Gender differences in masticatory movement path and rhythm in dentate adults

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Abstract

*Purpose:* The purpose of this study was to clarify whether there might be a gender difference in masticatory movement path and rhythm in dentate adults.

*Methods:* Thirty healthy males and 30 healthy females were asked to chew softened chewing gum on their habitual chewing side for 20 sec, and the movement of the mandibular incisal point was recorded using mandibular kinesiograph. For 10 cycles from the fifth cycle, the spatial and temporal parameters (spatial: amounts of vertical and lateral movements; temporal: opening, closing, occluding, and cycle times) of masticatory movement path and rhythm and the parameters representing the stability of masticatory movement path and rhythm were calculated and compared between males and females.

*Results:* The values of the spatial parameters were significantly greater for males than for females. The values of the temporal parameters were smaller for males than for females, and significant differences were found in all parameters except occluding time. However, there was no statistically significant difference in the parameters representing the stability of masticatory movement path and rhythm. 

*Conclusion:* From these results it was suggested that although there were no differences in the stability of masticatory movement path and rhythm between genders, there were gender differences in the spatial and temporal parameters of masticatory movement path and rhythm.