

Waterdrop excision technique for repairing a split earlobe after ear stretching

Técnica de exérese em gota para correção de lóbulo auricular fendido após uso de alargador

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ABSTRACT

The earlobe is often pierced, and complications such as significant defects may occur, particularly after the use of ear gauges. Surgical correction of these defects is challenging due to tissue loss and the risk of aesthetic deformities. We report the case of a 26-year-old man with a residual left earlobe defect following ear gauge use, successfully treated with a novel waterdrop-shaped excision technique. This approach allowed simple primary closure while preserving the natural contour and volume of the earlobe, resulting in an excellent aesthetic outcome. This technique represents a feasible alternative for intermediate earlobe defects.

Keywords: Ear Deformities, Acquired; Body Piercing; Surgery, Plastic

RESUMO

O lóbulo auricular é perfurado com frequência, podendo evoluir com defeitos significativos, especialmente após o uso de alargadores. A correção desses defeitos representa um desafio cirúrgico devido à maior perda tecidual e ao risco de deformidades. Relatamos o caso de um homem de 26 anos com defeito residual no lóbulo auricular esquerdo após uso de alargador, tratado por meio de uma nova técnica de exérese em formato de gota. A abordagem permitiu fechamento simples, preservação da curvatura inferior e excelente resultado estético, configurando uma alternativa viável para defeitos intermediários do lóbulo.

Palavras-chave: Deformidades Adquiridas da Orelha; Piercing Corporal; Cirurgia Plástica

How do I do it?

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INTRODUCTION

Earlobes are often pierced for either aesthetic or cultural reasons. However, this practice can lead to complications, such as a split earlobe. In this context, lobuloplasty has become an increasingly in-demand procedure, both by women and men who are dissatisfied with aesthetic defects caused in the earlobe by the use of piercings, ear gauges, or earrings.¹ There are different approaches to correcting these defects, ranging from local application of 90% trichloroacetic acid to surgical procedures, such as primary closure of de-epithelialized tissue or the use of flaps or grafts.² The choice of technique should be individualized, with the aim of achieving the best possible aesthetic outcome.

Most descriptions of surgical techniques take into account clefts caused by conventional earrings. In contrast, the use of ear gauges has become very common, and defects caused by their use are often not equivalent to the typical split earlobes caused by earrings. Such defects cause greater aesthetic discomfort when the patient discontinues use of the jewelry, as they involve greater tissue loss and skin laxity, particularly in the inferior portion of the earlobe. This makes correction challenging, and unaesthetic deformities may occur as a result of the surgical procedure.³ There are few descriptions in the literature of surgical techniques specifically aimed at correcting these defects.

We report the case of a patient with a defect in the left earlobe caused by previous use of an ear gauge and corrected using the drop excision technique. The technique was developed for this case and achieved a satisfactory aesthetic outcome, with preservation of the inferior curvature. We also provide a brief review of the surgical techniques described in the literature for correcting medium to large earlobe defects.

SURGICAL TECHNIQUE

The patient chosen for the procedure was a 26-year-old man with a history of ear gauge use for 3 years. After discontinuing use of the ear gauge, the patient noted a persistent 6-mm-diameter hole in the left earlobe, with local distortion and elongation (Figure 1), and was subsequently referred for surgical correction of the defect.

During surgical planning, we observed that revitalization of the hole by conventional de-epithelialization with primary closure, as used in conventional split earlobe repair, would not be appropriate given that the size of the hole corresponded to more than one-third of the earlobe size. In addition, the use of ear gauges leads to skin laxity of the earlobe and thinning of its inferior portion, which may hinder reconstruction using techniques involving de-epithelialization of the inferior earlobe border.

To avoid the complications described above, the waterdrop excision technique was developed. The defect is de-epithelialized in the shape of a water droplet, such that the widest portion of the droplet encompasses the defect to be corrected, while the tapered end is strategically positioned at the most lateral portion of the earlobe and parallel to its inferior portion, with the aim of preserving the shape of the earlobe curvature



FIGURE 1: Surgical marking using the waterdrop excision technique for correction of an enlarged earlobe. The tapered end of the waterdrop ends at the most lateral portion of the earlobe, with its design parallel to the most inferior portion, thereby avoiding distortion.



FIGURE 2: Immediate postoperative appearance: preservation of earlobe shape, without distortion.

during closure (Figure 2). In the case described, to achieve closure without deformity, a small portion of skin at the end of the inferior tip was excised to avoid redundancy during closure (Figure 3). Anesthesia was performed with lidocaine without a vasoconstrictor using greater auricular nerve block.

