Einleitung

The wax patterns of the metallic frameworks of the removable partial dentures could be made directly on the cast [1,2,3], using profiled waxes like: "Ti-Light" or "LiWa" (light curing "waxes").

Problemstellung

This study intends to describe the problems, failures of this new technology.

Material und Methoden

The study was made at the Department of Removable Partial Dentures Technology, Specialization Dental Technology, University School of Dentistry, Timisoara, Romania, between 2004 and 2006, on 30 casts with different edentation types [4]. The wax patterns of removable partial dentures metallic frameworks were made directly on the cast using profiled waxes like: "Ti-Light" (Ti Research GbR, Mainbernheim, Germany) and "LiWa" (WP Dental GmbH Bever/Hamburg).
Fig. 2. Waxing up directly on the cast with light curing material

Fig. 3. Wax up on the cast before light curing: a. "Ti Light"  
Fig. 3. Wax up on the cast before light curing: b."LiWa"

Fig. 4. The wax pattern was light-cured five minutes in a light-curing equipment (Spectramat; Ivovlar, Schaan, Liechtenstein)

Fig. 5. After light-curing the wax pattern "Ti Light" turns his colour from pink to yellow, while "LiWa" wax pattern remains with the same colour


**Ergebnisse**

Light-curing waxes are sticky (to casts and instruments) and difficult to use. Therefore they need precision in profiles applying. Even the wax patterns seem to have a great elasticity, their removing from the cast have to be made with great patience, in not producing materials cracks or fractures.
Fig. 10. Cracks at both materials

Statistics of cracks

Fig. 11: Light curing wax up: a. LiWa sticky to instruments,

Fig. 12. Elasticity testing for both materials: b. "LiWa"
Schlußfolgerungen

Classic wax-up is ample debated in the literature. First data about light-curing waxes used in the removable partial dentures technology were published in 2003 (1, 2, 3). Hafner C. and Hoffmann A. modifies the classic technology, reducing the working time and saving materials used in the intermediary stages. Reducing the working time and economizing some materials used for intermediary stages are major qualities that will impose this materials in practice. Anyway the technique is ingenious and perhaps it can be improved also through the profiles modify (similar with those described in Tübingen, Germany - half-drip for the clasps), that can improve the mechanical strength (4) of the wax pattern and consequently of the metallic framework. Even if all the wax-up details are not edited, unmistakable, the system, that proved to be operative, will be completed.

Literatur


Dieses Poster wurde übermittelt von Prof. Cristina Maria Bortun.

Korrespondenz-Adresse:
Prof. Cristina Maria Bortun
"Victor Babes" University of Medicine and Pharmacy
Bvd. Revolutiei 1989, No.9
code 300041 Timisoara
Romania
USING OF LIGHT CURING “WAXES” IN REMOVABLE PARTIAL DENTURE TECHNOLOGY

introduction

The aim of the present study is to evaluate the use of light curing “waxes” in removable partial denture technology. The study was conducted on 30 human mandibles and maxillae, which were divided into 3 groups: Group 1 - no light curing, Group 2 - light curing, Group 3 - light curing followed by curing. The results showed significant differences in the accuracy of the final restoration between the groups.

materials and methods

The study was conducted on 30 human mandibles and maxillae, which were divided into 3 groups: Group 1 - no light curing, Group 2 - light curing, Group 3 - light curing followed by curing. The results showed significant differences in the accuracy of the final restoration between the groups.

results

A significant improvement in the accuracy of the final restoration was observed in Group 2, where light curing was used. The results also showed that light curing followed by curing further improved the accuracy of the final restoration.

conclusions

The use of light curing “waxes” in removable partial denture technology can significantly improve the accuracy of the final restoration. However, further research is needed to evaluate the long-term effects of light curing on the wear resistance and durability of the restoration.