An accurate and stable construction bite by Jig method

Joe V Mathew*, Venkatesh Garla, Geetha Doddamani, Kenneth F H Tan

Email: drjoe@rediffmail.com

Abstract

Construction bite registration is the first and crucial step in fabrication of any Myofunctional appliance. Wax bite registration is the most popular and conventional method; however, it has inherent deficiencies of lesser accuracy and high warpage on storage. An alternate method has been devised to register an accurate and stable construction bite by the Jig method.

Key words: Myofunctional appliance, construction bite, Jig method

Introduction

The materials used must have the following characteristics to obtain a satisfactory construction bite: low resistance to mandibular closure, no adherence to the teeth, plasticity, suitable working time, appropriate rigidity after setting, precision of details, dimensional stability, easy handling, acceptability to the patient, and low cost.

Wax is the most utilized material because of its ease in handling and low cost; however, it is known for distortion. The distortion is attributed to memory effect phenomenon and residual stresses due to non-uniform heating.1

The greatest concern is the possible distortion of construction wax bite during transport to the lab. Mounting process may also introduce distortion due to inadvertent forces exerted. It is proven that polyvinyl siloxane is the most accurate and stable record medium;2 even 1 kg of the compressive force would not introduce any vertical error.3

Method

Addition silicon impression material is accurate in recording the details, but because of the long setting time it cannot be solely used for bite registration, as the patient cannot position the mandible for that long, hence, a jig is made with a greenstick tracing compound between the upper and the lower incisors.

The green stick compound (DPI PINNACLE TRACING STICKS, Dental Products of India, Mumbai, India) is softened over a flame and a ball of mass is made with gloved and wetted fingers. It is then adapted to the palatal aspect of the upper incisors with labial surfaces, minimally covered for the mid lines to be visible.

The mandible is guided to the planned position, so that the indentations of lower incisors are recorded. The material is cooled immediately with a three-way syringe.

How to cite this article: Joe V Mathew, Venkatesh Garla, Geetha Doddamani, Kenneth F H Tan. (2016). An accurate and stable construction bite by Jig method. MJDS, 1(2), 36-38.
Using a jig makes it easy to judge the buccal interocclusal relation, as no material is present interocclusally (Figures 1 and 2). The jig also acts as a guide and a stabilizer for putty construction bite registration.

An important aspect is to have a bleb free cast, otherwise the record would not fit.

The putty material encroaching onto the soft tissue has to be trimmed with Bard Parker blade to avoid hindrance to full seating of the record on the casts due to Realeff effect (Figures 5, 6, 7, and 8).
Mathew J V, et al: Construction bite by Jig method

Names of the manufacturers
1. DPI PINNACLE TRACING STICKS, (Green stick compound) Dental Products of India, Mumbai, India
2. Aquasil soft putty, DENTSPLY DETREY GmbH, GERMANY

References

Figure 7: The construction bite on cast-Frontal view

Figure 8: The construction bite on cast-Buccal view