Congenital Absence of Nasal Cartilage: A Case Report and Review of Literature

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Abstract

Congenital absence of nasal cartilage is a rare phenomenon, presenting challenges for both the patient and the reconstructive surgeon. This article describes the successful implementation of the Tasman technique, a technique for reconstructing nasal deformities due to congenital absence of nasal cartilage. The technique involves the use of autologous cartilage grafts and surgical procedures to create a normal nasal contour and function. The case report highlights the benefits of this technique in improving the patient's quality of life and nasal appearance. The review of the literature discusses the various techniques used for reconstructing nasal deformities and the outcomes associated with each technique. The conclusion emphasizes the importance of interdisciplinary collaboration in achieving optimal outcomes for patients with nasal deformities.

Introduction

Congenital absence of nasal cartilage is a rare phenomenon that can lead to significant nasal deformities. These deformities can be caused by a variety of factors, including congenital abnormalities, trauma, and infection. The absence of nasal cartilage can result in a hypoplastic nose, a nasal ridge, and a reduced nasal aperture. The shape and integrity of the nose is reliant upon several soft tissue structures. A strong understanding of the physics behind these structures is necessary for successful nasal reconstruction.

Methods

Case Report and Literature Review: The patient's pertinent history, clinical findings, and surgical techniques are reviewed. Additionally, the outcomes and complications of the surgical procedure are discussed.

Results

The case of a 17-year-old female is presented. The patient presented to the clinic for evaluation of her nasal deformity. She expressed difficulty with the shape, appearance, and function of her nose. The patient was taken to the operating room, where she underwent a functional rhinoplasty, which included the use of cadaveric rib cartilage. The surgical procedure was successful, and the patient experienced improved nasal appearance and function. The results are satisfactory thus far. On her last outpatient visit, she was noted to have improvement to her nasal appearance and function.

Discussion

Congenital absence of nasal cartilage is a rare entity, but one that has been studied in both function and form. The goal of this case report is to outline the novel use of the previously described Tasman technique for nasal reconstruction in a patient with congenital absence of nasal cartilage.

Conclusion

The report details the novel use of the Tasman technique in the reconstruction of a patient with absence of nasal cartilage, including nasal bone. The results are satisfactory; however, long-term follow-up is necessary to determine the graft’s long-term integrity. The use of autologous cartilage grafts and surgical procedures to create a normal nasal contour and function is necessary for successful nasal reconstruction. The success of the surgical procedure is dependent on the patient’s adherence to postoperative instructions and the patient’s overall health. The use of autologous cartilage grafts and surgical procedures to create a normal nasal contour and function is necessary for successful nasal reconstruction.

Fig 1: Preoperative images

Fig 2: Preoperative CT scan

Fig 3: Post-operative images, 2 months

Surgical Technique

The goal of this surgery is to perform a functional rhinoplasty and an aesthetic reconstruction of the nasal osseocartilaginous framework.

1. The nasal osseocartilaginous framework is approached through an external rhinotomy incision, which is carried down to the nasal bones. The nasal bones are marked with a drill and then elevated with a periosteal elevator. The nasal bones are then removed with a bone sculpting instrument to create a normal nasal bone contour.

2. A soft tissue incision is made along the markings on the nasal bones. The nasal bones are then elevated with a periosteal elevator to create a subperiosteal plane. The nasal bones are then removed with a bone sculpting instrument to create a normal nasal bone contour.

3. The nasal cartilage is then harvested from the septum, auricle, or sometimes both, and placed as grafts along the nasal dorsum. The nasal cartilage is diced into pieces of varying sizes to create a pliable graft that can be shaped and sculpted to create a normal nasal contour.

4. The nasal cartilage is then fixed to the nasal bones with sutures or staples to create a normal nasal bone cartilage framework. The nasofrontal area is then closed with subcutaneous sutures, and the skin incision is closed with absorbable sutures.

5. The patient is allowed to rehydrating saline solution to the surgical site, and the patient is allowed to rehydrate for at least 48 hours. The patient is then allowed to eat a normal diet and resume normal activities.

Discussion

The goal of this surgery is to perform a functional rhinoplasty and an aesthetic reconstruction of the nasal osseocartilaginous framework. The nasofrontal area is then closed with subcutaneous sutures, and the skin incision is closed with absorbable sutures. The patient is allowed to reappraise saline solution to the surgical site, and the patient is allowed to rehydrate for at least 48 hours. The patient is then allowed to eat a normal diet and resume normal activities.

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Resources


