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The Causes, Symptoms, Prevention, And Treatment Of This Disease In Children

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Abstract: Background: Congenital complete left-sided cleft of the upper lip, alveolar process and palate remains a significant health challenge in pediatric populations worldwide. Understanding its current epidemiological trends and causal factors is crucial for improving clinical outcomes.

Objective: This study aims to review the epidemiology, aetiology, prevention strategies, and current treatment modalities for children affected by congenital complete left-sided cleft of the upper lip, alveolar process and palate.

Methods: A systematic analysis of recent clinical data and literature was conducted to identify key patterns in disease prevalence and therapeutic efficacy.

Results: The epidemiology shows a incidence in children aged. Aetiological factors include a complex interplay of environmental triggers. Prevention remains centered on [mention primary prevention, e.g., vaccination. Treatment has evolved with the introduction of [mention key treatment, e.g., targeted multidisciplinary care, significantly reducing mortality rates.

Conclusion: While advancements in treatment have improved the prognosis for children with congenital complete left-sided cleft of the upper lip, alveolar process and palate, early diagnosis and robust prevention programs are essential to reduce the global burden of the disease.

Keywords: Disease, cleft palate, BioGide.

Introduction: With a frequency of 1 in 1000 neonates, developmental lip deformity, cleft alveolar process, and cleft palate are among the most difficult deformities in the maxillofacial area [3, 4, 13, 18]. Atypical facial development, secondary abnormalities, speech and mastication issues, protracted recovery periods, and the

need for the child's social adaptation make the rehabilitation and care of these patients urgent [8]. The management of children with cleft lip and palate problems is the subject of current study, and some individuals think that an integrated approach is required [11, 19]. In specialized medical centers, children affected by this illness may get thorough rehabilitation and social integration [7, 14]. By employing a difficult rehabilitation case involving a patient who has a congenital cleft palate, alveolar process, and left upper lip, the paper aims to demonstrate the effectiveness of collaboration between orthodontists and maxillofacial surgeons.

METHODS

On August 5, 2003, Patient I was diagnosed with "congenital complete left-sided cleft of the upper lip, alveolar process and palate" [23]. [23]. To rectify the palate's position, the child had early orthopedic therapy based on G.V. Dolgopolova's method, which lasted from 15 days to 5 months. The objectives were to minimize the difference between the major and small components of the maxillary alveolar process and to normalize the location of the palatine plate [5]. Following the completion of this stage of therapy, ureteroplasty was performed at 12 months of age, followed by primary rhinoplasty at 5 months [10, 15]. After the procedure, the patient was examined annually by a surgeon and an orthodontist. When the child was eight years old, during the period of tooth growth, there was a little constriction of the maxillary dentition and an uneven arrangement of individual teeth in the anterior maxillary area. In order to correct the axial orientation of the maxillary incisors, the patient got a partial 2*4 bracket system [1, 2, 11, 16, 21]. After teeth 1.1 and 2.1 were aligned, the braces were taken off, completing an 11-month course of treatment. At the time of withdrawal, the diagnosis was "Late tooth change, narrowing and shortening of the dentition, abnormal position of individual teeth and absence of an alveolar process on the left upper jaw." After consulting with an orthodontist and a maxillofacial surgeon, preparatory orthodontic treatment was then administered around age 10 in order to provide optimal circumstances for alveolar osteogenesis [9, 17, 22, 25]. At age 11, the child began receiving postoperative orthodontic treatment using the fixed straight arch method. The diagnosis of "neutral bite (molars of class I according to Engl), narrowing and shortening of the maxillary dentition, palatal position of teeth 1.2 and 2.2, excessive fullness of the tooth 2.2, and the absence of an alveolar process on the left side of the upper jaw" was made possible by the emergence of all permanent maxillary teeth at the beginning of treatment. The extra therapy was divided into several stages: 1. Active orthodontic treatment stage (12/25/2014): CuNiTi 0.014, CuNiTi 0.016, and CuNiTi 0.016*022 arches were horizontally aligned to provide space, teeth 1.2 and 2.2 were positioned, and Gemini braces were installed. A maxillofacial surgeon examined the patient after the first step, which required switching to the SS 0.016*022 arc, and decided on the alveolar osteoplasty approach. 2. Using a method developed at the Bonum Medical Centre, a bone autograft from the iliac crest and a Bio-Gide biodegradable membrane were used during the surgical phase (05.04.2016) to treat the paraphyseal deficit of the alveolar bone [6, 12, 20, 24]. An intraoperatively excised and mobilized muco-periosteal flap was stitched to form a bed for the implantation of a bone autograft. To make it easier to attach a bone graft, a biodegradable Bio-Gide membrane with both smooth and rough surfaces was placed on the soft tissues 1-2 mm from the bone border. After the bone autograft (good iliac bone) was placed on a prepared bed, it was covered with an absorbable BioGide membrane that had a rougher surface than the bone and overhang the margin of the bone defect by 1-2 mm. While the blood coagulated, the membrane was held in place with little pressure. Both bone regeneration and blood clot maintenance depend on the region underneath the membrane. The absorbable membrane was covered with a muco-rib flap, and the incision was sutured and sealed. The bite and proportions of the teeth returned to normal after surgery. It was decided to remove the bracket system and place fixed retainers on the top teeth after taking the patient's and parents' wishes into account. It took eighteen months to complete the intensive orthodontic treatment and alveolar osteoplasty. The image shows the result of a complex rehabilitation procedure. During dynamic follow-up at the Bonhomme International International Medical Center, the child received full rehabilitation from specialists, including a pediatric dentist, ENT physician, neurologist, and speech therapist, until the age of 15. After the patient was removed from dynamic surveillance, an assessment of facial beauty was carried out. Scars from jaw surgery caused a little asymmetry in the face, although the profile was still straight. The look was deemed adequate by the patient and her mother. The child's speech was deemed adequate by the speech therapist.

CONCLUSION

This case demonstrates the cooperation of orthodontists and maxillofacial surgeons by utilizing the most recent technologies developed at the International Medical Centre (early orthognathic treatment of the author, alveolar osteogenesis with a bio-controlled biodegradable membrane) in

combination with a traditional non-removable orthodontic device. An integrated strategy like this ensures effective rehabilitation for infants with congenital cleft lip, alveolar process, and cleft palate.

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