Impact of orthodontic treatment on craniofacial asymmetries

The value of the Frontal Delaire cephalometric analysis

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Abstract :

Craniofacial asymmetries such as TORSION, LATERAL ROTATION-FLEXION and STRAIN result in an asymmetry of the maxilla, a bone closely linked to the skull base. These maxillary asymmetries can be perfectly detected thanks to the analysis of the dental arch, which show a transversal asymmetry (difference in width between the right and left sides), sagittal asymmetry (different mesialization of the teeth on the right and left sides) and vertical asymmetry (tilting of the occlusal plane). Orthodontic treatments will allow the symmetrization of the dental arches in the three dimensions of space by dentoalveolar compensations, to a greater or lesser extent depending on the patient's age. This symmetrization of the arches associated with physiotherapy will allow orofacial functions symmetrization, such as alternating unilateral mastication.

By showing several clinical cases treated with different devices at different ages, this presentation will emphazise the impact of this anatomical and functional symmetrization on the whole craniofacial skeleton. The frontal Delaire cephalometric analysis given by

the software “Delaire evolution”, and particularly the patient's midline, the mandibular symmetry, the superimpositions before and after treatment are of exceptional value to assess the craniofacial growth balance and the improvement of craniofacial symmetry after orthodontic treatment.