

Insertion area in the mandible masticatory muscles for use in finite element analyses [Área de inserción en la mandíbula de los músculos de masticación para ser utilizados en análisis por elementos finitos]

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To validate the virtual finite element analysis (FEA) results, it is needed that the mathematical models take into account the insertion area. Thus, the aim of this study was to measure the insertion area of masticatory muscles in the mandible in human cadavers to be used in FEA. The insertion area of the masticatory mandible's muscles was measured on both sides of fifty human cadavers throughout digital photos and software. The insertion area of the masseter was $7.47(\pm 0.41)$ cm², the temporal (inner portion) was $3.05(\pm 0.13)$ cm², the temporal (outer portion) was $2.25(\pm 0.28)$ cm², the medial pterygoid was $2.2(\pm 0.23)$ cm², and the lateral pterygoid was $0.8(\pm 0.05)$ cm². In conclusion, there is enough data to be used for the finite element analysis. © 2015, Universidad de la Frontera.

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Finite element analysis

Insertion area

Masticatory muscles