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Otolaryngology -- Head and Neck Surgery 2011 145: 930 originally published online 21 July 2011
DOI: 10.1177/0194599811416186

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What is This?
Conchal Setback without Resection in Prominent Ear Deformity

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No sponsorships or competing interests have been disclosed for this article.

Keywords
prominent ear, auricular deformity, conchal setback

Received February 26, 2011; revised May 31, 2011; accepted June 16, 2011.

The main pathological features of prominent ear are the absence of an adequate antihelical fold, conchal hypertrophy with an increased conchamastoid angle, or a combination of these in varying degrees. For the surgical correction of the prominent ear deformity, it is better to define the components of the problem for each case and plan the surgical correction rather than perform a standard approach for each case. Conchal hypertrophy is an important component of the deformity and is usually harder to overcome and also more prone to relapse. To overcome the conchal hypertrophy and increased conchamastoid angle, conchal cartilage excision, conchamastoid sutures, or posterior auricular muscle manipulations have been used.¹⁴ In this article, we describe a new surgical approach for the correction of conchal hypertrophy without conchal cartilage resection and conchamastoid sutures.

Since 1998, 41 patients with prominent ear deformity have had operations, including 35 patients with bilateral and 6 patients with unilateral deformity. The ages of the patients ranged between 6 and 43 years. The Institutional Review Board of the Istanbul Medipol Hospitals approved the study.

Surgical Technique

Local anesthesia with adrenalin solution is injected into the lines of the incision, and the skin incision is made up to the cartilage. The skin is undermined up to the conchamastoid sulcus medially and to the helical rim laterally. The cartilage incision is made obliquely rather than perpendicularly (Figure 1). Through the cartilage incision, the anterior skin and conchal cavum are separated with dissection. With a slight digital pressure over the conchal rim, the lateral conchal segment is positioned anteriorly and the medial segment posteriorly. The amount of setback is determined and the overlap of the medial segment is marked over the lateral cartilage segment. If the upper and lower parts of the cartilage incision are impeding the medial movement of the cartilage, the incision can be lengthened upward and downward until the impediment is overcome. The overlapping cartilage segments are sutured with a nonabsorbable, multifilament, white 3/0 suture material as the decided amount of setback (Figure 2). The antihelical fold is performed by using the Mustardé technique. The postauricular skin incision is closed subcuticularly using an absorbable suture material. The dressing is carried out, and second-generation cephalosporin is used postoperatively for 5 days. The dressings are changed on the third postoperative day. A head bandage is applied through the day and night for the first week and only at nights for the second and third weeks. Postoperative examinations are done in the first and second weeks, as well as 1, 3, and 6 months and yearly thereafter.

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Part of this manuscript was presented at the 25th Turkish National Plastic Surgery Meeting; October 14-17, 2003; Samsun, Turkey.

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Discussion

The surgical correction of prominent ears should accomplish the correction of protrusion and create a smooth antihelical fold by leaving the posterior auricular sulcus intact. Cartilage removal may cause cartilage destruction, irregularities, or scarring. In the current technique, conchal hypertrophy can be corrected without excising the conchal cartilage but by displacing the lateral conchal cartilage segment over the medial segment after a cartilage incision. As a consequence of this maneuver, the conchal mastoid angle is restored again. The sliding of cartilage segments over each other reduces the risk of anterior skin redundancy and helps create a softer conchal bowl contour when compared to conventional conchal excision techniques. There is no need for wide posterior dissections, so the posterior auricular muscle is not affected. The movement of the lateral conchal cartilage segment over the medial segment does not interrupt the external auditory canal. Finally, because conchal cartilage is not excised, it can be used as cartilage graft in further reconstructive operations. Similar principles may be used to manage constricted ear deformity and restore the antihelical fold as described by Pan et al.5

The first patient we operated on had a “sharp edge deformity.” We thought that it was due to incising the cartilage perpendicularly and making the incision very near to the medial border. In all the other cases, we made the cartilage incision obliquely and 15 mm medial to the conchal rim. We did not face the same problem again. Suture exposure, recurrence, and overcorrection were the complications that were not related to our technique directly and could be faced in all other techniques. As a result, this is a simple technique for correcting conchal hypertrophy with little dissection and without conchal cartilage excision.

Author Contributions

Naci Karacaoglan, substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data, drafting the article or revising it critically for important intellectual content, and final approval of the version to be published; Sinem N. Ciloglu, substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data.

Disclosures

Competing interests: None.
Sponsorships: None.
Funding source: None.

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