Case Report

Management of a Neglected Case of Isolated Cleft Palate: A Case Report and Focused Narrative Review

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Abstract

Background: Cleft palate is a congenital craniofacial anomaly that may impair speech, feeding and middle-ear function. Some children present well beyond the usual age for primary repair. **Case presentation:** An otherwise medically fit 12-year-old boy presented with an untreated cleft palate, speech distortion, articulation difficulty and hypernasality. Examination showed poor oral hygiene, granular pharyngitis, ectopic residual molar roots and an approximately 4-cm gap between the palatal processes involving both hard and soft palate (Veau type II). Routine investigations and two-dimensional echocardiography were normal. After parental counselling regarding surgery, complications and postoperative speech therapy, Bardach two-flap palatoplasty was performed. Recovery was uneventful; the child was discharged on postoperative day 4, and no complication was reported at 6-month follow-up. **Discussion:** This case illustrates late presentation and surgical management of cleft palate. Palatoplasty aims to establish oral–nasal separation and improve velopharyngeal function; however, speech outcomes after late repair require formal longitudinal assessment. Bardach two-flap palatoplasty is an established option for selected clefts. **Conclusion:** Late presentation warrants individualized anatomical assessment, repair and structured speech-language follow-up. An uncomplicated postoperative course alone does not establish long-term speech or growth outcomes.

Keywords: Isolated cleft palate, late presentation, palatoplasty, Bardach two-flap technique, hypernasality, case report.

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Introduction

Cleft palate is a congenital craniofacial difference that may occur in isolation or with cleft lip and other anomalies. Clinical effects may include feeding difficulty, abnormal speech resonance and articulation, eustachian tube dysfunction, middle-ear disease and dental abnormalities. Care is best coordinated by an interdisciplinary cleft team.[1,2] Palatal repair aims to separate the oral and nasal cavities, facilitate speech development and minimize fistula formation and adverse effects on maxillary growth. The international TOPS randomized trial found that, among medically fit infants with isolated cleft palate in adequately resourced settings, repair at 6 months was associated with less velopharyngeal insufficiency at 5 years than repair at 12 months.[3] These infant data do not directly predict outcomes in an older child with an untreated cleft, but reinforce the importance of timely access to care.

Bardach two-flap palatoplasty is an established technique in which bilateral mucoperiosteal flaps are mobilized for closure. Published comparisons emphasize that outcomes depend on cleft anatomy, tension-free closure and surgical execution, and no single technique is optimal for every patient.[4–6] We report the management of a 12-year-old boy with a neglected cleft palate and provide a focused narrative review relevant to late presentation and palatal repair.

Case Presentation

A 12-year-old boy presented to the pediatric surgery outpatient department with an untreated cleft palate. Functional complaints included speech distortion, articulation difficulty and hypernasality. The source case record did not document symptom duration, feeding history, hearing assessment, previous speech-language therapy or family history.

Intraoral examination revealed poor oral hygiene, granular pharyngitis described as a sign of recurrent upper respiratory tract infection, and ectopic residual molar roots. A wide gap measuring approximately 4 cm was present between the palatal processes [Figure 1]. Soft tissue and hard tissue examination shows incomplete cleft of the soft and hard palate (Veau Classification type II). No other dental anomalies were seen apart from ectopic molar roots.

Routine baseline investigations were within normal limits, and

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two-dimensional echocardiography was normal. Both parents were counselled regarding the operation, potential complications and the anticipated need for postoperative speech therapy.

Surgical Management: The child underwent Bardach two-flap palatoplasty [Figure 2]. Bilateral mucoperiosteal flaps were raised from the hard palate, preserving their vascular supply through the greater palatine neurovascular bundles. The flaps were mobilized medially and sutured to achieve tension-free closure of the palatal defect.

Postoperative Course and Follow-up: The immediate postoperative period was reported as uneventful. The child was discharged on postoperative day 4. [Figure 3] shows the postoperative day-1 appearance. At 6 months, no complications were reported. The patient was referred to audiologist and speech therapist for further evaluation.

Focused Narrative Review and Discussion

Clinical implications of late presentation: An untreated palatal cleft may permit persistent nasal air escape and reduced intraoral pressure during speech, contributing to hypernasality and articulation errors. Assessment should document cleft extent, palatal length and mobility, dentition, oral hygiene, hearing and middle-ear history, feeding and growth, and possible syndromic features.

