

Article

POST OPERATIVE PALATOPLASTY FEEDING GUIDELINES: A LITERATURE REVIEW

Darryl Samuel Salim¹, Dona Christin Victo¹, S Sylvina¹, & Muhammad Rizqy Setyarto²

1. General practitioner—Intern participant, Division of Plastic Reconstructive and Aesthetic Surgery, Dr. Kariadi Central-General Hospital, Semarang, Indonesia

2. Consultant of craniofacial, Division of Plastic Reconstructive and Aesthetic Surgery, Dr. Kariadi Central-General Hospital, Semarang, Indonesia

ABSTRACT

Introduction: Post operative palatoplasty is one of the important things, because many complications that may occur post operatively such as bleeding, dehiscence, to velopharyngeal insufficiency. One of the factors that determine postoperative palatoplasty wound healing is feeding problem which is still controversial, both in terms of the type of food and the time of feeding. There are no guidelines for handling postoperative palatoplasty in Indonesia. For this reason, the author tries to make a feeding guides post palatoplasty by compiling existing literature, to be used as a reference in making guidelines.

Method: Data collected from journal search engine with limited keyword. All article were analysed by authors to find focused data post palatoplasty feeding. All data is presented in a table, then compared and analysed.

Result: There are nine articles that met the inclusion and exclusion criteria were obtained which were presented in the table and compared.

Conclusion: Guidelines for post palatoplasty surgery must be made to provide the best results. Based on existing research and literature, the authors suggest including: a liquid diet after surgery, a soft diet as soon as possible, a solid diet after one month of surgery, and most importantly all diets must have good nutrition for Indonesia post palatoplasty feeding guidelines.

Keywords: Post operative palatoplasty; Type of food; Time of feeding

Latar Belakang: Palatoplasti pasca operasi merupakan salah satu hal yang penting, karena banyak komplikasi yang mungkin terjadi pasca operasi seperti perdarahan, dehiscence, hingga insufisiensi velopharyngeal. Salah satu faktor yang menentukan penyembuhan luka palatoplasti pasca operasi adalah masalah pemberian makan yang masih menjadi kontroversi, baik dari segi jenis makanan maupun waktu pemberian makan. Belum ada pedoman penanganan pasca operasi palatoplasti di Indonesia. Untuk itu penulis mencoba membuat feeding guides post palatoplasty dengan menyusun literature yang ada, untuk dijadikan acuan dalam pembuatan guidelines.

Metodologi: Data dikumpulkan dari mesin pencari jurnal dengan kata kunci terbatas. Semua artikel dianalisis oleh penulis untuk menemukan data terfokus pasca makan palatoplasti. Semua data disajikan dalam sebuah tabel, kemudian dibandingkan dan dianalisis.

Hasil: Terdapat sembilan artikel yang memenuhi kriteria inklusi dan eksklusi yang disajikan dalam tabel dan dibandingkan.

Kesimpulan: Pedoman pasca operasi palatoplasti harus dibuat untuk memberikan hasil yang terbaik. Berdasarkan penelitian dan literatur yang ada, penulis menyarankan antara lain: diet cair setelah operasi, diet lunak sesegera mungkin, diet padat setelah satu bulan operasi, dan yang terpenting semua diet harus memiliki nutrisi yang baik untuk pedoman makan pasca palatoplasti Indonesia.

Kata Kunci: Palatoplasti pasca operasi; Jenis makanan; Waktu pemberian makan

Conflicts of Interest Statement:

The author(s) listed in this manuscript declare the absence of any conflict of interest on the subject matter or materials discussed.

Received: 10 03 2023, Revised: 22 05 2023, Accepted: 30 06 2023

Copyright by Salim et al, 2023. | P-ISSN 2089-6492; E-ISSN 2089-9734 | DOI: 10.14228/jprjournal.v10i1.353

Published by Lingkar Studi Bedah Plastik Foundation. This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal. This Article can be viewed at www.jprjournal.com

INTRODUCTION

Cleft palate is one of the most common congenital abnormalities with a prevalence of 1 per 1600 births in the world. This disorder has a major impact on patients, both in terms of function, beauty, and patient psychosocial, so that the cleft palate must be treated as soon as possible and as well as possible. Handling of cleft palate is divided based on the time before surgery, during surgery and after surgery. There are a lot of literatures that discusses handling before and during surgery, but there are no guidelines for handling postoperative palatoplasty in Indonesia. Post operative is one of the important things, because many complications that may occur post operatively such as bleeding, dehiscence, to velopharyngeal insufficiency. One of the factors that determine postoperative wound healing is the provision of food which is still controversial, both in terms of the type of food and the time of food. For this reason, the author tries to make post palatoplasty feeding guides by compiling existing literature, to be used as a reference in making guidelines.^{1,2}

METHOD

Data collected from google scholar, PubMed, Journal of Plastic and Reconstructive Surgery, Scopus, Elsevier and manual search. Article searches are limited to the keyword "feeding", "cleft palate", "post operation", "guideline". The inclusion criteria: post palatoplasty, type of food and the time given, any type of studies, article written in English. The exclusion criteria: post labioplasty, no feeding time, articles that the researcher could not access. All article were analyzed by writer to find focused data post palatoplasty feeding. All data is presented in a table, then compared and analyzed.

