A. de la Fuente · A.B. Santamaría

Minimally invasive otoplasty

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Abstract Over the past five years we have successfully performed what we call a minimally invasive technique. The objectives of this technique are minimal incisions, limited dissection, and absence of internal permanent sutures for antihelix definition. In this article, we describe the surgical technique and analyze its advantages. There has been a reduction in complications and other problems associated with the conventional techniques.

Key words Otoplasty · Prominent ears · Protruding ears

Introduction

Since many surgical techniques have been described for the correction of prominent ears, it suggests that there is no ideal method. In fact, most techniques obtain good results but include permanent buried sutures, extended incisions and dissection with the possibility of morbidity, antihelix overcorrection giving an unnatural look, overfolding with a hidden helical rim, telephone deformity, etc. Over the past five years, we have used a simple, easy to perform, atraumatic technique. It includes minimal incisions and dissection, and omits definitive sutures for the antihelical fold.

In accordance with current nomenclature for designated procedures; this approach has been named “minimally invasive otoplasty”.

Preoperative evaluation

The evaluation and diagnosis of the deformity are critical in planning of the operation.

The deformities which may require correction include:

- conchal cartilage overdevelopment
- lack of definition of the antihelical fold
- an obtuse auriculomastoid angle
- occasionally, a hypertrophic scapha or lobule

Surgical technique

As in most aesthetic surgical procedures, good results depend in great measure on a correct and individualized preoperative evaluation of the patient. Each area to be corrected will be treated independently, with a specific incision and minimal dissection.

Surgery is done under IV sedation and local anesthesia with 1% lidocaine with epinephrine 1:100000.

1. In the case of a hypertrophic concha, the first stage is to make a small curved incision on the anterior portion of the concha thus the scar is hidden by the antihelical fold (Fig. 1a). A semilunar wedge of cartilage is then dissected subperichondrially. With the ear pushed posteriorly bringing the auricle back, the portion of overlapped concha cartilage to be resected is displayed. The conchal cartilage is excised and the ear is set back (Fig. 1b). To avoid any tension and obtain the best wound closure, skin is never resected. The wound is closed with # 6–0 catgut.

2. Once the contour of the proposed antihelix has been marked a 2 mm vertical incision on the anterior surface of the lower third of the auricle is made. The new antihelix is dissected out and a Stenström rasp is introduced (Fig. 1c) and the cartilage is scored along the new fold (Fig. 1d). Once the cartilage is weak enough to turn backwards on its own, the incision is closed with # 6–0 catgut (Fig. 1e).

3. The previous two stages will have to overcome the ear’s tendency to retroposition. Deep sutures are placed between ear and mastoid, not to model the ear but only to set it back and maintain the ear in position during healing.

An ellipse of 3 to 5 mm of skin is excised in the auriculomastoid sulcus (Fig. 1f) so that the incision can be closed without tension. Two to 3 tunnels are bluntly dissected in the superior, medial and inferior portion, by opening the scissors vertically, without cutting the tissues, to expose the mastoid fascia so that the suture can be placed without difficulty (Fig. 1g). Along these tunnels the needle tacks the subcutaneous tissue and perichondrium of the posterior surface of the cartilage to the mastoid fascia (Fig. 1h). The sutures are not tied. Once the tension has been estimated, avoiding obliteration of the postauricular sulcus especially in the central portion, the sutures are tied under direct vision to maintain the exact amount and shape of the produced fold. The antihelix is smooth and naturally