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The use of a deprogramming appliance to obtain centric relation records

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ABSTRACT

The purpose of this study was to investigate the effect of an anterior flat plane deprogramming appliance (Jig) in 40 subjects for whom centric relation (CR) records were obtained before and after the use of the appliance. Incisal overbite and overjet dimensions and three-dimensional instrument condylar representation using the Panadent condylar path indicator (CPI) were recorded from maximum intercuspation and centric relation. Subjects were assessed subjectively to determine the degree of difficulty manipulating the mandible to obtain the centric relation record. The mean overbite difference from maximum intercuspation (MI) to centric relation without (CR) and with (CRJ) the appliance were statistically significant and decreased 1.58 mm and 2.23 mm, respectively. The mean overjet values from MI to CR and CRJ were statistically significant and increased .44 mm and .57 mm, respectively. Significant differences were determined on the Panadent articulator for the absolute vertical (Z) and absolute horizontal (X) values for centric relation with and without the appliance. The number of subjects who exceeded the threshold values of 2 mm for CPI recordings in either the horizontal or vertical direction was 7 (18%) from MI to CR and 16 (40%) from MI to CRJ. The Lucia-type jig deprogramming appliance provides a centric relation record with greater displacement from MI than a centric relation record alone. This appliance may be a useful adjunct in a patient where mandibular manipulation in taking a centric relation bite registration is deemed not easy.

KEY WORDS: Anterior deprogramming appliance, Articulator, Bite registration, Centric relation, Condylar displacement.

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