

denture adhesives are widely used, there are few quantitative data on the effects of an adhesive on denture retention and stability during normal functional activities. The purpose of this investigation was to study the influence of denture adhesive on the surface EMG activity of the masticatory muscles in a sample of complete denture wearers. In this study 6 denture wearers were investigated. Surface EMG recordings were obtained from left and right anterior temporal and masseter muscle and from the sub-mandibular group in the region of the anterior belly of the digastric muscle on the left and right side. Data were recorded during standardized jaw positions that included clenching in the position of maximal intercuspation of teeth (at 100%, 50% and 25% of the maximum activity), lateral eccentric positions, maximal lateral eccentric positions, protrusion, maximal protrusion and wide opening. The results demonstrated higher digastric muscle activity in protrusion with the teeth at an edge-to-edge position after the use of adhesive ($p < 0.05$). In the laterotrusion position, after the use of adhesive, the working side elevator muscles activities increased, although without any statistical significance ($p > 0.05$). This investigation demonstrated that patients were able to produce greater levels of muscle activity in protrusive and laterotrusion positions with the use of adhesive.

63.

Measurement of Factors Influencing Mandibular Function in Dental Students in Croatia

Valentić-Peruzović M, Illeš D, Alajbeg IZ.

Department of Prosthodontics, School of Dental Medicine University of Zagreb, Croatia

The aim of this study was to measure main variables influencing mandibular function-movements of mandible during chewing, speech and breathing. Measurements taken were: vertical and horizontal overlap of central incisors, side shift from centric relation (CR) to maximal intercuspation (MI) measured in the sagittal and frontal plain, maximal mouth opening, maximal mouth opening using force, maximal dextrorotation and sinistrorotation. Method used included the same number of subjects and examiners. This was achieved by educating final year dental students before the measurement took place. They were both examiners and subjects for each other. Comparison of this method to single examiner and multiple experienced examiner methods revealed no statistically different results. Measurements were divided by gender, dental status, and the number of signs and symptoms relat-

ed to temporomandibular dysfunctions (TMD) that were then statistically analyzed.

There were no significant differences between the results of this study and findings in current literature.

64.

The Centric Relation of the Mandible Represented by Computer Aided Graphic Models - The Aspect of the Basic Line of the Temporomandibular Joint

Suljak A¹, Prčić A², Vuković A², Ajanović M.¹

¹Department of Prosthodontics, School of Dental Medicine University of Sarajevo

²Department of Dental Pathology, School of Dental Medicine University of Sarajevo, Bosnia and Herzegovina

A large number of the research carried out on the temporomandibular joint (TMJ) has been related to the interrelation between the articular surfaces within the joint. Research was done on conserved skulls. The results obtained show that the articular surface of the condyle, in the position of the centric relation, regarding the upper surface, has a retruded position. The results of current research differ. The aim of the research was to perform accurate osteometry of the joint bone structure, transfer the obtained data into the computer and with the aid of computer aided three dimensional analyses, to arrive at certain conclusions.

The basic line of the TMJ was used as a reference point. The main task of the research was to discover another possible reference line, connecting the midpoints of the front and the back edge of the temporal bone articular surface. The basic line of the TMJ was found as a new reference line. The research results of the interrelation of the TMJ surfaces are represented by the computer aided graphic model. Two software application packages, AutoCAD and Euclid were used for the graphic analysis. Based on the obtained results, the computer algorithm was needed to enable connection of the reference points in space using mathematical laws. The retroposition of the top of condyle could not be seen.