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EVALUATION OF MODIFIED UNILATERAL NASOPLASTY IN PATIENT WITH POST OPERATION OF UNILATERAL LABIOPLASTY AT MALAHAYATI HOSPITAL BANDA ACEH: COHORT STUDY FROM 2017-2019

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ABSTRACT

Introduction: Nasal deformity associated with cleft lip has been viewed as one of the most challenging reconstructive problems in rhinoplasty. The common clinical features associated with cleft lip nasal deformity are its lack of symmetry, alar collapse on the affected side, short nasal length, loss of tip definition, obtuse nasal labial angle, and altered columella show among Others. The complexity of cleft lip rhinoplasty is demonstrated by the an abundance of technique that is available for its correction. In this case we used the technique modified by Dr. Muhammad Jailani, SpBP-RE in Aceh.
Methods: We conducted a retrospective study involving 139 patients who is done the rhinoplasty unilateral operation at Malahayati Hospital from January 2017 to November 2019. Demographic information was recorded such as a ratio between pre–operation and post–operation, gender, and age.
Results: Our results has shown the result of comparison between cleft nose before rhinoplasty and cleft nose after rhinoplasty is ±0.26 : ±0.58, and the patients who came to the hospital for rhinoplasty unilateral surgery are 81% of 139 patients. Women (61.2%) experience rhinoplastymore dominant compared to man (38.8%), and the highest age average is between 1 year until 7 years old (71%)
Conclusions: Improvement in procedure's duration and better positioning of both nasal tip and nostril. Expected improvements in terms of aesthetic and functions were observed but further documentations still needed.

Highlights:

1. The study's outcomes reveal favorable results regarding nasal enhancement following rhinoplasty, disparities in surgical choices, and variations in patient gender distribution.
2. It is essential to recognize that these preliminary findings, while encouraging, underscore the necessity for additional documentation and research.

INTRODUCTION

Bair and Brown first described the cleft nose in 1931, critically identifying the nuances of the pathology[4]. The nose and the lips develop from derivatives of theseprominences as follows frontonasal prominence, lateral nasal process, medialnasal process, maxillary prominences, mandibular prominences, mesenchyme in the facial prominences[5]. The most complicated morphogenic movement occurs between the fourth and eight weeks of embryogenesis[6].

Nasal deformity associated with cleftlip has been viewed as one of the most challenging reconstructive problems in rhinoplasty. The complexity of cleft lip rhinoplastyis demonstrated by the abundance of technique that is available for its correction[7]. The common clinical features associated with cleft lip nasal deformity are its lack of symmetry, alar collapse on the affected side, short nasal length, loss of tip definition, obtuse nasal labial angle, and altered columella show among others[3]. The surgical approaches for a cleft lip rhinoplasty can be a closed endonasal or an open approach. The open orexternal approach is indicated in cases where there is a severe deformity of the nasal tip[8].

METHODS

We conducted a retrospective study involving 139 patients who are done the rhinoplasty unilateral operation at Malahayati Hospital from January 2017 to November 2019.Demographic information was recorded such as ratio between pre–operation and post–operation, gender, andage. The authoes declare that ethics approval was not required for this case report.

Surgical Technique

All the patient who was undergo the open rhinoplasty surgery was carried out under general anesthesia and placed in the supine position. This is a technique used by Dr. M. Jailani Specialist Plastic Surgery and Reconstruction who modified the technique of open reduction by Djohansjah (doctor's dissertation: Prof.Dr. dr.Djohansjah Marzoeki, Sp.BP) which uses an incision according to Rethi who opened the columella in both sidewhereas this modification is only done on one side only[9,10].

During rhinoplasty surgery, we make an incision design at the cleft area andthe normal side as the rule. Release all the nose cartilage such as greater alar cartilage, lateral nasal cartilage, lesser alar cartilage and septum cartilage from the skin on the nose cleft side area. After we separate the skin and the cartilage, the excess skin at this part is removed and the cartilage fixed on the upper side of the nostril area once believed to be nearing the normal point.

