

Management of the Prominent Ear




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KEYWORDS

- Otoplasty • Incisionless otoplasty • Ear setback surgery • Prominent ears • Ear cosmetic surgery • Ear surgery

KEY POINTS

- The role of nonsurgical management of the prominent ear is discussed by presenting some traditional and current concepts available as well as investigational future trends.
- Current concepts in the management of prominent ears are presented from North American and European perspectives.
- The role of cartilage-cutting and cartilage-sparing otoplasty is discussed as well as management options for the prominent ear lobe.
- Postoperative management of patients undergoing different types of otoplasty is discussed.

 Video content accompanies this article at <http://www.facialplastic.theclinics.com>.

Panel discussion

1. What is the role for nonsurgical management of the prominent ear?
2. What are the advantages and disadvantages of cartilage-sparing techniques compared with cartilage-cutting techniques when modifying or recreating the antihelical fold?
3. What is your preferred surgical technique when performing otoplasty? What are the indications and contraindications for this technique in your hands? If you do not perform your usual technique, what other techniques do you perform?
4. How do you deal with the prominent ear lobe?
5. How do you manage your otoplasty patients postoperatively?
6. What are the sociocultural and technical considerations in performing otoplasty in nonwhite patients?
7. How have your techniques in this area changed over the past 5 years?

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Question 1: What is the role for nonsurgical management of the prominent ear?

GANTOUS

Prominauris, or prominent ears, is the most common congenital deformity of the head and neck area. It is estimated that its incidence is 5% in the white population as an autosomal dominant trait, but the incidence of auricular deformities has been estimated to be as high as 47% of all births.^{1,2} A common but erroneous belief held by many health practitioners is that a majority of ear deformities detected in newborns correct themselves with time. In truth, only a third of these deformities self-correct.³ Another misconception is that these minor cosmetic defects cause minimal psychological effects or problems of adjustment. MacGregor⁴ has shown that in deviations that provoked laughter or were objects of ridicule or derogatory nicknames, the psychological impact was marked.

It has been found that the auricular cartilage has unusual plasticity during the first few weeks of life. The high levels of circulating estrogen peak at day 3, returning to a baseline level by the sixth week of life. It is thought that hyaluronic acid is elevated by the high estrogen levels and is responsible for the increased plasticity and malleability of the newborn cartilage.² The nonsurgical correction of auricular deformities using a variety of splinting techniques was first described in the 1980s in several publications from Japan.^{2,5,6} Excellent results have been reported when the ear molding is carried out within the first 6 weeks of life for a variety of auricular deformities of varying severity. Furthermore, Tan and colleagues⁷ have shown a 4% rate of residual deformity compared with a 10% to 24% rate with surgery.

An effort should be made to educate pediatricians, obstetricians, midwives, and nurses to identify these deformities early on before the window for nonsurgical intervention closes. This may reduce the need for future surgical correction in these children.⁸

TASMAN

Depending on the semantic definition of “nonsurgical,” a facial plastic surgeon may only speculate on the potential role of techniques that ideally complement the classical surgical armamentarium. Understanding “nonsurgical” in a broad sense as not based on the cutting of tissues, bracing of the pinna in the first weeks of life, laser-assisted heat-induced reshaping of auricular cartilage, and incisionless suture-based techniques deserves mentioning.

Taking advantage of a window of opportunity in which the future shape of the auricle can be changed by molding the cartilage was initially described in the 1980s. Early reports of successful corrections by taping the auricle were followed by the use of foam and, later, the development of a molding system.³ A later report suggested reducing the duration of the molding period to as short as 2 weeks, if the treatment can be started within the first days postnatum.⁹ This author, having no personal experience with the technique, speculates that the role of this truly nonsurgical treatment may grow in the future. Another treatment that may be considered nonsurgical has been named laser-assisted cartilage reshaping. The treatment principle is based on weakening the cartilage by heating it to 65°C to 75°C and then bringing it into a desired shape with a silastic elastomer.¹⁰ Thermal energy is applied transcutaneously to the cartilage with lasers of different wavelengths, of which the 1540-nm Er:glass laser produced what the investigators called favorable results with little thermal damage to the auricular skin and no need for local anesthesia. The incidence of damage to the skin, reported to be higher with the 1064-nm Nd:YAG laser,¹¹ the limited availability of the preferred Er:glass laser, and the need to splint the auricle for several weeks may limit the acceptance of this technique in the facial plastic surgery community. Suture-based incisionless otoplasty techniques, initially described by Fritsch¹² in the early 1990s, continue to be a fascinating alternative to open surgical approaches, with convincing esthetic long-term results and acceptable complication and revision rates.¹³ Incisionless techniques are appealing and the published results are convincing. This author, having no personal experience with this nonsurgical technique either, still prefers the versatility of a surgical approach, for rigid cartilage in particular.

Question 2: What are the advantages and disadvantages of cartilage-sparing techniques compared with cartilage-cutting techniques when modifying or recreating the antihelical fold?

GANTOUS

This is a question that has been brought up, discussed, and been a source of animosity between the camps promoting one over the other.

Mustarde¹⁴ first described the use of permanent sutures to recreate the antihelical fold and it is probably the most widely taught and used cartilage-sparing technique. It allows for the formation of the antihelical fold with the use of permanent sutures.¹⁴ Furnas¹⁵ described the use of

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