RESULTS

There are nine articles that met the inclusion and exclusion criteria were obtained which were presented in the table and compared.

DISCUSSION

The majority of cleft palate patients in Indonesia come from poor families with low

levels of education. Providing education about clear and uniform postoperative care will greatly help understanding patient parents. Therefore, a uniform palatoplasty care guide is needed.

Discrepancy occurs from the articles collected which make different statements on the type of food, namely articles that does not include patients who are required to have a liquid diet and the patient is obliged to a liquid diet for a certain time. Nationwide Children Hospital and Pediatric-Ent Florida make direct reference to a soft diet after being discharged from the hospital, with the consideration that the patient has passed the liquid diet and can accept a soft diet at home. The rest of the article directly states the diet that must be given after the operation is carried out for a certain period of time because the patient is discharged before the patient can accept a soft diet. This big discrepancy still has something in common, that is all the literature believes that patients must have a liquid diet before they can have a soft diet. This mean every post palatoplasty patient must go through a liquid diet before a soft diet for the best outcome.³⁻¹¹

The majority of palatoplasty operating costs in Indonesia are covered by government insurance and several social organizations such Smile Train. The main principle in treating patients is patient safety, so that patients will be discharged immediately if there are no indications for hospitalization. Based on this principle, there is no indication of treating the patient just to wait for the patient to receive a soft diet in the hospital, therefore there must be a liquid diet in Post palatoplasty feeding guidelines for the best outcome.¹²⁻¹⁶

No studies have shown the best time to switch from a liquid diet to a soft diet, nor have any studies shown an adverse effect on an immediate soft diet. Gailey DG Studies demonstrate that the mechanical effects of feeding have little effect on wound complications or incision breakdown, nutritional intake plays a much larger role in wound complications than the mechanical motions involved with feeding. The best palatoplasty results will be obtained by a soft diet as soon as possible with good nutrition.⁷

Table 1. The results of study

SOURCE	TYPE OF STUDY	DIET	TIME	EXPLANATION
Onah II et al ³	retrospectif	liquid	3 weeks	significant increase in wound breakdown in patients commenced early (one-three weeks) on semisolid/solid diets as compared to those commenced on semisolid/solid diet later at one month. Nutrition may have played a role in fistula rate.
Natiowide Children Hospital ⁴	literature	Give soft, pureed or mashed foods	3 weeks	fluid post op before discharged from hospital
Pediatric-Ent Florida ⁵	literature	only soft food	3-4 weeks	fluid post op before discharged from hospital
Barragan, Julie et al ⁶	literature	clear liquid diet	0-3 days	no explanation
		full liquid diet	4-6 days	no explanation
		soft diet	>6 days	no explanation
Gailey DG ⁷	literature	Returning to normal presurgical feeding regimens	ASAP	Studies demonstrate that the mechanical effects of feeding have little effect on wound complications or incision breakdown, nutritional intake plays a much larger role in wound complications than the mechanical motions involved with feeding.
Raghavan U et al ⁸	literature	soft diet and avoid anything hard	first 24 hours	to protect the suture
Hoffman WY ⁹	literature	liquid	2 weeks	no explanation
		Semisolid	3-4 weeks	no explanation

SOURCE	TYPE OF STUDY	DIET	TIME	EXPLANATION
Cohen M et al ¹⁰	Retrospektif	Nothing Normal diet	The day surgery After the day	There were no complication in the unrestricted group.
Heishiro Fujikawa et al ¹¹	retrospective	Liquid food	First week	Eating in the immediate postoperative period did not increase the incidence of postoperative complications. Fluid foods can minimize excessive stress to palatal. Nutritional value plays an important role in wound healing.

Solid diets can cause damage to palatoplasty sutures, so solid diets must be postponed until the palatoplasty wound has closed completely. Onah II et al study results of a significant increase in wound breakdown in patients commenced early (one-three weeks) on semisolid/solid diets as compared to those commenced on semisolid/solid diet later at one month. For best results solid diet palatoplasty should be postponed after 1 month.³

CONCLUSION

Guidelines for post palatoplasty surgery must be made to provide the best results. Based on existing research and literature, the authors suggest including: a liquid diet after surgery, a soft diet as soon as possible, a solid diet after one month of surgery, and most importantly all diets must have good nutrition for Indonesia post palatoplasty feeding guidelines.

