PLASTIC RECONSTRUCTIVE & REGENERATIVE SURGERY

2023;2:30-33
DOI: 10.57604/PRRS-104

SINGLE-STAGE EARLOBE RECONSTRUCTION USING A POSTERIOR BASED RHOMBOID FLAP FROM THE NECK

Isabella Herbst, Iselin Saltvig, Alessandro Venzo

Department of Plastic Surgery and Burns Treatment, Rigshospitalet, Copenhagen, Denmark

Summary

Introduction. There are multiple ways to reconstruct the earlobe with one or two flaps combined, in single – or two stage procedures. Most methods for reconstruction use an anterior base. We present a new method for earlobe reconstruction using a doubleover rhomboid flap with a posterior base for a satisfactory earlobe reconstruction.

Case report. A 68-year-old healthy male with squamous cell carcinoma located at his right earlobe is planned for radical excision involving the earlobe. Earlobe reconstruction single stage is performed using a posterior based flap from the neck.

Discussion. There are multiple ways to reconstruct the earlobe. We present a new method for earlobe reconstruction using a doubleover rhomboid flap with a posterior base.

Conclusions. The method has proven to be suitable for an aesthetic earlobe reconstruction where an anterior base is not possible.

Key words: earlobe reconstruction, rhomboid flap, plastic surgery, reconstructive surgery, head and neck

Received: January 7, 2023
Accepted: August 28, 2023

Correspondence
Isabella Herbst
Department of Plastic Surgery and Burns Treatment, Rigshospitalet, Blegdamsvej 9, 2100 Copenhagen, Denmark
E-mail: isherbst@gmail.com

How to cite this article: Herbst I, Saltvig I, Venzo A. Single-stage earlobe reconstruction using a posterior based rhomboid flap from the neck. PRRS 2023;2:30-33. https://doi.org/10.57604/PRRS-104

INTRODUCTION

Loss of an earlobe may be congenital, due to excision of skin cancer or trauma. There are multiple ways of reconstructing earlobes using single – or two stage procedures.

Gavello [1,2], was one of the first authors to describe a method using a bilobed flap with an anterior base in the 1970's. Since then different techniques has been developed using one or more flaps combined [3].

Rhomboid flaps for earlobe reconstruction have previously been described in the literature [4] although most have an anterior base.

We present a case of earlobe reconstruction using a rhomboid flap from the neck with a posterior base.

CASE REPORT

A 68-year-old healthy male with squamous cell carcinoma located at his right earlobe measuring 25 x 20 mm (Fig. 1) is planned for excision. However, on the day of the operation the tumor has progressed to a size of 28 x 25 x 20 mm.

Figure 1. Right earlobe pre-operatively.

Figure 2. Peri-operatively.

Operative technique performed under local anesthesia

Due to the size, the tumor was excised with 1 cm resection margin which means the resection was partially on the right cheek and deep to the parotid fascia. Peri-operative frozen biopsies revealed clear margins.

The resection involved nearly the whole earlobe with exposed cartilage of the concha and antihelix resected cartilage and was deep on the cheek with exposed parotid gland. At the floor of the resection on the cheek on the parotid gland, a lymph node was excised and sent for pathology to exclude micro metastases. Taking the resection involvement into consideration as well as the opportunity for adjuvant radiotherapy, a flap reconstruction was chosen above a skingraft. A rhomboid flap was marked, incised and raised posteroinferiorly to the defect on the neck (Fig. 2). The donor site was closed, and the rhomboid flap was transposed into the defect firstly secured on the ear posteriorly to create the posterior part of the earlobe. The flap was then folded anteriorly and was sutured into the remaining defect on the cheek Figure 3 showing lateral view and Figure 4 showing the flap sutured post-auricular. The patient was prescribed prophylactic post-operative antibiotics Dicillin 1 g x 4. Drainage using a glove which was removed the next day. The sutures were removed 11 days post-operative (Figs. 5, 6 anterior view and Figure 7 posterior view) and the patient was seen again on day 20 (Fig. 8) with no necrosis for a satisfactory result with earlobe contours. 3 months post-operative control with satisfactory cosmetic result with little to no contracture after radiotherapy and satisfied patient.

Figure 3. Post-operatively lateral view.

Figure 4. Post-operatively postauricular.

Figure 5. Day 11 post-operatively anterior view.

Figure 6. Day 11 post-operatively lateral view.

DISCUSSION

There are multiple ways to reconstruct the earlobe with one or two flaps combined, in single – or two stage procedures. Most methods for reconstruction use an anterior base. However due to the size of the carcinoma in the present case it was excised with 1 cm margin leaving a defect preauricular deep to the parotid gland. Therefore, we present a new method for earlobe reconstruction using a doubleover rhomboid flap with a posterior base.

The method has proven to be suitable for earlobe reconstruction where an anterior base is not possible. The skin on the neck is typically quite loose and a flap design is suitable for varying defect sizes. Flap shrinkage over time can be compensated by initial overcorrection.

Figure 7. Day 11 post-operatively posterior view.

Figure 8. Day 20 post-operatively anterior view.

CONCLUSIONS

Most methods for reconstructing the earlobe is anterior based. We propose a safe and aesthetic solution for a posterior based flap earlobe reconstruction when anterior base is not an option.

Conflict of interest statement

The authors declare no conflict of interest.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Author contributions

IH: D, S, W
IS: DT
AV: A

Abbreviations

A: conceived and designed the analysis
D: collected the data
DT: contributed data or analysis tool
S: performed the analysis
W: wrote the paper
O: other contribution (specify contribution in more detail)

Ethical consideration

Not applicable.

References

1 Cabral AR, Brinca A, Figueiredo A, et al. CASE REPORT Earlobe reconstruction by the Gavello technique and bilobed flap [Reconstrução do lóbulo auricular pela técnica de Gavello e retalho bilobado]. Bras Dermatol 2013;88:272-275. https://doi.org/10.1590/S0365-05962013000200018

2 Fidalgo Rodríguez F, Navarro Cecilia J, Rioja Torrejón L. Earlobe reconstruction with a modified bilobed flap. Plast Reconstr Surg 2010;126:E23-E24. https://doi.org/10.1097/PRS.0b013e3181dab329

3 Rae Ryu H, Woon Lee D, Hyuk Kim J. Earlobe reconstruction using two opposed periauricular dermal pedicled flap J Craniofac Surg 2023;34:721-722. https://doi.org/10.1097/SCS.0000000000008899

4 Singh A, Singh G. Earlobe reconstruction using a Limberg flap in six ears. Br J Plast Surg 2003;56:33-36. https://doi.org/10.1016/s0007-1226(03)00002-x