


Hemiuvulectomy: is it a suitable alternative?

Norma Samanta Romero-Castro,^{1,2} Leonel Ponce-Ávila,³
Daniel Sandoval-Guevara,² Rafael Luna-Aguilar,⁴ Alicia García-Verónica,^{1,2}
Natalia Hernández-Treviño,^{1,2} Salvador Reyes-Fernandez ^{1,2,4}

To cite: Romero-Castro NS, Ponce-Ávila L, Sandoval-Guevara D, *et al.* Hemiuvulectomy: is it a suitable alternative? *World J Pediatr Surg* 2026;**9**:e001139. doi:10.1136/wjps-2025-001139

Received 5 December 2025
Accepted 14 January 2026



© Author(s) (or their employer(s)) 2026. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ Group.

¹Cleft Lip Palate Program, Faculty of Dentistry Autonomous University of Guerrero, Acapulco, Guerrero, Mexico

²Postgraduate course in Implantology and Oral Rehabilitation, Faculty of Dentistry, Autonomous University of Guerrero, Acapulco, Guerrero, Mexico

³Oral and Maxillofacial Surgery Service, High Specialty Hospital, ISSSTE, Acapulco, Guerrero, Mexico

⁴Cleft Lip Palate Clinic, Acapulco General Hospital, IMSS-BIENESTAR, Acapulco, Guerrero, Mexico

Correspondence to

Dr Salvador Reyes-Fernandez; Salvadorreyes@uagro.mx

The uvula is a vital organ of the craniofacial complex that is responsible for speech, swallowing, and mastication.¹

It develops from the muscular component of the fourth pharyngeal arch during the first 6 weeks of life. Over the next 1 to 2 weeks, mesodermal tissues migrate and differentiate within the arch before organizing to form the specific muscle fibers that constitute the uvula muscle. It is the only intrinsic muscle of the soft palate; it is a paired, thin, sagittally oriented muscle that occupies the most medial and nasal position of the soft palate, occupying the posterior three-quarters of the velum.²

Like other intrinsic muscles, its primary function is to modify shape, not position. This muscle contributes to velopharyngeal competence through both active and passive mechanisms. The primary macroscopic movement induced by the uvula is to shorten the soft palate. This produces a localized protrusion of tissue (muscular, glandular, and connective tissue) on the medial and nasal aspect of the levator veli palatini muscle, known as the levator eminence, which contributes to active velopharyngeal closure.²

A bifid uvula can occur in isolation or in association with a submucous cleft.¹ The uvula is a delicate structure compared with the rest of the palate. During cleft palate repair, it can be difficult for surgeons to meticulously suture both hemiuvulae using the conventional repair technique and achieve satisfactory esthetic results.³

The esthetic reconstruction of the uvula is an important outcome measure from the parents' perspective; therefore, it should be repaired during palatoplasty. The conventional method for uvula repair involves suturing both hemiuvulae, which often results in a displaced, small, scarred, and shrunken uvula.⁴

Uvuloplasty techniques have been described to create a more esthetically pleasing uvula.

Bithrey *et al.* described complete unilateral excision of one hemiuvula.⁴ The single-hemiuvula-sparing technique offers excellent esthetic results and increases functionality. Resection of one hemiuvula is safe and physiological.⁵ The primary uvuloplasty method using one hemiuvula has been widely used by various surgeons in South America.⁶

During surgical procedures for cleft palate closure, we frequently encounter difficulties in closing the uvula. As mentioned by Chauhan *et al.*, this surgical step is often difficult. Closing both hemiuvulae becomes a challenge for achieving adequate esthetic results.³ It frequently happens to us when we are repairing a palate, and according to what Bithrey *et al.* report, when we attempt the exact union of both hemiuvulas to generate a single uvula, it ends up lateralized, small, and deformed.⁴

We believe that the often underestimated functions of the uvula should be considered during cleft palate repair. Another important factor to consider, as Bithrey himself points out, is that esthetics are an important outcome measure from the parents' perspective.⁴ According to reports by Rosell-Perry *et al.*, this technique not only does not affect velopharyngeal function, but also reduces the space in that area, decreasing the possibility of hypernasality.^{7,8}

In one of the operated cases diagnosed with submucous cleft palate with bifid uvula (figure 1A), we performed a palatoplasty using the Von Langenbeck technique. First, 2% lidocaine with 1:100 000 epinephrine was infiltrated into the surgical area, and an incision was made from the upper left retro-molar area. We followed the incision with a No. 12 scalpel blade over the palatal mucosa near the free gingiva up to the level of the canine. A midline incision was then made, and a tunnel was made between both incisions. The medial incision was extended to the apex of the hemiuvula on the same side.