Correspondence regarding this article should be addressed to:

Muhammad Rizqy Setyarto. Consultant of craniofacial, Division of Plastic Reconstructive and Aesthetic Surgery, Dr. Kariadi Central-General Hospital, Semarang, Indonesia. Email: riza_prihadi@yahoo.com

ACKNOWLEDGEMENT

The author has no acknowledgement.

REFERENCES

1. Mai CT, Isenburg JL, Canfield MA, Meyer RE, Correa A, Alverson CJ, Lupo PJ, Riehle-Colarusso T, Cho SJ, Aggarwal D, Kirby RS. *National population-based estimates for major birth defects, 2010–2014. Birth Defects Research.* 2019; 111(18): 1420-1435.
2. Salari N, Darvishi N, Heydari M, Bokae S, Darvishi F, Mohammadi M. *Global prevalence of cleft palate, cleft lip and cleft palate and lip: A comprehensive systematic review and meta-analysis.* J Stomatol Oral Maxillofac Surg. 2022 Apr;123(2):110-120. doi: 10.1016/j.jormas.2021.05.008. Epub 2021 May 24. PMID: 34033944.
3. Onah II, Amanari CO, Onwuagha I, Jac-Okereke CA. *Outcomes of Cleft Palate Surgeries at the National Orthopedic Hospital, Enugu, Nigeria: November 2008 – November 2013.* Ann Ib Postgrad Med. 2020 Jun;18(1):S39-S44. PMID: 33071695; PMCID: PMC7513373.
4. Natiwide Children Hospital. *Cleft Palate Repair: Instructions After Surgery* (nationwidechildrens.org)
5. Pediatric-Ent St. Petersburg. *Post-Op Instructions: Palatoplasty.* Pediatric ENT (pediatric-ent.com)

6. Barragan, Julie; Andrada, Macy; Greenberg, Mercedes; Grib, Tatiana; Gerber, Samantha; and Dailor, Amanda. *Standardization of Postoperative Care Guidelines for Pediatric Cleft Palate Patients*. (2019). Master's Projects and Capstones. 965, .https://repository.usfca.edu/capstone/965
7. Gailey DG. *Feeding Infants with Cleft and the Postoperative Cleft Management*. Oral Maxillofac Surg Clin North Am. 2016 May;28(2):153-9. doi: 10.1016/j.coms.2015.12.003. PMID: 27150302.
8. Raghavan U, Vijayadev V, Rao D, Ullas G. *Postoperative Management of Cleft Lip and Palate Surgery*. Facial Plast Surg. 2018 Dec;34(6):605-611. doi: 10.1055/s-0038-1676381. Epub 2018 Dec 28. PMID: 30593076.
9. Hoffman WY. *Cleft palate*. In: Neligan PC, editor. *Plastic Surgery: Craniofacial, Head and Neck Surgery, Pediatric Plastic Surgery*. 3rd ed. Volume 3. Philadelphia: Saunders Elsevier; 2013. pp. 569–583.
10. Cohen M, Marschall MA, Schafer ME. *Immediate unrestricted feeding of infants following cleft lip and palate repair*. J Craniofac Surg. 1992 Jul;3(1):30-2. doi: 10.1097/00001665-199207000-00011. PMID: 1391246.
11. Fujikawa H, Wakami S, Motomura H. *The Influence of Palatoplasty on Eating Function*. Plast Reconstr Surg Glob Open. 2016 Aug 12;4(8):e840. doi: 10.1097/GOX.0000000000000837. PMID: 27622108; PMCID: PMC5010331.
12. Volk AS, Davis MJ, Desai P, Hollier LH. *The history and mission of smile train, a global cleft charity*. Oral and Maxillofacial Surgery Clinics. 2020 Aug 1;32(3):481-8.
13. Ambarriani AS. *Hospital financial performance in the Indonesian national health insurance era. Review Integrative Business & Economics Research*. 2014;4(1):367-79.
14. Cohen M, Marschall MA, Schafer ME. *Immediate unrestricted feeding of infants following cleft lip and palate repair*. J Craniofac Surg. 1992 ; 3(1):30–32
15. Kim EK, Lee TJ, Chae SW. *Effect of unrestricted bottle-feeding on early postoperative course after cleft palate repair*. J Craniofac Surg. 2009; 20 (2):1886–1888
16. Deshpande G. *Palatal Fistula and Dehiscence, Its Etiology and Consequences*. In *Surgical Atlas of Cleft Palate and Palatal Fistulae* 2022 Feb 9 (pp. 1-3). Singapore: Springer Singapore.