

Research Article

**The Use of Septal Perichondrium to Camouflage
Nasal Tip Irregularities**



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Received Date: June 30, 2021; Published Date: July 26, 2021

Citation: Oscimar B Sofia* and Amanda A Monteiro. The Use of Septal Perichondrium to Camouflage Nasal Tip Irregularities. *Otolaryngol Head Neck Surg J.* 2021;1(1):1002.

Abstract

Introduction: The thin skin is a surgical challenge in rhinoplasty. The use of grafts or sutures to reposition the cartilages can lead to visible irregularities in the postoperative period. The main camouflage techniques described in the literature are the use of: cartilage cap grafts, “free diced” cartilage, temporal fascia, fasciae latae, costal perichondrium and the Pitanguy ligament.

Objective: To describe a new surgical technique: The use of the the septal perichondrium as a graft to use as camouflage of irregularities of the nasal tip in rhinoplasty.

Materials and methods: Technical description: Transfixing septal incision. Choose the side to remove the perichondrium, usually the concave side. Elevation of the mucoperichondrial flap. Removal of the perichondrium that must be separated from the septal mucosa. Adaptation of the perichondrium over the domus and/or strut and/or septal extension graft and suture with Nylon 6.0.

Results: The technique was performed on 8 patients and the follow-up was between 6 months and 12 months. There were no intra or postoperative complications and, to the present date, the results are considered positive and satisfactory.

Discussion: The technique was considered safe with the advantage of shortening the surgical time and avoiding the need for another concomitant surgery to remove the graft

from other donor site. The main disadvantage is the limitation of the graft size, improper to larger coverage. And the need for more time of postoperative follow-up to observe long-term results.

Conclusion: The technique was considered as a good surgical resource to cover irregularities of the nasal tip deformities on the rhinoplasty.

Keywords: Rhinoplasty; Thin skin; Graft; Nasal tip; Tipcamouflage

Introduction

The rhinoplasty is a challenging surgery and presents a compendium of varied techniques that can be used as a resource to achieve more harmonious and lasting results. The use of grafts is a widely used and described practice. The use of autologous cartilages (of the nasal septum, of the auricular or costal cartilage), fascia or even heterologous material, such as collagen membranes, or alloplastic grafts such as silicone, porous high density polyethylene (Porex®) and polytetrafluoroethylene (Goretex®) is quoted in several articles on the matter [1-6].

The thickness of the patient's skin plays a decisive role on the result, and the thin skin is a particular challenge for the surgeon. The use of conventional maneuvers for rotation and projection of the tip, such as the “strut graft”, or even the use sutures for repositioning and definition of the cartilages, in thin skins, can leave irregularities that may impair the final aesthetic result [1,5,6-8].

Several studies provide suggestions of techniques to perform this camouflageto refine the nasal tip contour. Among the most popular techniques we can mention the use of the “cap graft” with morselized cartilage harvest from the septum or from the lower lateral cartilage (Cephalic Trim Cap Graft) [1,2,6-9]. These are considered “visible” grafts because of the potential to become apparent after the regression of the edema, especially in thin skins in primary rhinoplasties [6,7].

In our bibliographic review we also found as camouflage techniques the use of grounded cartilage (free diced cartilage) and the use of an autologous membrane of peripheral blood (PRP= Platelet-Rich Plasma) [10,11].

These grafts have a great advantage because of the possibility of modeling them on a desired shape, however, they may present dislocations in the postoperative period causing deformities and, also, there are uncertainties, up to the moment, of the behavior and absorption of these tissues in the long term.

As an option to camouflage the irregularities “invisible” grafts can also be used and they can even be combined with “visible grafts” as wrappings [7]. The most relevant among them include:

- Temporal fascia, latissimus fasciae and chondral perichondrium - all these techniques require a second surgical site as a donor area for the grafts but offer the possibility of removing a large amount of material to perform extensive coverings [1,3-6].
- The pituitary ligament to harvest this graft there is no need to make a new incision on the patient's skin, however, this structure is often difficult to be identified and resected, as well as it can be presented in a small size and so be insufficient for the camouflage of the structures [12].

