

State of the art in orthognathic surgery

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The structure and function of the muscles of the masticatory and orofacial complexes, including their associated connective tissues are of profound interest to surgeons because of their potential roles in relapse after correction of skeletal dysplasias. Efforts to surgically correct malocclusions surgically must take into consideration the relationship between the muscles and bones of the craniofacial complex in order to be most effective. The rationale for this point of view can be found in the concept of adaptation. From a physiologic perspective, the concept of adaptation refers to the structural and functional changes that serve to maintain or to enhance functional capabilities in a changing environment during the lifetime of the individual. Like biological systems throughout the body, adaptive change within the muscles and skeletal components of the craniofacial complex is governed by the principles of homeorhesis, or a constancy of the process by which development comes about, and homeostasis, or the tendency for the system to remain constant. At any one point in time, the muscles and bones of the craniofacial complex are essentially in a balanced, homeostatic condition. In other words, tensions produced by contraction of the muscles of the orofacial and masticatory complexes and by stretch of soft tissues are effectively dissipated by the associated skeletal components. Variants of normal and even abnormal maxillomandibular relationships are both characterized by a homeostatic relationship. However, if something is done to upset this balance between muscles and associated soft tissues on the one hand and bone on the other for example if the function of the muscle and/or the position of the bone is altered dramatically and chronically then the process begins for establishment of a new balance, of a new homeostatic condition. The primary purpose of this talk is to show the alterations in function, esthetics and air way for patients treated by clockwise and counterclockwise rotation of maxillofacial complex.

Biography

Rafael Seabra Louro has completed his PhD at the age of 33 years from UNICAMP University, Piracicaba, São Paulo, Brazil. He is the Director of resident program in Oral and Maxillofacial Surgery at Federal Fluminense University since 2006, a member of the board of Brazilian College of Surgeons and International Faculty of AO-ASIF. He has published more than 18 papers in reputed journals and his special areas of interest are: orthognathic surgery, trauma, implants and mandibular reconstruction.

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