



INTISARI SAINS MEDIS

Published by Intisari Sains Medis

Evaluation of modified unilateral nasoplasty in patient with post operation of unilateral labioplasty at Malahayati Hospital Banda Aceh: a cohort study from 2017-2019



CrossMark

Devyana Enggar Taslim¹, Muhammad Taufik¹, Muhammad Jailani^{2*}, Syamsul Rizal², Mirnasari Amirsyah²

¹Clinical Research Unit Cleft Lip and Palate Center Aceh, Banda Aceh, Indonesia

²Plastic Reconstructive and Aesthetic Surgery Division, Faculty of Medicine, Universitas Syiah Kuala, Banda Aceh, Indonesia

*Corresponding author:

Muhammad Jailani;
Plastic Reconstructive and Aesthetic Surgery Division
Faculty of Medicine Universitas Syiah Kuala Banda
Aceh, Indonesia;

jailani@unsyiah.co.id

Received: 2020-12-24

Accepted: 2021-03-22

Published: 2021-04-01

ABSTRACT

Background: Nasal deformity associated with a cleft lip has been viewed as one of the most challenging reconstructive rhinoplasty problems. 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. This study aims to evaluate the modified unilateral nasoplasty in a patient with post-operation of unilateral labioplasty at Malahayati Hospital Banda Aceh as a cohort study.

Methods: We conducted a retrospective cohort study involving 139 patients who completed the unilateral rhinoplasty operation at Malahayati Hospital from January 2017 to November 2019. Demographic information was recorded, such as the ratio between

pre-operation and post-operation, gender, and age. Data were analyzed using SPSS version 20 for Windows.

Results: Our results have shown the comparison between cleft nose before rhinoplasty and cleft nose after rhinoplasty is 0.26 vs. 0.58 cm. The patients who came to the hospital to do the unilateral rhinoplasty surgery are 81.00%. Females (61.20%) experienced rhinoplasty more dominant compare to man (38.80%), and the highest age average is between 1 year old until 7 years old (71.00%).

Conclusion: Improvement in procedure's duration and better positioning of both nasal tip and nostril. Expected improvements in terms of aesthetics and functions were observed, but further documentation is still needed.

Keywords: Cleft Nasal, Modified Unilateral Rhinoplasty, Gender, Age, Outcome.

Cite This Article: Taslim, D.E., Taufik, M., Jailani, M., Rizal, S., Amirsyah, M. 2021. Evaluation of modified unilateral nasoplasty in patient with post operation of unilateral labioplasty at Malahayati Hospital Banda Aceh: a cohort study from 2017-2019. *Intisari Sains Medis* 12(1): 128-130. DOI: [10.15562/ism.v12i1.849](https://doi.org/10.15562/ism.v12i1.849)

INTRODUCTION

Blair and Brown first described the cleft nose in 1931, critically identifying the nuances of the pathology.¹ The nose and the lips develop from derivatives of these prominences as follows: frontonasal prominence, lateral nasal process, medial nasal process, maxillary prominences, mandibular prominences, mesenchyme in the facial prominences.² The most complicated morphogenic movement occurs between the fourth and eighth weeks of embryogenesis.³

Nasal deformity associated with a cleft lip has been viewed as one of the most

challenging reconstructive rhinoplasty problems. The complexity of cleft lip rhinoplasty is demonstrated by the abundance of available techniques for its correction.⁴ 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.⁵ The surgical approaches for a cleft lip rhinoplasty can be a closed endonasal or an open approach. The open or external approach is indicated in cases where there is a severe deformity of the nasal tip.⁶

Based on those mentioned above,

this study aims to evaluate the modified unilateral nasoplasty in a patient with post-operation of unilateral labioplasty at Malahayati Hospital Banda Aceh as a cohort study.

METHODS

We conducted a retrospective cohort study involving 139 patients who completed the unilateral rhinoplasty operation at Malahayati Hospital from January 2017 to November 2019. Demographic information was recorded, such as the ratio between pre-operation and post-operation, gender, and age.