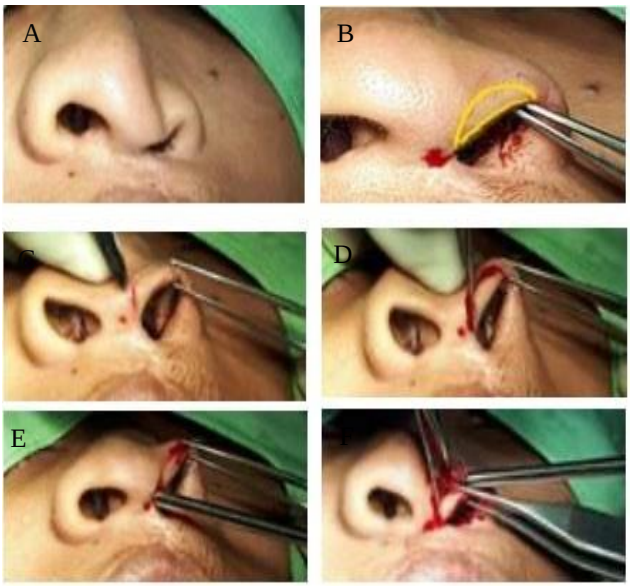

Figure 1. (A-B) Make an incision design on the cleftnose area with the normal nose as a rule. (C-F) Release all the nose cartilage such as greater alar cartilage, lateral nasal cartilage, lesser alar cartilage and septum cartilage from the skin on the nose cleft side area.

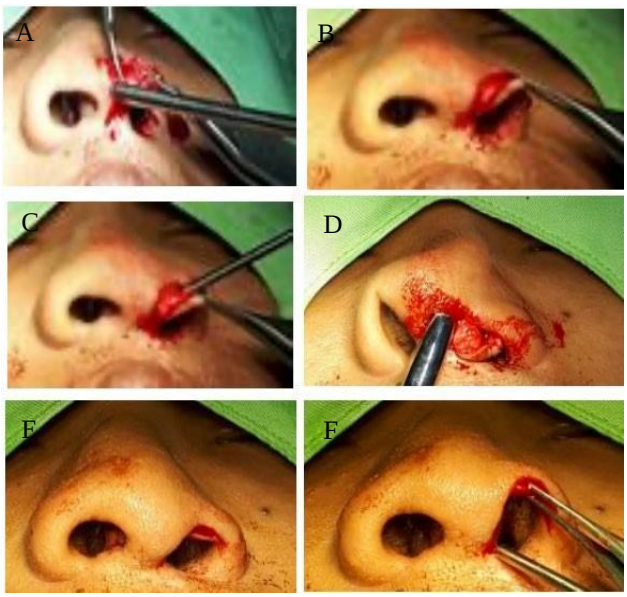

Figure 2. (A-F) After we separate the skin and thecartilage, the excess skin at this part is removed to get the ideal shape of the nostril which is then sewn to the upper nostril area.

On the columella septum section, fixation of the inner nasal area between the cleft and the non-cleft area (transnasal sutures) (Figure 3) to create the nasal dome for better symmetry and projection (raise the cartilage / repositioning the cartilage) toa rather normal position[11]. It sewn using absorable thread Proline 6-0 and eventually make the septum cartilage stand straight.

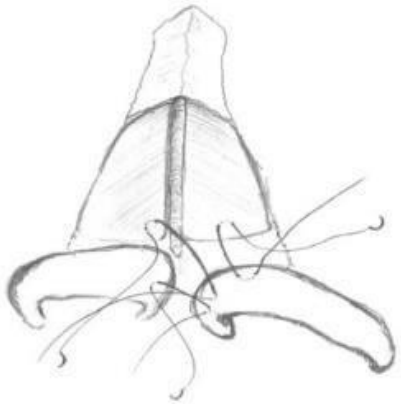

Figure 3. Transnasal sutures to create the nasal dome for better symmetry and projection, and also make the septum cartilage stand straight to support nasal dome and nasal tip at the center.

