Clinics in Surgery

Short Communication
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Crouzon Syndrome

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Short Communication

Crouzon syndrome is very similar with apert syndrome, except that there is no change of hands and feet, so it's easier form. Rarely can occur slight mental retardation (this finding serves to Dif. Dg.). Crouzon Syndrome was first reported by a French Neurosurgeon, Octave Crouzon in 1912 [1,2]. Crouzon syndrome is the most common craniofacial dysostosis occurring without syndactyly. Because of the shallow orbital grooves, exophthalmoses, strabismus, nystagmus and hypertelorism are present. The nose is underdeveloped. The upper lip is regularly short. The face is noticeably asymmetrical.

The upper jaw is narrow and short with high arched palate. There is discomfort and density of the maxillary arch, pseudoprogenia, also permanent canines are mostly impacted, which due to underdevelopment of the upper jaw, do not have place in the dental arch where to erupt. Due to lack of space they remain either impacted or with ectopic location. Main characteristics of the Crouzon syndrome are: proptosis, midface hypoplasia, hypertelorism and class III malocclusion. Also patients with Crouzon syndrome tend to have ear problems.

Basic craniofacial examinations are: dental impressions, X-rays including a panorex for the lower jaw position, cephalograms to assess the relationship of the upper and lower jaws, CT (computed tomography) scan to assess skull growth, orbital size and jaw relationships. These scans can be converted into vivid, three-dimensional images of the skull and facial bones.

Orthodontic Treatment

The treatment should be aimed at stimulating the development and expansion of the upper jaw in the sagittal and transverse direction. The orthodontic mobile appliance type " Y ' and Delaire-mask should be used for ante-position of the upper jaw. The leveling of dental chains, as well as wearing fixed orthodontic appliances in the upper and lower jaw is indicated, because of the impacted upper canine teeth that occur as a result of underdevelopment of the upper jaw. When orthodontists create a space for impacted teeth, oral surgeon frees the impacted canine teeth, and they are placed in dental chain. After complete leveling of dental chains and preparation of the patient, maxillofacial surgeon access to the surgical therapy. It is necessary to make ante-position of the upper jaw, with or without using distractors [3-5]. High Le Fort I osteotomy is effective for midfacial deformity correction in patients with Crouzon syndrome [6]. After this stage, orthodontist definitely regulate vertical dimension of the bite, because after surgical treatment to a soft opening of the bite may occur. For this stage orthodontist use inter-maxillary rubbers of varying diameters. Differential diagnoses have to be made from Apert syndrome, Carpenters syndrome and Pfeiffer syndrome.

References

1. Kumar DS, Murugesan D, Murugan K, Subramanian D, Maheshwari SU. Crouzon Syndrom: Report in a Family. J Clin Diagn Res. 2016;10(1):ZJ02-3.
2. Torun GS, Akbulut A. Crouzon syndrome with multiple supernumerary teeth. Niger J Clin Pract. 2017;20(2):261-3.
3. Hariri F, Rahman ZA, Mahdah S, Mathaneswaran V, Ganesan D. A Novel Technique Using Customized Headgear for Fixation of Rigid External Distraction Device in an Infant with CrouzonSyndrome. J Craniofac Surg. 2015;26(8):e740-4.
4. Roussel LO, Myers RP, Girotto JA. Deep Venous Thrombosis in Teen With Crouzon Syndrome Post-Le-Fort III Osteofomy with rigid external distraction. J Craniofac Surg. 2015;26(8):e780-2. 4.
5. Rahimov C, Asadov R, Hajiyeva G, Verdiyev N, Novruzov Z, Farzaliyev I. Crouzon syndrome: Virtual planning of surgical treatment by application of internal distractors. Ann Maxillofac Surg. 2016;6(1):135-40.
6. Nakajima Y, Nakano H, Sumida T, Yamada T, Inoue K, Sugiyama G, et al. High Le Fort I osteotomy for correction of mid-face deformity in Crouzon syndrome. Congenit Anom (Kyoto). 2016;56(5):240-2.

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