

Malar Reconstruction with Anterior Bilobed Cheek Flap

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Summary: A 66-year-old man had developed a tumor on his right cheek. A biopsy revealed basal cell carcinoma. The ulcerative cancer and zygomatic bone were resected. We designed an anterior bilobed cheek flap to reconstruct the cheek skin defect. The postoperative clinical course was uneventful. (*Plast Reconstr Surg Glob Open* 2018;6:e1725; doi: 10.1097/GOX.0000000000001725; Published online 13 April 2018.)

The lateral cheek flap provides a good donor source in the closing of a defect in the buccal areas.¹ If the defect is large, the combination of a lateral cheek and postauricular flap can cover it. However, transposition of the lateral cheek flap causes anterior movement of the preauricular hair-bearing region, and the donor site of the postauricular flap needs a skin graft. The cervicofacial flap can also cover the cheek region, but this flap needs skin laxity for primary closure of the donor area.^{2,3}

The bilobed flap was first described in 1918 for the use in nasal tip defect reconstruction.⁴ Zimmany⁵ popularized this flap with 2 lobes separated by an angle but based on a common pedicle. So, we designed an anterior bilobed cheek flap that can be used to reconstruct the cheek defect instead of the cervicofacial flap.

A bilobed flap was suitable for reconstruction of this patient because the aging face had an increased skin laxity. It is described in this report.

CASE REPORT

A 66-year-old man had developed a tumor on his right cheek 10 years ago, but received no treatment. The tumor spread slowly and widely and became ulcerated (Fig. 1). A biopsy revealed basal cell carcinoma. CT scan and MRI showed zygomatic cortical bone invasion. There were no cervical metastatic lymph nodes or other metastatic lesions.

The ulcerative cancer was resected with a 7-mm tumor-free margin, and the zygomatic bone was resected with a 5-mm tumor free margin from the invasion line with a thickness of 12.5 mm. The skin and bone defect measured 45 × 33 mm and 35 × 15 mm, respectively.

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The zygomatic defect was reconstructed with a rib bone graft. An anterior cheek flap was designed for the lower margin to coincide with the nasolabial fold (Fig. 2). The flap was elevated beneath the superficial musculoaponeurotic system (SMAS). The smaller second lobe was designed in the submandibular area, and the pedicle of it was positioned forward from the mandibular angle and attached with the platysma muscle only in the distal half of the flap to avoid injury of the marginal branch of facial nerve. A nerve stimulator should be used if necessary.

This bilobed flap was moved and sutured (Fig. 3). The postoperative clinical course was uneventful, and the flap showed a good take (Fig. 4). The right lower eyelid showed slight ectropion due to setting back of the first lobe.

DISCUSSION

A patient with long-standing malignant ulcer had cheek reconstruction with a lateral cheek and posterior auricular transposition skin flap. This skin flap provides an excellent donor source to close soft-tissue defects in the buccal and parotid-masseteric areas.¹ Large areas can be reconstructed with additional transposition, advancement, or bilobed flaps. The combination of a preauricular and a postauricular flap provides a generous amount of the desired skin for facial repair.¹ The donor site of the postauricular flap must be repaired with a skin graft. However, if the defect spreads toward the upper eyelid as in this case, the preauricular flap must contain some hair-bearing region in the major part of the flap and it may become difficult for the postauricular tissue to cover the donor site of the preauricular flap. Containing the hair-bearing region in the flap means that preauricular hair moves anteriorly.

Taking the above-mentioned factors into consideration, we designed an anterior bilobed cheek flap. The second lobe of the flap must be sought in the submandibular region; however, its donor site can be sutured directly. Therefore, this flap may be appropriate for older patients. The side effect of this flap is thought to be lower eyelid ectropion caused by setting back of the first lobe. In this patient, the right lower eyelid showed slight ectropion, but we are now thinking if a tarsal strip procedure should be performed in the future.

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Fig. 1. A 66-year-old man had an ulcer on the right cheek. A biopsy revealed basal cell carcinoma.



Fig. 3. The first lobe of the flap was elevated beneath the SMAS, and the smaller second lobe was designed in the submandibular area and elevated, attached with part of the platysma muscle.



Fig. 2. An anterior bilobed cheek flap was designed for the cheek skin defect.

The cervicofacial flap can also close soft-tissue defects in the buccal region.^{2,3} But, this flap is particularly suitable for patients who are middle-aged or older because of the laxity of the cervical skin that allows a primary closure of the donor area. In younger patients, a skin graft in the neck may be required to prevent excessive pulling on the lower lid. Our designed bilobed cheek flap could cover the cheek defect without a skin graft. To compare the cervicofacial flap, the almost horizontal scar in the nasolabial fold and some visible scars on the cheek exist in this patient and also we are thinking to add revisions of the scars if they continue to be conspicuous.



Fig. 4. Six months after operation.

If the patient permits a delay procedure, a retroauricular-temporal flap^{6,7} and a postauricular and retroauricular scalping flap⁸ can be candidates.

The retroauricular-temporal flap can be used to transfer tissues from behind the ear for reconstruction of limited defects of the nose, forehead, cheek, and lower eyelid.

This procedure is reported not to be indicated for elderly or obese patients.⁹

SUMMARY

A 66-year-old man had developed a tumor on his right cheek. A biopsy revealed basal cell carcinoma. The ulcerative cancer and zygomatic bone were resected.

The zygomatic defect was reconstructed with a rib bone graft. We designed an anterior bilobed cheek flap to reconstruct the cheek skin defect. The postoperative clinical course was uneventful, and the flap showed a good take.

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