Table 1. The overall results of modified unilateral nasoplasty in patient with postoperative of unilateral labioplasty

Variables	Average	Total (N=139)
Total of Surgery, n (%)		
Rhinoplasty unilateral		113 (81.00)
Non-Rhinoplasty unilateral		26 (19.00)
Gender, n (%)		
Male		54 (38.80)
Female		85 (61.20)
Age Groups (Years), n (%)		
1-7		99 (71.00)
8-15		15 (10.00)
16-23		18 (13.00)
24-31		5 (4.00)
32-39		1 (1.00)
40-47		1 (1.00)
Nostril Height in 2017 (cm)		
Normal Side (Before)	0.68	
Normal Side (After)	0.73	
Cleft Side (Before)	0.28	
Cleft Side (After)	0.68	
Nostril Height in 2018 (cm)		
Normal Side (Before)	0.54	
Normal Side (After)	0.57	
Cleft Side (Before)	0.26	
Cleft Side (After)	0.53	
Nostril Height in 2019 (cm)		
Normal Side (Before)	0.57	
Normal Side (After)	0.69	
Cleft Side (Before)	0.24	
Cleft Side (After)	0.54	

All the patient who underwent 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, SpBP), which uses an incision according to Rethi, who opened the columella in both sides whereas this modification is only done on one side only.^{7,8}

During rhinoplasty surgery, we make an incision design at the cleft area and the normal side as a 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 the authors 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.

On the columella septum section,

fixation of the inner nasal area between the cleft and the non-cleft area (transnasal sutures) creates the nasal dome for better symmetry and projection (raise the cartilage/repositioning the cartilage) to a relatively normal position.⁹ It sewn using absorbable thread Proline 6-0 and eventually make the septum cartilage stand straight. Data were analyzed using SPSS version 20 for Windows.

RESULTS

According to [Table 1](#), most of the surgery conducted at Malahayati Hospital from January 2017 to November 2019 were unilateral rhinoplasty (81.00%). In addition, this study found that female was predominant (61.20%) and followed by 1-7 years age group (71.00%) ([Table 1](#)). There was a tendency for nostril height improvement in 2017 before (0.68 and 0.28 cm) and after (0.73 and 0.68 cm) surgery on normal and cleft side, respectively ([Table 1](#)). The similar findings were also found in 2018 (0.54; 0.26 vs. 0.57; 0.53 cm) and 2019 (0.57; 0.24 vs.

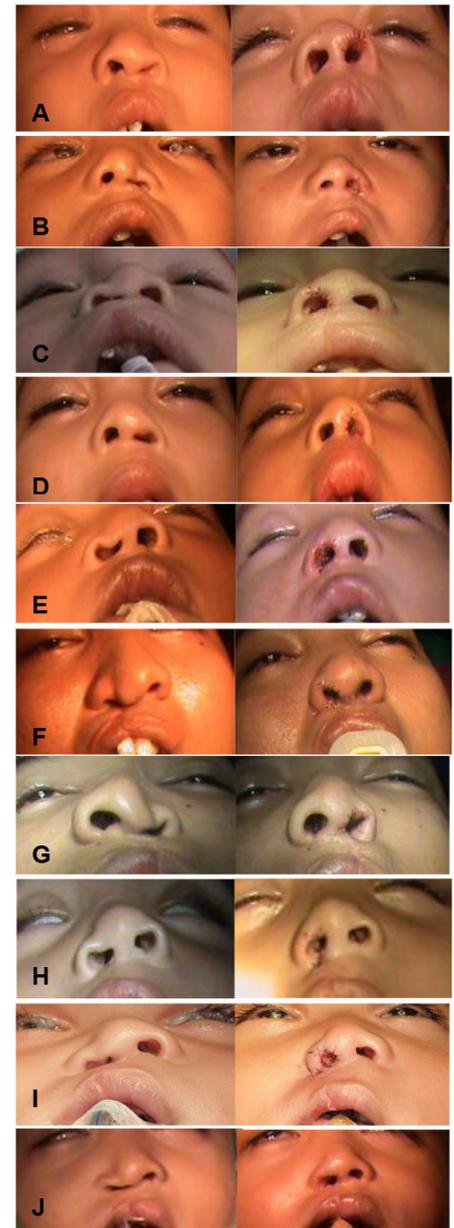


Figure 1. Some pictures of before and after using the modification technique by dr. Muhammad Jailani, SP.BP-RE (A-J).

