Cephalometric assessment of craniofacial structures in patients with cleft lip and palate

This retrospective study describes the craniofacial architecture of post-pubertal patients with cleft lip and palate by using DELAIRE whole skull analysis along with the analysis by SEGNER AND HASUND. 177 cephalometric X-Ray films from a group of patients (114 male, 63 female) of the former Wolfgang Rosenthal Clinic Thallwitz, Germany, were analyzed. Typical changes in the viscero-cranium (mandibular and maxillary retrognathia in a vertical basal open relationship) were accompanied by small yet statistically significant changes to the neuro-cranium. The study revealed mid-face deficits in the sagittal plane and a reduced height of the mid-face in favour of the lower face. Furthermore, a reduced craniofacial base line and cranial height and a reduced angle between the cranial base and craniofacial base line were evident. The angle between the cranial base and the basilar slope was enlarged, suggesting an abnormal posture of the cervical spine in CLP patients. Cleft lip and palate along with late-closure corrective surgery may cause complex effects on the entire craniofacial architecture including, but not limited to the facial region. Whole skull analyses – such as DELAIRE analysis – are beneficial in assessing abnormal dimensions extending beyond the face and oral cavity to the entire viscero-cranium and neuro-cranium in general as might commonly occur in cleft lip and palate patients.

Biography

Philine H Metelmann earned her Degree in Dentistry at Greifswald University, Germany. She completed her Doctorate in the field of Comprehensive Cancer Prevention for which she received the nomination for Felix Burda Award 2015. In 2012 she was awarded a grant from DAAD (German Academic Exchange Service) to continue her research and education as a visiting student at University of Minnesota, USA. After working in a private practice she is currently doing an Orthodontic Residency and carries out different research projects.

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