RESULTS

From 2017 to 2019, out 172 patients who registered for unilateral rhinoplasty procedure, 81% were followed up. Thegender ratio is 0.38 to 0.61 with female predominates. The age group incidence highest for age 1 – 7 years old with 71% from the total samples. Post procedural observations showed slight improvement at normal side 0.060 : 0.66 and 0.26 : 0.58 on the cleft side.

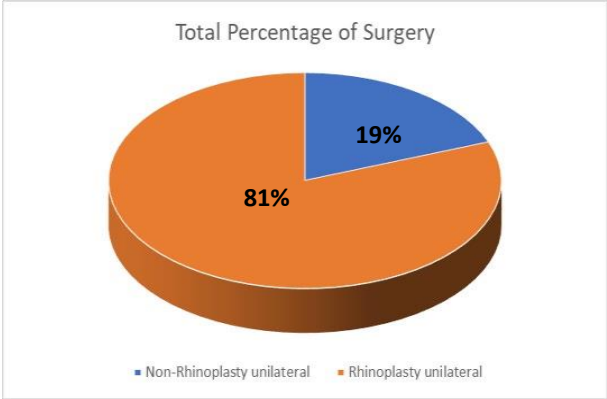

Figure 4. Diagram of Total Patient of Rhinoplasty Sugery

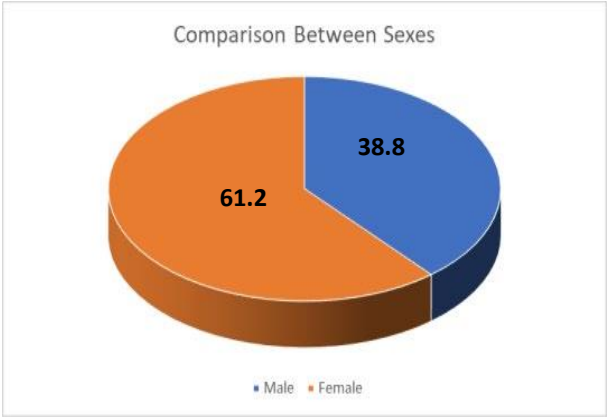

Figure 5. Diagram of Comparison Between Male and Female

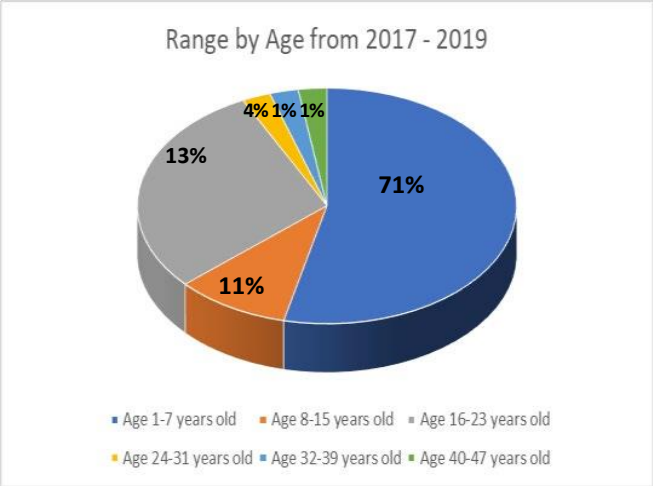

Figure 6. Diagram of Age

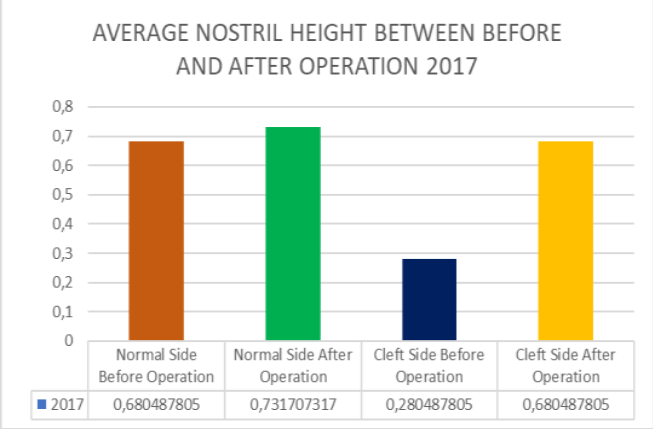

Figure 7. Average Between Before and After Operation of Normal Side and Cleft side 2017

