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A NOVEL METHOD OF RECORDING THE VERTICAL DIMENSION AT REST IN COMPLETELY EDENTULOUS PATIENTS UTILIZING THE DIVINE PROPORTION

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ABSTRACT

Accurate determination of the vertical dimension (OVD) of occlusion during the fabrication of complete dentures is essential to prevent damage to the surrounding oral structures. However the currently applied methods are mostly subjective and rely on the determination of the vertical dimension at rest (RVD) to calculate the occlusal vertical dimension. This study proposes the use of a mathematically designed caliper based on the divine proportions to determine the RVD and subsequently OVD offering an objective and repeatable technique.

INTRODUCTION

The prosthodontist is continually confronted with problems relating to the determination of vertical dimension at rest (RVD) when constructing complete dentures⁽¹⁻⁴⁾. The conventional methods for determining RVD include swallowing^(5,6), phonetics^(2,7,8) and the physiologic approach^(2,9,10). However, the dentist must comprehend the limitations of these techniques such as, the individual technique, the patient's comprehension of what the dentist is trying to accomplish and the habit patterns of the patient's neuromuscular mechanism. These factors contribute to the difficulty of establishing RVD⁽¹¹⁾.

There is little disagreement about the importance of establishing the correct vertical relation of occlusion (OVD), however finding the most reliable method remains to be a problem after many years of study. It is much easier to state that there should be a certain inter-occlusal distance when the mandible is in its physiologic rest position than it is to establish that distance. In fact, it is difficult even to observe or measure the inter-occlusal distance, because such attempts in the mouth disturb the physiologic rest of the Mandibular musculature. As soon as the patient tries to help, the musculature is no longer at rest⁽¹²⁻¹⁵⁾.

Additionally, the clinical rest position is highly variable and can be influenced by a number of factors

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