



Relationship between dimensions of masticatory muscles (masseter and lateral pterygoid) and skeletal dimensions: a study of 60 cases

Authors :

Ait Rai Wijdane, Azaroual Mohamed Faouzi



Institutions :

Faculté internationale de médecine dentaire de Rabat, Maroc

Abstract :

Introduction: The masticatory muscles are critical in determining the morphology of the facial skeleton. The objective of this work was to study the relationship between the skeletal dimensions in the sagittal and vertical directions and the dimensions of the masseter and lateral pterygoid masticatory muscles.

Material and method: A descriptive cross-sectional study was conducted from July 1 to August 30, 2022, based on CT scans of the skull of a sample of 60 patients with different facial morphologies who came to the Bourgogne radiology center in Rabat.

Results: The overall sample included 60 CT scans of which 30 were women (50%) and 30 were men (50%) with an average age of 35.8 ± 9.1 years. Thirty patients (20.3%) showed a statistically significant difference between the dimensions of the masseter and lateral pterygoid muscles on the right and left sides in terms of thickness, width and length. Thirteen hypodivergent patients (10.4%) had skeletal class II, whereas 47 hyperdivergent patients (31.2%) had class III. Twenty patients (14.4%) revealed that the vertical direction impacted the dimensions of the masseter muscle.

Conclusion: While thickness is the dimension of the masseter muscle that correlates significantly with skeletal dimensions in the vertical and sagittal directions, for the lateral pterygoid muscle it is length and width that correlate significantly with vertical skeletal dimensions.