16 - Miscellaneous

OC040 - (22716) - KINEMATIC ANALYSIS OF MASTICATION: FUNCTIONAL DENTITION VS. DENTURE WEARERS

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Edentulism is a condition whose incidence increases as the population ages. This condition can force individuals to modify their diet, tending to consume softer foods. The objective of this study is to analyze the mastication of subjects with complete dentures and those with functional dentition (21 or more teeth) (n=10).

Mastication was evaluated using 36 foods selected from Chilean cuisine. For this purpose, the AG501 electromagnetic articulograph (Carstens Medizinelektronik GmbH, Bovenden, Germany) was used. This device records the movement of a sensor attached to the subject's mandible. Participants were asked to perform Posselt's polygons and then to chew the foods. Data were processed using Matlab (R2020, Mathworks, Natick, MA, USA), and the area of Posselt's polygons, the area of masticatory cycles in each plane, and the speed of ascent and descent during mastication were obtained. Data were analyzed using SPSS (D’Agostino test, independent samples t-test, Mann-Whitney U test, $p<0.05$).

In Posselt's polygons, the horizontal polygon showed a larger area in subjects with functional dentition. During mastication, 4 foods showed differences in the sagittal plane, and 30 showed differences in the horizontal plane. Speeds did not show significant differences between the groups.

The horizontal polygon showed greater differences in both groups, both during mastication and in Posselt's polygons. This may be due to the instability of the prosthesis.

Palavras-chave : Chewing, Electromagnetic Articulograph, Posselt Polygon