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Incomplete Cleft Earlobe Reconstruction Using a Z-plasty or Hammock Flap[☆]



Reconstrucción de lóbulo rasgado incompleto mediante media z plastia o colgajo en hamaca

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Introduction

In cleft earlobes, the split can be complete or incomplete, depending on whether or not the defect reaches the free border of the lobe. There are many reconstruction techniques, from direct closure to classic Z-plasties.

Choice of the appropriate surgical procedure is based on an evaluation of the site of the cleft orifice, symmetry with the contralateral lobe, and possible lengthening of the lobe. It should also be planned whether to maintain the initial orifice or, in contrast, to create a new perforation after the intervention.

In 1996, Abenavoli¹ first described the use of a half Z-plasty to reconstruct complete and incomplete cleft earlobes. The advantage of this technique over the traditional Z-plasty is maintenance of the original orifice and the fact that it is a simple and quick procedure.² In 1998, Gayiwala³ described the use of a similar technique for reconstruction of the cleft lobes. This method, which he called the hammock flap, avoided producing a pointed lobe, as can occur after reconstruction with the classic Z-plasty, and left an oblique scar. In complete defects, he added a small L-flap at the free border of the lobe to prevent notches.

The advantages of this technique compared with direct closure were that it has a lower recurrence rate and that the reconstructed lobe has a natural, round silhouette; it was also preferable to the punch technique for lobes with a limited volume of tissue.⁴

We present the case of an incomplete cleft lobe in a 34-year-old patient. The defect occupied the lower two thirds of the left earlobe and was not associated with lengthening of the lobe. We decided to perform reconstruction using a half Z-plasty or hammock technique, maintaining the original orifice.

Description of the Technique

After designing the flap, local anesthesia is administered with 1% mepivacaine plus 1:200 000 epinephrine. A hook is used to hold the lobe in a fixed position. An elliptical incision is made to refresh the borders of the central part of the cleft, where the orifice had split, maintaining the upper part intact. An incision is then made at the extremes of the Z, penetrating through to the posterior surface of the lobe. This creates 2 triangular flaps that are transposed across the central area, embracing the original orifice that is left at the superior end of the incision.

After placing subcutaneous sutures with a 5/0 absorbable material such as polyglactin, suturing of the skin is started on the anterior surface of the lobe, with interrupted sutures with 5/0 monofilament polypropylene. A 3/0 braided silk thread is left in the remaining orifice and the patient is advised to move this thread several times a day for the next

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3 weeks, when a small earring can be inserted. Sutures are removed 10 days after the operation.

The procedure is similar in lobes with a complete cleft, performing the Z-plasty at the midpoint of the defect.

Indications

Reconstruction of complete and incomplete earlobe clefts when it is desired to preserve the original orifice.

Contraindications

Very long earlobes with a (relative) excess of tissue.

Complications

An unsightly scar may remain in some patients and, as with any Z-plasty, necrosis of the tips of the flaps can occur. As there is no tension, subcutaneous suture, which could compromise the tips of the flaps, is not necessary.

Another possible complication is recurrence of the cleft lobe, although this complication is more likely when the original orifice is maintained during the reconstruction. This stepped closure provides considerable support to the orifice.

Conclusions

The modified Z-plasty technique or hammock flap is a simple and rapid reconstruction technique for cleft earlobes and has a good cosmetic result. According to some studies,

maintenance of the original orifice leads to greater patient satisfaction.⁵ The procedure is useful for both complete and incomplete earlobe clefts; preservation of the original orifice will maintain symmetry with the orifice in the other lobe. Additionally, when there is a complete cleft, this technique prevents the appearance of notches, as can occur with any Z-plasty.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at [doi:10.1016/j.adengl.2016.08.012](https://doi.org/10.1016/j.adengl.2016.08.012).

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