Correction of the Prominent Ear With Cartilage Abrasion and Concha-Mastoid Sutures

The pathologic genesis of the protruding ear is a combination of the antihelix's failure to fold and some form of conchal protrusion, in which either the whole ear is tilted laterally or conchal hypertrophy exists. The corrective procedure should address both of these factors. I use a combination of techniques, including lateral cartilage surface abrasion, as originally described by Sten Stenstrom, MD, and posterior sutures, as described by John Mustarde, MD, to create the antihelix.

Rather than resect the posterior conchal wall, I prefer to remove the soft tissue from the posterior area of the concha down to the mastoid fascia and then remove a portion of the conchal floor—the so-called "eminentia"—to provide adequate room for concha-mastoid sutures. To avoid overresecting skin in the central part of the ear, I make a dumbbell-shaped incision, removing slightly more skin superiority and inferiorly. Once I get the skin and soft tissue elevated from the posterior surface of the ear, I run a needle through the point in the cartilage where I want to place the Mustarde sutures and tattoo it with methylene blue. Next, I make a little incision just under the edge of the helical rim, dissect superficial to the perichondrium, and use modified Brown-Adson forceps to abrade the lateral surface of the cartilage.

It is important to abrade the perichondrium and the cartilage and to be very careful not to overabrade; otherwise the abrasions may be visible anteriorly. I am convinced that if you don’t abrade the perichondrium, its elasticity will work against you in trying to get a more permanent antihelix correction. I use the anterior abrasion approach in adults and in older children—that is, those aged 8 years or older who have stiffer cartilage. I place the concha-mastoid sutures first and then tie them down so that I can position the ear, which allows me to recreate the antihelix. I look at the ear from the front as I tie the sutures so that I can get an even correction rather than an overcorrection. The concha-mastoid sutures must be placed in a slightly posterior direction so that the external canal isn’t pushed forward and narrowed.

It is sometimes difficult to align the lobule properly. A suture placed between the tail of the helix and the wall of the concha can sometimes help reposition the lobule. However, one may need to remove a significant amount of skin from behind the lobule to get it to lie in a plane with the rest of the ear. A prominent antitragus is a minor problem that can be corrected by direct excision.

For dressings, I use saline solution—rather than mineral oil-soaked cotton. I usually manipulate the dressing and look at the ears 24 hours after surgery and then leave the dressing on for a week. To avoid injury to the ear during the early healing period, my patients wear a very light elastic headband while they are sleeping for the following 3 weeks. The technique I use allows me significant flexibility in making corrections, particularly if the patient’s ears are asymmetric. In some cases, one side will have a conchal malposition and a normal antihelix, but the other side will have a completely unfurled antihelix. The idea of creating curves and repositioning the concha rather than actually cutting the cartilage is very appealing to me.