After excision of the area previously marked during preoperative planning, simple suturing was performed between the two edges, respecting the local anatomy, with 6-0 nylon suture. The technique allowed closure with a satisfactory aesthetic outcome, preserving the inferior curvature and lobular symmetry, without overall loss of earlobe volume compared with the earlobe before the procedure, despite the substantial size of the preoperative defect (Figure 3B). After 3 months of follow-up, the aesthetic outcome remained stable, with no scar retraction or secondary deformity.

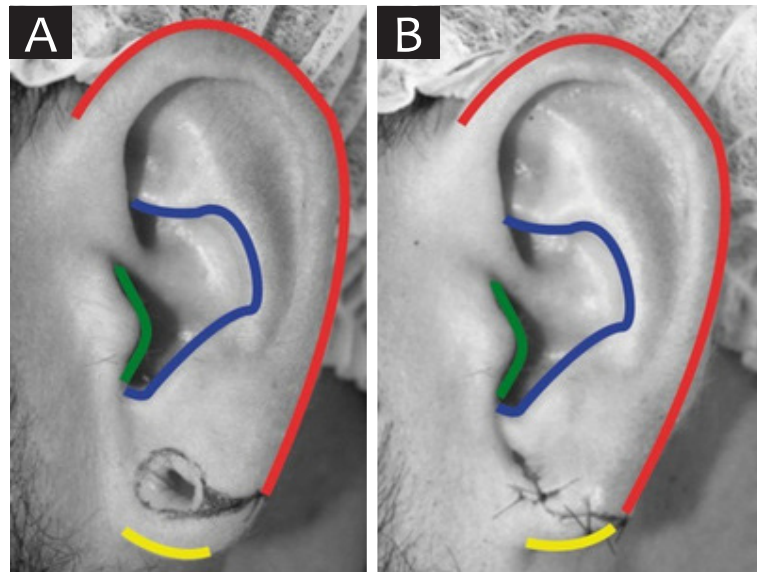


FIGURE 3: Preoperative **A** and postoperative **B** images in grayscale for better identification of the auricular structures. In green: tragus; in red: helix; in yellow: inferior portion of the earlobe, sutured to the defect after excision of redundant skin tissue. It is important to note that, despite removal of excess tissue, there was no significant overall reduction in the earlobe, since the defect caused by the ear gauge increases the overall local volume (image supplemented by artificial intelligence).

TABLE 1: Comparison of techniques for correcting split earlobes with intermediate or large defects

Technique	Description	Advantages	Disadvantages
Boutray, 2020 ⁹	De-epithelialization of defect; transverse crescent-shaped suture on the anterior surface and longitudinal crescent-shaped suture on the posterior surface.	Technically easy; no need for flap reconstruction; suitable for intermediate defects.	May cause deformities in larger defects
Arévalo-Ortega, 2025 ⁶	Use of punch 4 or 5 mm after elongating the cutting blade with forceps.	Technically easy and fast; no need for complex surgical material; excellent for small to intermediate defects.	The diameter of the punch is insufficient for larger defects.
Henderson-Malata, 2010 ¹¹	Complete excision of the enlarged portion of the medial earlobe to the beginning of the cleft; de-epithelialization of the medial surface; the lateral margin of the earlobe, which forms part of the tunnel, is used as a random-pattern flap; L-shaped closure of the defect.	Moderate level of difficulty.	Substantially reduces the size of the earlobe.
Arasaratnam-Pek Technique, 2011 ^{12, 13}	De-epithelialization of the entire defect; de-epithelialization of the lateral surface of the earlobe; suturing of the lateral surface of the earlobe in a spiral pattern.	Preserves the rounded shape of the earlobe.	Technically more difficult and time-consuming.
Collins Technique, 2015 ¹⁴	Excision of the inferior portion of the enlarged earlobe; de-epithelialization of the defect; advancement with a posterior-superior base advanced anteriorly to be sutured to the defect.	Preserves the rounded shape of the earlobe.	Technically more difficult and time-consuming.
Williams Technique, 2010 ¹⁵	Excision of the inferior portion of the enlarged earlobe; de-epithelialization of the defect; edge-to-edge suturing of the defect at the center.	Technically easier than the Collins technique; allows removal of lax tissue from the inferior portion.	The earlobe may become more pointed compared with the Collins technique.

