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Biography

Rahaf Al.qadi , has completed her bachelor's degree at the age of 22 years from King Abdulaziz University in Saudi Arabia and post-graduate studies from The Saudi Commission of Health Specialties . She is currently working at The Ministry of Health as senior registrar in pediatric dentistry. She has published around 4 papers in reputed journals.

Management Of Anterior Crossbite Using Growth Modification

Abstract:

Anterior crossbite is a form of malocclusion characterized by the abnormal labiolingual relationship between the maxillary and mandibular incisors, often resulting in functional and aesthetic concerns. One common skeletal cause of anterior crossbite is maxillary retrognathism; a condition in which the maxilla is positioned posteriorly relative to the cranial base and mandible. If left untreated during the growth phase, this discrepancy can progress to a more severe skeletal Class III malocclusion. This case report presents a growing pediatric patient diagnosed with anterior crossbite secondary to a retrognathic maxilla. The patient was treated using a growth modification approach involving a protraction face mask appliance. The primary objective was to stimulate forward growth of the maxilla, thereby correcting the skeletal discrepancy and improving occlusal harmony. Early orthopedic intervention in such cases is critical to achieve favorable skeletal and dental outcomes and to potentially avoid the need for surgical correction in the future. A seven-year-old healthy Saudi male patient (ASA I) with no medications intake and no known drug allergies (NKDA). He did full dental rehabilitation under GA in 2021. He has class III skeletal pattern due to retrognathic maxilla manifested as anterior crossbite with functional shift. Cephalometric radiograph was done before the treatment and the interpretation showed:

- Skeletally class III due to retrognathic maxilla.
- Hyperdivergent growth pattern.
- More vertical than horizontal growth.
- Normal LFH.
- Proclined and protruded upper and lower incisors.

Cervical vertebra maturation staging (CVMS) was checked through the lateral cephalometric, and it showed that the patient is in stage CS1 which is a perfect timing to start growth modification using face mask. Therefore, Face mask therapy was decided to be used for him (elastics used were (450g) at 30-degree inclination for each side and worn for 14 hours daily including sleep).