Timing and goals of repair: Palatoplasty aims to achieve anatomical closure, restore velopharyngeal function, improve speech potential and minimize fistula and growth-related complications. Evidence on primary repair timing largely concerns infants. In the TOPS trial, surgery at 6 months was associated with a lower frequency of velopharyngeal insufficiency at 5 years than surgery at 12 months, with serious adverse events uncommon in both groups.[3] This does not provide a direct estimate of benefit for a 12-year-old. For late-presenting patients, counselling should explain that surgery can close the defect, while established speech patterns may require prolonged speech-language therapy and may not normalize with surgery alone.

Choice of palatoplasty technique: Bardach two-flap palatoplasty provides bilateral vascularized mucoperiosteal flaps for hard-palate closure and is used in suitable anatomy. A comparative study of modified von Langenbeck and Bardach repairs reported wound, fistula and hypernasality outcomes with both techniques, emphasizing the role of patient selection and technical execution.[4] A systematic review and meta-analysis found differences in fistula and velopharyngeal insufficiency outcomes across techniques, including lower pooled risks for Furlow repair than some comparator techniques; included studies varied in design and patient characteristics.[5] A large series also reported a low fistula incidence after two-flap palatoplasty, illustrating the influence of surgical expertise and case mix.[6]

Postoperative surveillance and multidisciplinary care: Follow-up should assess wound healing, oronasal fistula, nasal regurgitation, speech resonance and articulation, hearing, dental health and facial growth. A cleft team may include reconstructive surgery, pediatrics, otolaryngology, audiology, dentistry/orthodontics and speech-language pathology. Current American Cleft Palate Craniofacial Association guidance emphasizes interdisciplinary care and longitudinal evaluation.[1,2] In this case, no complication was recorded at 6 months, but objective speech and hearing outcomes is still under evaluation.

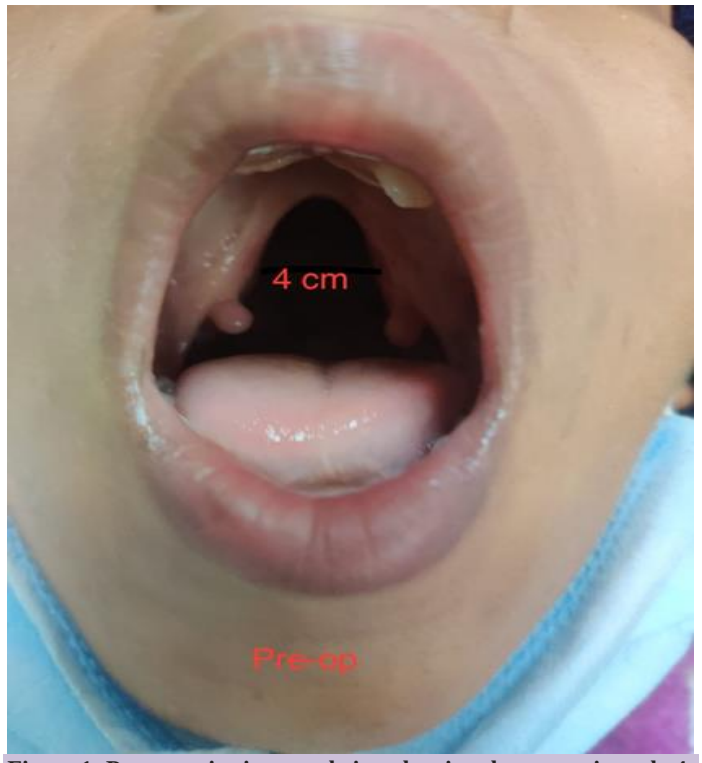


Figure 1: Preoperative intraoral view showing the approximately 4-cm palatal gap, as labelled in the source image.



Figure 2: Intraoperative view during Bardach two-flap palatoplasty.



Figure 3: Postoperative day-1 intraoral view.

Conclusion

This case describes Bardach two-flap palatoplasty in a 12-year-old boy presenting with a neglected cleft palate, hypernasality and articulation difficulty. The immediate postoperative course was uneventful, and no complication was reported at 6 months. Late-presenting patients require individualized surgical planning and long-term assessment of speech, velopharyngeal function, hearing and dentofacial development.

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Conflicts of interest

There are no conflicts of interest.

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