The “invisible grafts” are more flexible and malleable tissue and so it can be a good ally in the camouflage of irregularities in the dorsum and nasal tip, covering visible marks, improving the contour of both the tip and the nasal dorsum for a better postoperative result.

Objective

To describe a technique: The septal perichondrium as a graft to camouflage irregularities in the nasal tip in rhinoplasty.

Materials and Methods

1. Technical description.
2. Transfixing septal incision using a 15-blade scalpel.
3. Choose the side to remove the septal perichondrium, preference to the concave side of the septum.
4. Elevation of the mucoperichondrial flap.
5. Incision using a 15-blade scalpel between the mucosa and septal perichondrium (Figure 1).

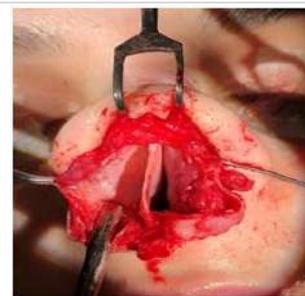


Figure 1: Elevation of flap mucosa and Perichondrium.

6. Divulsion of these structures with straight iris scissors (it is possible to repair the septal mucosa with delicate curved Kelly forceps making the separation of the planes more visible and tense) (Figure 3).



Figure 2: Use of delicate curved Kelly to make the separation of the planes more visible and tense.

7. Excision of the perichondrium to the desired size (Figure 3).



Figure 3: Perichondrium to the desired size.

8. Adaptation of the perichondrium over the domus and/or strut and/or septal extension graft and fixation with nylon 6-0 (Figure 4).

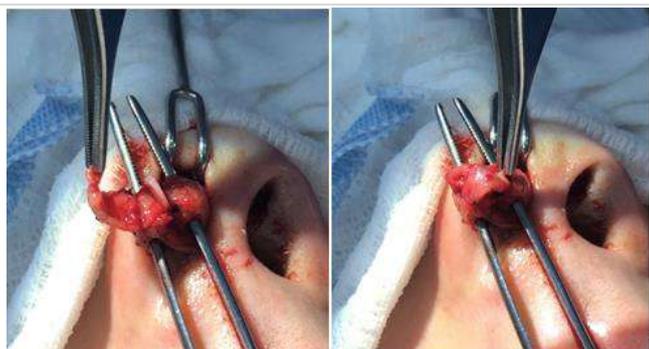


Figure 4: Adaptation and fixation of the graft with nylon 6-0 in the domus.

Results

Eight patients underwent this technique, and the follow-up was between 6 months and 12 months. None of them had infectious or inflammatory complication associated with graft rejection or displacement. To date, no visible irregularities in the skin have been found and the contour of the nasal tip remains harmonious with satisfactory results.

Discussion

The use of the septal perichondrium proved to be a viable resource with good postoperative results in the camouflage of minor irregularities in the nasal tip. The main advantage is that there is no need to use a secondary surgical site since the detachment of the mucoperichondrial flap is a basic step for performing rhinoplasty.

We can also highlight that there is a consequent decrease in the surgical time and in the morbidity of the procedure and in the postoperative period, as well as can save the patient from an additional scar.

It is, however, a graft limited in its physical size and it is not possible to remove it in large extensions to perform, for example, the covering on the entire nasal dorsum, being reserved, in general, for more delicate repairs, such as the nasal tip.

Even though the results are potentially encouraging there is little time for post-surgical follow-up, so that it is not yet possible to make statements about the absorption of the septal perichondrium in the nasal tip in the long term until the present moment.

Conclusion

The technique was considered as a viable and satisfactory surgical resource as a covering maneuver to camouflage

irregularities in the nasal tip and improve the contours in rhinoplasty.

Highlights

- The thin skin is a surgical challenge in rhinoplasty. The use of grafts or sutures can lead to visible irregularities in the postoperative period.
- This paper describe a new surgical technique: the use of the septal perichondrium as an graft option to camouflage the contour of the nasal tip
- It was considered a safe technique with the advantage of decreasing surgical time and avoiding the need for another concomitant surgery for harvesting the graft.
- Postoperative follow-up of these patients demonstrates harmonious and satisfactory results.

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