ABSTRACT

Introduction: Auricular reconstruction after traumatic ear loss remains a challenge in Otolaryngology and Facial Plastic Surgery. The variety of techniques described in literature shows the intrinsic difficulty of reconstructing a structure with such a delicate architecture. Most of the procedures require a reconstruction in two stages. In this work we propose a new single-stage reconstructive technique of a partially avulsed ear.

Methods: We present a case of a 23-year-old male individual, victim of aggression, who sustained a human bite that resulted in the avulsion of the upper third of the right ear, without preservation of the amputated portion. Three months after the injury, the patient underwent reconstructive surgery. The reconstruction of the lateral wall of the auricle was achieved with a composite graft from contralateral auricular concha. A postauricular advancement flap provided the skin to cover the medial aspect of the ear defect.

Results: Two months after surgery, a favorable cosmetic result was obtained, with patient satisfaction.

Conclusions: This technique gives a good cosmetic result in a single-stage procedure, keeping the symmetry between the ears and the delicate architecture of the ear cartilage.

INTRODUCTION

Auricular reconstruction after traumatic ear loss presents a challenge to the reconstructive surgeon. In order to preserve the complex and fragile anatomy of this structure, as well as the desirable symmetry between the two ears, it is required a special care in planning and carrying out the techniques available to correct it. Several reconstructive techniques are described in the literature. In essence, most of them require a two-step procedure. The size and location of injury will influence the selection of the most appropriate surgical procedure.

In this paper we present a reconstruction technique for defects of the peripheral upper third of the ear, performed in a single-stage procedure.

CASE REPORT

23 year-old male

Caucasian

No previous medical history

Aggression victim (one month before first appointment): sustained a human bite, resulting in the avulsion of the upper third of the right ear, without preservation of the amputated portion (Figure 1A).

Three months after the aggression, the patient was proposed and submitted to reconstructive surgery (Figure 1B). The reconstruction of the lateral wall of the auricle was achieved with a composite graft from contralateral auricular concha. A postauricular advancement flap provided the skin to cover the medial aspect of the ear defect (Figure 2-4).

RECONSTRUCTIVE SURGERY || STEP-BY-STEP

Composite Cartilage Grafting

Figure 2. Composite cartilage grafting. (A) Defect measuring (B) Outlined composite concha cartilage graft harvested from postauricular sulcus of the contralateral ear (C) local anesthesia infiltration (D) Composite cartilage graft (E) Applied bolster to the conchal bowl

Postauricular Advancement Flap

Figure 3. Reconstruction of the medial wall of the defect with a postauricular advancement flap. (F) Defect (G) Outlined flap design with large Burow’s triangles (H) Elevated flap and scar tissue removal (I) Flap fixation with surgical staples and neo-retroauricular sulcus creation. (J) Simple suture between flap and auricular medial wall

Composite Graft Incorporation

Figure 4. Composite graft incorporation. (K) Defect. (L) Composite graft shaped to fit the defect. (M) simple suture between graft and auricle lateral wall. (N) Simple suture between graft and flap. (O) Applied bolster. (P) Situation at the end of surgery.

RESULTS

CONCLUSIONS

- Favorable aesthetic results
- Single-stage technique
- Achieved symmetry between the ears
- Retrauralcular sulcus preservation
- To Think and Plan...

... each case of auricular reconstruction is unique.

REFERENCES