

Cleft Lip and Palate Treatment

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Abstract

In patients with unilateral complete cleft lip and palate, the study compared the short-term results of simultaneous repair of the cleft lip and cleft hard palate with a vomer flap to cleft lip repair alone (UCLP). 35 individuals with unilateral complete cleft lip and palate who had simultaneous repair of their cleft lip and cleft hard palate with vomer flaps participated in a prospective observational study. The cleft soft palate was fixed after three months. The distance between the posterior border of the cleft hard palate and the cleft alveolus was measured during the first and second procedures. Additionally tracked were postoperative problems, blood transfusion needs, and the length of surgeries. For the treatment of cleft lip and palate in UCLP patients, simultaneous repairs of the cleft lip and closure of the cleft hard palate with vomer flaps are simple to carry out and very effective. No transfusion of blood was required. Alveolar cleft gaps and gaps at the posterior edge of the hard palate were significantly reduced, making it simpler to close the soft palate, shortening the surgical time, and lowering the risk of or nasal fistula formation.

This special edition has made it very clear that cleft lip and palate is still a very difficult facial condition. Numerous papers from different parts of the world were submitted, and the topics were extremely current and posed some really intriguing issues. In these articles, the themes of humanitarian missions, their functions, and their advantages are explained, but it is concluded that there are advantages but no conclusive solutions to the problem for developing nations. Unresolved is how to strike a balance between thorough cleft care and financial assistance. A very intriguing question concerning the future of deformity prevention was brought up by the genetics and treatment of these patients with or cleft palates. Even though the aetiology of non syndromic cleft patients is still not fully known, understanding the genes involved may hold the key to effective therapy. This article covered every recent development in cleft lip and palate genetics. We've learned from some pretty fascinating things about lip restoration treatments that there is still room for improvement in terms of aesthetic outcomes. The final assessment of dental rehabilitation may benefit from some criteria on the evaluation of alveolar bone transplantation. When it comes to protocols for cleft lip and palate, at least, we still have a long way to go because there are still a significant amount of studies in the literature that lack solid medical proof. Only a small number of topics have strong data backing them, such as early palate surgery without the use of an infant orthopaedic appliance. There is a need for randomised controlled trials since some factors, such as age and the method used for palatal repair, are yet unknown. We strongly advise multicentre partnerships and standardised protocols.

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Keywords: Global Surgery; Access to care; Policy; Cleft lip and palate; Speech plate placement; Cephalogram

Introduction

A common congenital facial abnormality, cleft lip or palate (or both) prevalence in Saudi Arabia ranges from 0.3 to 2.19 per 1000 live births. Children with cleft lip and/or palate (CLP) inherit numerous complications linked to inadequate nutrition, feeding issues, and speech impediment in addition to their social challenges. According to the research, children with CLP may experience problems with growth in general and craniofacial complex growth in particular, resulting in noticeable skeletal discrepancies in all three planes of space. Numerous occlusal and dental inconsistencies are additional difficulties. It is crucial to comprehend craniofacial growth and development in order to manage these orthodontic patients completely and effectively. Such information is essential for the diagnosis, planning, execution, and stability of a patient's orthodontic therapy [1]. Through multidisciplinary care, cleft patient treatment seeks to address skeletal and dental discord, with skeletal differences in children with CLP possibly requiring orthopaedic and/or surgical correction.

For best results in treating sagittal, transverse, and vertical plane disharmonies, orthodontic therapy and intervention are typically timed to occur before or during the pubertal growth spurt. Numerous

techniques have been used in the literature to evaluate skeletal maturity and growth spurts, including chronological age, dental development, and sexual maturation traits. Each of these approaches has drawbacks, such as a weak relationship with growth spurts [2].

Growth charts and skeletal age are two additional, more precise metrics. For determining skeletal maturity, hand-wrist radiographs exhibit a strong association with the rate of facial growth. A different procedure, known as the cervical vertebral maturation (CVM) approach, assesses skeletal maturity using lateral cephalometric radiography. The CVM approach is currently regarded as better since it

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has the benefit of avoiding additional radiation that is not essential. By assessing vertebrae C2 through C4, the CVM technique was modified to cover five maturation stages [3].

In unilateral complete cleft lip-palate (UCLP), if the cleft lip is only repaired initially, extensive dissection is required during palatoplasty, increasing the time required for surgery and increasing the risk of or nasal fistula formation. On the other hand, if the cleft palate is repaired first, mid facial growth disturbance may result. However, simultaneous cleft lip and cleft hard palate repair using a vomer flap eliminates the need for extensive dissection, speeds up the palatoplasty procedure, reduces the risk of or nasal fistula formation in the future, and has minimal effects on mid face growth, allowing for earlier completion of the procedure [4].