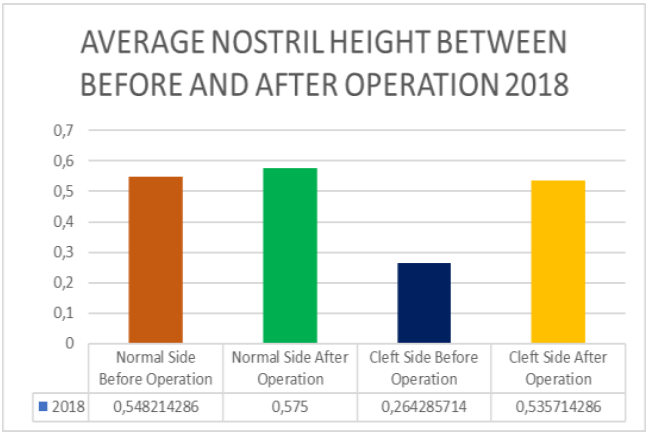

Figure 8. Average Between Before and After Operation of Normal Side and Cleft side 2018

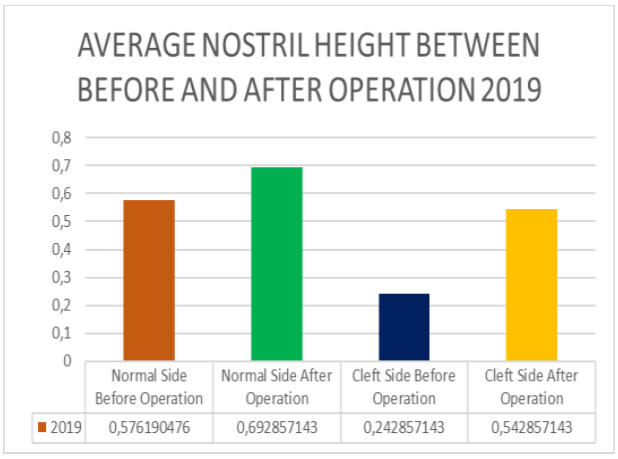

Figure 9. Average Between Before and After Operation of Normal Side and Cleft side 2019

DISCUSSION

A deformed nose that results from unilateral cleft of the lip and palate is likenedto a tent whose one side depressed[12]. On the cleft side, the orbicularis oris muscle inserts into nasal base, retracting it laterallyand inferiorly. The goal of rhinoplasty surgery include creation of nasal symmetry, definition of nasal base and tip, relief of nasal obstruction, and management of nasal scarring[13]. The literature reports various methods with which to assess the cleft lip nasal deformity[14]. According to Kaufman et al, an open rhinoplasty can be performed to expose the bilateral cartilage on the lower lateral sides and directly observe the geometric difference. If there is any lateral vestibular webbing accours through an incision, a V-Y or back-cut type incision can be used to extend the lateral nasal wall, and advance the lower lateral cartilage forward.

The study provides precise numerical data, such as the comparison result between cleft nose before and after rhinoplasty, the percentage of patients undergoing unilateral rhinoplasty, the gender and the age distribution. These numbers make the results more concrete and easier to understand, and they contribute to the overall rigor of the research.

Figure 10. A-J Some pictures of before and after using the modification technique by dr. Muhammad Jailani, SP.BP-RE

CONCLUSION

This modified technique that introduced by Dr. Muhammad Jailani, SpBP- RE, even without doing the usual technique, the surgical outcome still come out good. This technique can be applied to unilateral cleft nose post–labioplasty procedure. Improvement in procedure's duration and better positioning of both nasal tip and nostril (pre–rhinoplasty and post–rhinoplasty ratio is ±0.26:±0.58) and expected improvements in terms of aesthetic and functions were observed but further documentations still needed.

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CONFLICT OF INTEREST

The authors have no conflicts of interest to disclose.

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AUTHORS CONTRIBUTION

All authors drafted the manuscript. All authors listed have made substantial, direct, and intellectual contribution to the work and approved the final manuscript.

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