness skin grafting is another option when considering reconstruction. However, because of variations in the degree of thickness and the amount of photodamage between donor and recipient sites, a full-thickness skin graft may result in poor tissue color and texture match. Therefore, it is not the best option for repairing the two surgical defects in this case.

We felt that a local flap would provide optimal results. The two defects were repaired by using a double rotation flap. Strategic planning of this flap allows the donor tissue to be recruited from the island of tissue lying between the defects. The tissue was bisected diagonally (Figure 2); the superior piece was rotated superiorly and the inferior piece was rotated inferiorly to fill the respective defects (Figure 3). The rotation of shared tissue combined the two defects, and, as a result, the defects were closed as one (Figure 4). There was little tension on the wound edges, allowing healing without complications, especially the lower eyelid and lateral canthus. Ten weeks after the surgery, the patient was pleased with his results (Figure 5).
**Conundrum Keys**

- The strategic incision of the tissue between two defects in close proximity allows for tissue recruitment for rotation flaps.
- The rotation of shared tissue can be used to combine two defects into one.
- The conservation of tissue that occurs by using the island of skin shared between two defects protects vital structures, such as the eyelid, from being distorted.
- By using tissue shared by two defects in a rotation flap, distortion of anatomic structures, in this case, the lateral canthus, can be avoided.

*Figure 4. An immediate postoperative photograph of the double rotation flap.*

*Figure 5. A 10-week follow-up photograph shows a well-healed flap.*