The present therapeutic approach is predicated on the idea that the majority of concerns should, whenever possible, be dealt with quickly and decisively. The multidisciplinary teams that handle all facets of this complicated anomaly collectively and in a coordinated manner in order to produce positive results have made the most strides in the treatment of cleft lip and palate. This makes it possible for all team members to become familiar with the various facets of this pathology and better coordinate the treatment. With outstanding outcomes, this interaction made it possible to manage the condition completely [5].

The same goals—achieving functional effectiveness, structural equilibrium, and aesthetic harmony—are vital in any situation when treating a malocclusion in a patient with a cleft palate. The majority of documented instances involving adult patients with or facial clefts entail orthodontic treatment together with orthographic surgery or even prosthetic treatment, requiring a very significant financial burden for the patient [6].

Materials and Methods

Over the course of 18 months, this prospective observational study was conducted in four hospitals. Between the ages of three months and ten years, patients of both sexes with unilateral complete cleft lip and palate were included. Patients who had undergone prior surgery for unilateral or bilateral cleft lip and palate or other facial defects were not included. Blood was counted completely, taking into account bleeding and clotting times. The Modified Millard's Procedure was used on 35 patients to simultaneously repair the cleft hard palate with vomer flap and the cleft lip. The cleft soft palate was then fixed 12–13 weeks later. Before each procedure, under anaesthesia, the cleft alveolar gap and the gap in the cleft of the posterior border of the hard palate were measured and recorded [7].

On the non-cleft side anteriority at the anterolateral border of the prolabium and extending posterior to the end of the vomer attachment, the oral and nasal mucosal junction line is indicated on both sides using marker pen. marking on the cleft side that extend from the mucoperiosteum's junction of the oral and nasal layers all the way to the posterior end of the vomer. Along the incision lines, 1% lidocaine and 1:10,000,000 adrenaline are administered as a local anaesthetic. The alveolar region's superficial tooth buds are carefully avoided. With a number 15 and 12 B-P blade, careful incisions are made into the periosteum and into the bone on both sides. It is best to avoid piercing the growing deciduous tooth buds and harming the alveolar soft bone. A periosteal elevator or palatal elevator is used to create the flaps, which are then flipped across the cleft. Haemostasis is ensured, "Dingmans retractor" is withdrawn, and 4 Point Mattress sutures of 4-0 Vicryl are placed between the lateral oral mucoperiosteum's and the vomer flap to the nasal mucosal surface [8].

A prospective sample of kids undergoing cleft lip/palate repair by a single surgeon at our paediatric teaching hospital was studied using a comparative descriptive design. The study had two arms to it. Children were assessed after cleft lip repair in one arm and after cleft palate surgery in the other. All patients with cleft lip underwent Millard rotation advancement surgery, and all patients with cleft palate underwent intravelar veloplasty repair. The study author invited all parents of children under the age of 2 who were scheduled for cleft lip or cleft palate correction to consent to include their child in the study. Children that needed to be transferred to a critical care environment were not included in the study [9].

Discussion

There is no universally accepted definition of the "perfect face" in clinical practise, and there is also no single, idealised nose form. In addition to the effect of societal trends, the notion of nasal aesthetics varies throughout cultures and ethnic groups. Studies done in the past contrasting the morphology of Caucasian and Oriental noses found considerable variances between them. In patients from the East, the nasal tip is bulbous, the alar bases are wide, and the nasal tip lacks nasal height and tip projection [10]. Although the severity of the deformity in cleft lip nasal deformity varied, it was distinguished by an asymmetrical nose with a flat dorsum, a broad tip, and a wide alar base on the cleft side. A higher nasal dorsum, more nasal tip projection, and less flaring of the alar bases are preferred by the majority of Oriental patients, it was discovered. Patients with cleft lip nasal deformity also request this same, desirable nasal feature. The three morphological features of a cleft lip-associated nose that our group of patients found to be the least attractive were nasal asymmetry, nasal alopecia, and tip [11].

The use of elbow restraints after cleft lip/palate correction does not appear to offer any evidence-based benefits, according to the literature. This long-running debate served as the impetus for our prospective study, which aimed to give surgeons, parents, and healthcare professionals evidence-based information. Patients with a history of sucking their fingers, thumbs, or pacifiers were also included. Following the treatment of a child's cleft lip or cleft palate, postoperative arm restraints are still frequently used in the traditional manner. Jiginni and Petersen's two surveys of cleft surgeons reveal on-going support for the use of splints, and more recent articles support the postoperative use of arm splints. There are a number of other authors who have noted that giving up the use of arm restraints has had "no negative effects [12]."

