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A COMPARISON OF THE CHANGE IN MANDIBULAR CONDYLE-FOSSA RELATIONSHIP WITH THE USE OF ANATOMIC TEETH AND SEMIANATOMIC TEETH IN COMPLETE DENTURE PROSTHESIS – AN IN VIVO STUDY

By

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ABSTRACT

BACKGROUND AND OBJECTIVES: Centric relation is one of the most controversial and most debatable topics in the field of dentistry. The reason why centric relation is important to all prosthodontists is it is that it is the reference point for restoring occlusion or in other words the starting point of rehabilitation. Any error in establishing centric relation can be clinically disastrous and penalties of error are high. The type of posterior form to be used in complete dentures is also a principal topic in prosthodontics. Studies have proved that better chewing efficiency can be attained when anatomic tooth forms i.e 33 degree tooth forms are used . However semianatomic tooth forms have their own advantages, balanced occlusion is easier to attain when semi anatomic teeth are used. However the effect of these posterior tooth forms does on the condyle fossa relation in centric occlusion has never been studied radiographically.

METHOD: In this study 20 edentulous patients were selected with good neuromuscular control. For each patient a pair of dentures with anatomic teeth and with semi anatomic teeth were fabricated. The primary impressions were recorded using impression compound.. Primary casts were poured using dental plaster. Custom trays were fabricated and boder molding was performed using green stick compound. Final impressions were recorded using Zinc oxide eugenol (DPI) impression material. Master cuts were poured using dental stone. These casts were duplicated using liquid silicone (Duplident). Record bases and occlusal rims were fabricated Tentative centric relation was recorded and the hinge axis was recorded using Hanau spring bow .The casts were mounted on a Hanau Wide Vue articulator.

Extra oral tracers were attached and the gothic arch tracing was carried out. The articulator was carried programmed A DVT record of both the condyles in centric relation was taken. The occlusal rims were duplicated using a silicone putty index (aquasil, Dentsply). On one set of rims was used for arrangement of anatomic teeth and the other set was used for arrangement of semi anatomic teeth in class 1 relation. Try in was carried out satisfactorily. The dentures were flasked using three pour technique. The dentures were then remounted onto the articulator and clinical remount was carried out.Both dentures were inserted into the patients mouth . DVTs was recorded during the denture insertion process of both the condyles . These DVTs were compared to the DVT taken during jaw relation process. The measurements of the condyle fossa relation were carried out using Zhangs method and Brekwas method.

RESULTS: The The obtained values were then subjected to statistical analysis using unpaired 't' test.Results obtained after statistical analysis indicated that there was no statistical change in the condyle fossa relation recorded during jaw relation and during insertion of dentures with anatomic teeth. Also there was no statistically change in the condyle fossa relation recorded during jaw relation and during insertion of dentures with semi anatomic

INTERPRETATION AND CONCLUSION: Thus within limitations of this study it was concluded that the condyle fossa relation established during jaw relation does not change with the change in posterior tooth form used.