DISCUSSION

The objective of this article is to describe a new technique for correcting intermediate earlobe defects, aiming for a good aesthetic outcome and restoration of the natural shape of the earlobe, and to review the techniques described in the literature.

Few publications focus on descriptions of split earlobes, particularly after the use of ear gauges. For small defects, primary closure preceded or not by punch excision, and, for large defects, excision with advancement flaps and Z-plasties are classically used.^{4,5,6,7} However, there are few reports on intermediate

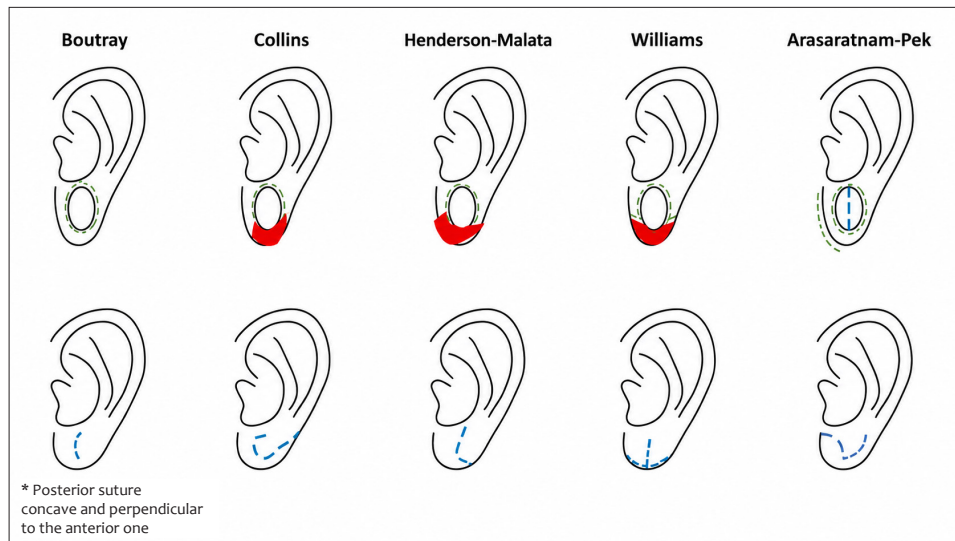


Figure 4: Representative diagram of the main surgical techniques described for correcting split earlobes caused by ear gauge use. The green dashed lines show the areas of de-epithelialization; the red areas show the areas of tissue excised because of redundancy; the blue dashed lines indicate the suture lines for each technique (image drawn using artificial intelligence and supplemented by the authors).

defects, for which two challenges must be considered: deformation of the natural curvature of the inferior margin, which requires technical care to restore the earlobe contour; and greater local tissue loss, since ear gauges cause this characteristic as a consequence of their use.⁸

Classic primary closure may cause distortion, with narrowing and elongation of the earlobe and, consequently, an unsatisfactory aesthetic outcome. Different techniques for correcting intermediate defects involve rotation or transposition flaps, with preservation of the inferior border while maintaining earlobe dimensions.⁹ However, for the present case, such approaches would not be aesthetically appropriate because of the increased earlobe proportions, in addition to being more complex and requiring greater skill and training on the part of the surgeon.

The waterdrop closure technique for earlobes was developed with the aim of respecting the original shape of the earlobe while being easier to perform than techniques such as rotation or O-Z techniques of the earlobe, which require greater refinement.⁴ In addition, earlobes that have been subjected to ear gauge use generally have greater laxity, making closure more difficult and often requiring greater removal of devitalized tissue,

which may preclude the use of a more complex flap.¹⁰⁻¹⁵ Table 1 describes the main surgical techniques for correcting split earlobes, including their advantages and disadvantages, and Figure 4 shows a representation of each surgical technique.

It is crucial to maintain the inferior curvature of the earlobe during lobuloplasty procedures; therefore, the surgeon must be attentive and careful during planning, particularly in cases in which the defect causes significant tissue loss, as with the use of ear gauges. In the present case, we describe a technically simple surgical technique that has not yet been described, with promising results for correcting split earlobes caused by ear gauges.

CONCLUSION

Correction of defects resulting from the use of ear gauges in the earlobes is challenging, given the risk of deformities and reduction in overall earlobe volume. Waterdrop excision allows preservation of the earlobe shape without significantly compromising overall local volume, and it has a low level of technical difficulty, making it feasible for routine office practice. Comparative studies with other techniques are needed to determine the best aesthetic and functional outcomes for earlobe defects involving greater tissue loss. ●

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