



## GUIDELINES

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## Viewpoints

### Sentinel Lymph Node Biopsy in the Setting of Conjunctival Melanoma

Sir:

**C**onjunctival melanoma is a rare subset of malignant melanoma, representing only 1.6 percent of all melanomas.<sup>1</sup> The role of sentinel lymph node biopsy, now widely considered the standard of care for the treatment of cutaneous head and neck melanoma, is beginning to show promise in the setting of conjunctival melanoma. As plastic surgeons, we may be called upon by ophthalmologic surgeons to perform sentinel lymph node biopsies in this patient population. We present our experience in performing a sentinel lymph node biopsy on a 16-year-old female patient with conjunctival melanoma to elucidate nuances involved in performing a procedure of this kind.

The patient presented with a biopsy-proven, 0.84-mm-deep, ulcerated malignant melanoma of her right bulbar conjunctiva. An ophthalmologic sur-

geon referred the patient to us after she had undergone excision and cryotherapy (Fig. 1). Preoperatively, sentinel lymph node mapping was performed via lymphoscintigraphy, and an ophthalmologic surgeon performed the radiocolloid (Tc-99m) injection. During injection, a drop of the radiocolloid spilled onto the cornea, complicating localization of the sentinel lymph node by draining and scattering into the nasolacrimal duct system (Fig. 2). The proximity of the injection site to the preauricular area and the spillage of the radiocolloid onto the cornea made pinpointing the sentinel lymph node with the gamma probe more difficult secondary to scatter. A preauricular, face lift-type incision was used to access the "hot spot" within the parotid, from which the sentinel lymph node was then dissected. Pathologic analysis revealed no evidence of micrometastasis.

The use of sentinel lymph node biopsy in cutaneous melanoma has proven to be invaluable. There are difficulties, however, when using this technique in periocular and, more specifically, conjunctival melanoma. First, the proximity of the tumor to its draining lymphatic basins and the potential for random scatter of radiocolloid make the use of lymphoscintigraphy more challenging. Amato et al.<sup>2</sup> described the successful use of smaller volumes of Tc-99m sulphur colloid, injecting only 0.2 ml in two to four spots around the lesion. The smaller volumes minimized the random spread of radiocolloid, facilitating the identification of "hot nodes." We recommend the use



**Fig. 1.** Conjunctiva of a 16-year-old girl who was sent to the senior surgeon for a sentinel lymph node biopsy after she had undergone excision of a conjunctival melanoma performed by an ophthalmologic surgeon.

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**Fig. 2.** Lymphoscintigraphy scan demonstrates the inadvertent spillage of radiocolloid onto the patient's cornea and drainage into the nasolacrimal system. The sentinel lymph node can be seen in the region of the parotid gland.

of these reduced volumes and injection under negative pressure to avoid spillage.

Cases of permanent tattooing of periorbital skin with the injection of intradermal Lymphazurin blue dye have been reported.<sup>3</sup> Due to these previous reports and our experience with a patient who underwent a lower eyelid injection that resulted in long-term tattooing (>6 months), we discourage the use of Lymphazurin blue in the conjunctiva.

Nijhawan et al.<sup>4</sup> have conducted the largest study of conjunctival melanoma treated with sentinel lymph node biopsy. They found that the first-order lymph node was within the parotid in four of five patients. The second-order lymph node was a level II cervical lymph node in four of five patients. Our case study supports previous findings that strongly suggest that the sentinel lymph node in patients with conjunctival melanoma will most likely be found in the parotid. This can easily be accessed via a preauricular incision.

With the above recommendations in mind, sentinel lymph node biopsy for the treatment of conjunctival melanoma can be performed safely and efficiently.

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## Postauricular Artery Island Flap for Subtotal Ear Reconstruction: Expanding Flap Versatility Based on Zones of Regional Perfusion

**Sir:**

The postauricular artery flap is a workhorse for conchal reconstruction. Previous reports<sup>1-4</sup> have focused on flaps directly posterior, or cranial, to the conchal defect. Such “short pedicle” designs are precluded in severe trauma or Mohs’ excision, where both conchal and postauricular subunits are absent. We present a novel design of the postauricular artery flap for conchal replacement that exploits the rich vascular network of this vessel.

A 68-year-old man with basal cell carcinoma of the right ear underwent Mohs’ surgery. The patient exhibited loss of the cymba conchae and the antihelix and partial loss of the helical rim (Fig. 1). In addition, the cranial surface directly behind the ear was absent, negating “revolving door” or direct pull-through of mastoid tissue (Fig. 1). A 3.5 × 3-cm island flap was de-



**Fig. 1.** A large, through-and-through auricular defect, with extension onto the underlying auriculomastoid skin. A pedicled island flap, based on intraoperative Doppler probe findings, is elevated in an inferior to superior direction (held by Adson forceps), incorporating deep fascia and the perforating branch (arrow).