The Relationship of Facial Asymmetry and Bite Force to Handedness in Iraqi adult Sample

A Thesis

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Abstract

Facial asymmetry is a normal finding in clinically symmetrical faces. The asymmetry in general was either functional and/or structural in nature. The objective of this study was to investigate the relationship of the amount and direction of facial asymmetry in clinically symmetrical faces with class I normal occlusion to handedness, and to discover if there is any relation of occlusal bite force with handedness and facial asymmetry in Iraqi Arab adult sample.

The sample composed of 60 subjects (30 right-handers and 30 lefthanders) with equal number for each gender. All subjects had clinically symmetrical faces with class I normal occlusion and age range 18-25 years. After clinical examination of each subject, a digital posteroanterior radiography and bite force was conducted in these subjects. Method of triangulation was used to measure various face areas using AutoCAD program 2008. The surface areas of these triangles were compared with their equivalents on the contralateral side.

The results showed that skeletal asymmetry was present even in clinically symmetrical faces with teeth in normal occlusion. The areas on the left side were found to be significantly larger than those on the right one in righthanders. Left-handers were inconsistent in facial asymmetry, but they tended to have larger facial areas on the right side than the left one. The amount of asymmetry was least in dental region and greater at lateral maxillary and mandibular areas. In conclusion, the facial dimensions tend to be larger in males than in females. Bite force was independent of handedness. Males have significantly greater molar bite force than females.

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