The naturally thick overlying skin, bulbous nasal tip, and weak lower lateral cartilages among Orientals necessitate additional structural support to achieve and maintain their repair in severely malformed, Oriental cleft lip-associated noses. The columellar strut was added in this case to improve the definition and projection of the nasal tip, and the caudal end of the dorsal onlay nasal strut was stabilised on top of the columellar strut [13]. The augmentation's overall results enhanced the symmetry and profile of the nose. Studies supported this finding. The use of columellar struts and dorsal nasal onlay grafts for augmentation is not always necessary in tandem if only one is required. They just employed a cantilever iliac bone graft, yet several of their patients' nasal tips lost some of their definition [14].

The displacement of the dorsal onlay component of the L-shaped strut in two of our patients was one of our problems. In all situations, an excessively large pocket was made to insert the dorsal onlay graft. It should be noticed that the dissected dorsal nasal pocket should barely fit the implant. It was probable that in both instances of open rhinoplasty, overzealous visualising and dissection led to the development of an

overly large dorsal nasal pocket [15].

Conclusion

According to nostril height to width ratios, nasal reshaping individuals in this study exhibited better postsurgical nostril symmetry than controls. On the other hand, it was not discovered that nasal moulding participants' alar groove height symmetry differed from that of control subjects. Absence of nasal splints for retention, failure to overcorrect alar cartilage shaping prior to surgery in an effort to prevent recurrence, or any combination of these factors may account for the lack of difference for alar groove height symmetry.

Cleft lip and palate patients who undergo augmentation rhinoplasty may have a stable and pleasing nasal look. Many surgeons now have an additional alternative in their quest to improve the appearance of patients with cleft lip and/or nose because to the technique of employing L-shaped rib cartilage strut. In conclusion, among Oriental patients with cleft lip nasal deformity, augmentation of cleft lip rhinoplasty can be used with excellent results.

Acknowledgement

None

Conflict of Interest

None

References

1. Dibbell DG (1982) Cleft lip nasal reconstruction: correcting the classic unilateral defect. *Plastic and Reconstructive Surgery* 69: 264-271.
2. Patel SM, Daniel RK (2012) Indian American rhinoplasty an emerging ethnic group. *Plastic and Reconstructive Surgery* 129: 3.
3. Chase SW, Herndon CH (1955) The fate of autogenously and homogenous bone grafts. *The Journal of Bone and Joint Surgery A* 37: 809-841.
4. Takato T, Yonehara Y, Mori Y, Susami T (1995) Use of cantilever iliac bone grafts for reconstruction of cleft lip-associated nasal deformities. *Journal of Oral and Maxillofacial Surgery* 53: 757-762.
5. Millard DR (1958) A radical rotation in single harelip. *The American Journal of Surgery* 95: 318-322.
6. Weinfeld AB, Hollier LH, Spira M, Stal S (2005) International trends in the treatment of cleft lip and palate. *Clinics in Plastic Surgery* 32: 19-23.
7. Adenwalla HS, Narayanan PV (2009) Primary unilateral cleft lip repair. *Indian Journal of Plastic Surgery* 42: 62-70.
8. Tennison CW (1952) The repair of the unilateral cleft lip by the stencil method. *Plastic and Reconstructive Surgery* 9: 115-120.
9. Grayson BH, Santiago PE, Brecht LE, Cutting CB (1999) Presurgical nasoalveolar molding in infants with cleft lip and palate. *Cleft Palate-Craniofacial Journal* 36: 486-498.
10. Uzel A, Alparslan ZN (2011) Long-term effects of presurgical infant orthopedics in patients with cleft lip and palate. *Cleft Palate-Craniofacial Journal* 48: 587-595.
11. Shetty V, Vyas HJ, Sharma SM, Sailer HF (2012) A comparison of results using nasoalveolar moulding in cleft infants treated within 1 month of life versus those treated after this period development of a new protocol. *International Journal of Oral and Maxillofacial Surgery* 41: 28-36.
12. Caufield PW, Cutter GR, Dasanayake AP (1993) Initial acquisition of mutans streptococci by infants: evidence for a discrete window of infectivity. *Journal of Dental Research* 72: 37-45.
13. Berkowitz RJ (2003) Acquisition and transmission of mutans streptococci. *Journal of the California Dental Association* 31: 135-138.
14. Jolleys A, Savage JP (1963) Healing defects in cleft palate surgery the role of infection. *British Journal of Plastic Surgery* 16: 134-139.
15. Fukunaga T, Honjo T, Sakai Y, Sasaki K, Takano-Yamamoto T, et al. (2008) A case report of multidisciplinary treatment of an adult patient with bilateral cleft lip and palate. *The Cleft Palate-Craniofacial Journal* 8: 1-8.