Palatoplasty using the Von Langenbeck technique was performed on a patient with submucous cleft palate with bifid uvula. (A) Preoperative image. (B) Intraoperative image. (C) Postoperative image.

The nasal mucosa, oral mucosa, and muscular plane were then dissected. The same steps were then performed on the right side. Adequate hemostasis was achieved in each step.

The palate was closed with 3/0 absorbable polyglycolic acid suture, beginning with the nasal mucosal plane with simple inverted sutures, followed by closure of the muscular plane, achieving adequate closure of both planes. The oral mucosal plane was sutured posteriorly, and the uvula area was left for repair at the end of the procedure. It was decided to remove the right hemiuvula from its base because it was the smallest in volume and length. The left hemiuvula was repaired with two lateral sutures and one suture from the base of the hemiuvula to the deep muscular plane of the midline of the repaired soft palate (figure 1B). The patient underwent short- and long-term evaluations, yielding satisfactory results both esthetically and functionally. The patient was referred for speech therapy. The patient underwent short- and long-term evaluations, yielding satisfactory results both esthetically and functionally (figure 1C). The patient was referred for speech therapy.

Based on our experience, we believe that hemiuvulectomy for cleft palate repair may be a suitable alternative that reduces surgical difficulty and time with satisfactory esthetic and functional results. This surgical modification has indeed been described by some authors previously; however, it has been largely overlooked or infrequently considered. The contribution of this paper is to remind and raise awareness that this easy-to-perform technique can be carried out with less surgical risk, resulting in shorter surgical and anesthesia times, thereby reducing risks for the patient, minimizing exposure to anesthetic drugs, decreasing operating room time, and lowering costs, all while yielding very good and predictable results and avoiding the risk of uvular dehiscence. Therefore,

it is proposed that this technique becomes the new gold standard for uvular closure during palatal repair.

Contributors NSR-C: Responsible for planning, conducting, and reporting the work. LP-Á: Responsible for planning and conducting the work. AG-V: Responsible for conducting and reporting the work. NHT: Responsible for conducting and reporting the work. DS-G: Responsible for conducting and reporting the work. RL-A: Responsible for planning and conducting the work. SR-F: Responsible for planning, conducting, and reporting the work. The guarantor, SR-F, accepts full responsibility for the finished work and/or the conduct of the study, had access to the data, and controlled the decision to publish.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not applicable.

Ethics approval This study involves human participants and was approved by Bioético comité Posgrado de la Facultad de Odontología de la Universidad Autónoma de Guerrero EIRB-001/2025. Participants gave informed consent to participate in the study before taking part. The information was handled confidentially, and the patient's anonymity was respected.

Provenance and peer review Not commissioned; externally peer reviewed.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <https://creativecommons.org/licenses/by-nc/4.0/>.

ORCID iD

Salvador Reyes-Fernandez <https://orcid.org/0000-0002-4144-4113>

REFERENCES

- 1 Prasad P, Khalil E, Desai VB, et al. Bifid Uvula-An Enigma. *J Pharm Bioallied Sci* 2023;15:S806–9.
- 2 Farmer LDM, Dounas GD, Kwon HJ, et al. The Musculus Uvulae Muscle and the Effect of Furlow's Palatoplasty on It. *J Craniofac Surg* 2025.
- 3 Chauhan JS, Sharma S. Modified Uvuloplasty for Achieving Aesthetically Desired Uvula in Cleft Palate Repair. *J Maxillofac Oral Surg* 2022;21:454–9.
- 4 Bithrey S, Grau E, Bütow K-W. Uvuloplasty during soft palate cleft reconstruction. *Br J Oral Maxillofac Surg* 2024;62:501–2.
- 5 Ivanov AL, Sukacheva SA, Reshetnyak EI. Functional and aesthetic significance of the uvula in cleft palate repair. *Stomatologija (Mosk)* 2023;102:31–6.
- 6 Rossell-Perry P. About a "New" Technique for Uvular Repair. *Cleft Palate Craniofac J* 2020;57:660.
- 7 Rossell-Perry P, Navarro-Gaspardo C, Caceres-Nano E, et al. A prospective, randomized, double-blind clinical trial study to evaluate a method for uvular repair during primary palatoplasty. *J Plast Surg Hand Surg* 2014;48:132–5.
- 8 Rossell-Perry P, Olivencia-Flores C, Gavino-Gutierrez AM, et al. A Comparative Study to Evaluate the Functional Effect of Unilateral Uvuloplasty after Primary Palatoplasty. *Plast Reconstr Surg Glob Open* 2015;3:e415.