

The Immediate Effects of Occlusal splint on the Mandibular Movement velocity in Healthy Individuals

吳慶榕

Ching Zong Wu;Sun Long Chou

Abstract

The relationship between the morphologic characteristics of facial skeleton and the function of the masticatory system has been studied extensively. Mandibular movement velocity is one of the parameters used to evaluate the mandibular function. However, the interaction between dentofacial morphology and mandibular movement velocity is unclear. The aims of this study were to investigate the mandibular movement velocity in different dentofacial morphology of young adults and observe the association between different characteristics of the dentofacial morphology and the velocity of mandibular movement. One hundred twenty seven young adults (84 males, 43 females, age ranged from 21 to 26 years) were observed by using Myotronics Kinesiograph K-6 model for the measurement of jaw motion velocity. Five consecutive open-close strokes were recorded for evaluating the following parameters. (1) the maximal opening and closing velocity, (2) the average opening and closing velocity, and (3) the maximal velocity of terminal tooth contact. Dentofacial morphology was evaluated with conventional lateral cephalometric radiographs and dental cast. Analysis of data indicated that the correlation between the opening and closing velocity among individual was high ($p < 0.01$), but there existed large interindividual variation. Only the maximum and average closing velocity of the male subjects had the significant association with the position of upper incisor ($p < 0.05$). It could be concluded that there existed weak correlation between the velocity of mandibular movement and dentofacial morphology.