0.69; 0.64 cm) before and after surgery, respectively ([Table 1](#)). Several pictures regarding the modification technique by dr. Muhammad Jailani, SP.BP-RE before and after the intervention of modified unilateral nasoplasty in patients with post-operation of unilateral labioplasty were depicted in [Figure 1](#).

DISCUSSION

A deformed nose that results from the unilateral cleft of the lip and palate is likened

to a tent whose one side is depressed.¹⁰ The orbicularis oris muscle inserts into the nasal base on the cleft side, retracting it laterally and inferiorly. The goal of rhinoplasty surgery includes creating nasal symmetry, the definition of nasal base and tip, relief of nasal obstruction, and management of nasal scarring.¹¹ The previous literature also reports various methods with which to assess the cleft lip nasal deformity.¹² According to a study by Kaufman Y et al., an open rhinoplasty can be performed to expose the bilateral cartilage on the lower lateral sides and directly observe the geometric difference.⁹ If there are any lateral vestibular webbing occurs 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.^{13,14}

Improvement in procedure's duration and better positioning of both nasal tip and nostril (pre – rhinoplasty and post-rhinoplasty ratio is 0.26 vs. 0.58 cm) and expected improvements in terms of aesthetic and functions were observed, but further documentations still needed.

CONCLUSION

Dr. Muhammad Jailani, SpBP-RE introduced this modified technique; even without doing the usual technique, the surgical outcome still comes well. This technique can be applied to unilateral cleft nose post-labioplasty procedure.

ETHICAL CLEARANCE

Ethics approval has been obtained from the Faculty of Medicine, Universitas Syiah Kuala, Banda Aceh, Indonesia prior to the study being conducted.

CONFLICT OF INTEREST

The authors have no conflicts of interest to disclose.

FUNDING

No financial support was received for this case report.

AUTHOR CONTRIBUTIONS

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

REFERENCE

1. Blair VP, Brown JB. Nasal abnormalities, fancied and real: The reaction of the patient: Their attempted correction. *Int J Orthod Oral Surg Radiogr.* 1932;18(4):363–401.
2. Wantia N, Rettinger G. The current understanding of cleft lip malformations. *Facial Plast Surg.* 2002;18(3):147-153.
3. Clark JM, Skoner JM, Wang TD. Repair of the unilateral cleft lip/nose deformity. *Facial Plast Surg.* 2003;19(1):29-40.
4. Cho BC, Baik BS. Correction of cleft lip nasal deformity in Orientals using a refined reverse-U incision and V-Y plasty. *Br J Plast Surg.* 2001;54(7):588-596.

5. Van Beek AL, Hatfield AS, Schnepf E. Cleft rhinoplasty. *Plastic and Reconstructive Surgery.* 2004;114:57e–69e.
6. McComb H. Treatment of the unilateral cleft lip nose. *Plast Reconstr Surg.* 1975;55(5):596-601.
7. Djohansjah M, Jailani M, Perdanakusuma DS. *Teknik Pembedahan Celah Bibir dan Langit-langit.* Sagung Seto: Jakarta. 2002.
8. Djohansjah M. Repositioning of The Nose in Primary Unilateral Cleft Lips Closure [Dissertation]. Airlangga University Press: Surabaya. 1989.
9. Kaufman Y, Buchanan EP, Wolfswinkel EM, Weathers WM, Stal S. Cleft nasal deformity and rhinoplasty. *Semin Plast Surg.* 2012;26(4):184-190.
10. Shih CW, Sykes JM. Correction of the cleft-lip nasal deformity. *Facial Plast Surg.* 2002;18(4):253-262.
11. Mehrotra V, Natarajan S, Deshpande G, Merchant R. Cleft Rhinoplasty: A Surgical Technique. *J Contemp Dent.* 2017;7(3):188–93.
12. Al-Omari I, Millett DT, Ayoub AF. Methods of assessment of cleft-related facial deformity: a review. *Cleft Palate Craniofac J.* 2005;42(2):145-156.
13. Tiong WH, Zain MA, Basiron NH. Augmentation rhinoplasty in cleft lip nasal deformity: preliminary patients' perspective. *Plast Surg Int.* 2014;2014:202560.
14. Baskaran M, Packiaraj I, Arularasan SG, Divakar TK. Cleft rhinoplasty. *J Pharm Bioallied Sci.* 2015;7(Suppl 2):S691-S694.



This work is licensed under a Creative Commons Attribution