

FORMING THE DENTAL CAP OR THIMBLE IN FIXED PROSTHETICS

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Abstract: The use of modern technology (immersion bath, special immersion waxes) in the immersion technique of the prepared tooth obtaining the crown model, permits the creation of the dental cap model or the thimble, which is exactly adapted at the preparation sides with a minimum of effort.

Cuvinte cheie: capa, degetarul, tehnica de imersie

Rezumat: Utilizarea tehnologiei moderne (baie de imersie, ceruri speciale de imersie) în tehnica de imersie a bontului pentru obținerea machetei coroanei de înveliș, permite formarea machetei capei sau a degetarului exact adaptată la nivelul fețelor preparației (bontului) cu minim de efort.

INTRODUCTION

The wax inprint represents the exact copy of the final piece of work, being a reproduction of all the tissue details removed by filing the pillar tooth and the teeth which are replaced by the dental bridge.

The method of obtaining the wax inprints in an indirect mode is done by modelling on the models, obtained after the impress, most frequently with special waxes for the wax inprint (1).

The deformation of the wax inprints is dependent on the temperature, time and storage conditions of the wax inprints (2). The dental cap or thimble is made from a uniform wax layer (0,5 mm), and it is made so that we can realize a framework of the models agregational elements (retentionists) which assure the necessary rigidity so it may not deform and ease the modelling of the axial and occlusal sides details of the finished crown (1).

The immersion bath (the bath were the wax is heat up) is an electric device, that attains in a controlled way the melting and maintaining of the special waxes at the recommended temperature given by the producer's prospectus (3).

The wax inprint of the microprosthesis, aggregational elements can be made diversified through a various of methods, depending on the clinical situation, the equipment of the dental laboratory, the training and professionalism of the dental technician (4).

PURPOSE OF THE STUDY

We wanted to show the many problems that occur considering the equipment, technique and measurements imposed for obtaining the dental cap or the thimble throughout the immersion technique of the prepared tooth into an recipient of liquid wax.

MATERIAL AND METHOD

We took into our study a lot of 77 patients, which had partial edentations and coronary affections that were fixed with fixed unitary and/or multiple prosthetics. We elaborated case files in which we noted the time needed for the restoration, the technology used to obtain the models metal frame (the waxes we used, the technique of the model's obtainment, the devices we used, the necessary time for

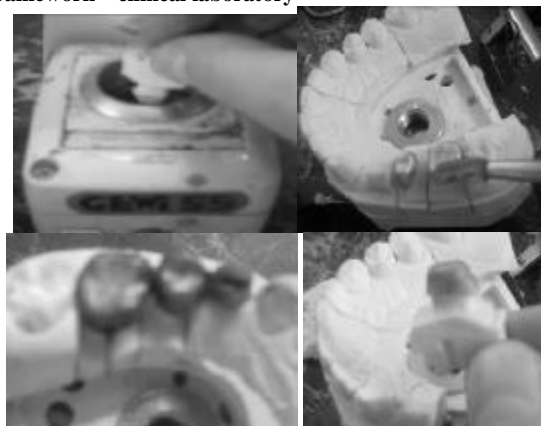
the making of the model, preparation concerning the cast, etc.)

Forming the cap retainors on the pillar teeth, through the immersion procedure in wax, like this: the isolation of the prepared tooth with isolating material, applied with a paintbrush in a uniform, thin layer; the rapid immersion of the prepared tooth in the immersion bath; the slower immersion of the tooth favours the contraction of the wax, with the formation of the contractional lines, which slacken the capes resistance; successive immersion until we obtain a uniform layer of 0,5 mm thickness; the control of the capes margins and the adaptation with a blunt instrument, a little heated (so it may not deform the cape); at this point the cape of wax (degetarul) is ready for the modelling of the anatomical details of the axial and occlusal sides through the addition-technique or additive technique (1,5).

RESULTS AND DISCUSSIONS

Patient M.R. 24 y.o. with a right unilateral maxillary edentation given by the absence of 1.4, has been restored prothetically through a fizionomical metal ceramics bridge, aggregated on a 1.5.,1.6., where the formation the thimble of the metallic framework on the pillar teeth has been realized through the immersion of the prepared tooth in the bath (Fig.1,2).

Figure no. 1. Obtaining the wax inprint of the metallic framework – clinical laboratory



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CLINICAL ASPECTS

Figure no. 2. The finished metalo-ceramel piece



Pacient N.A., with a right lateral maxillary edentation, by the absence of 1.4., and 1.6., we made a dental metalo-ceramelical fizionomical bridge, aggregated on 1.3.;1.5.;1.7.; the creation of the thimble on the pillar teeth has been made through the immersion technique of the prepared tooth into the bath (Fig.3.)

Figure no. 3. Creating the caps with the immersion technique

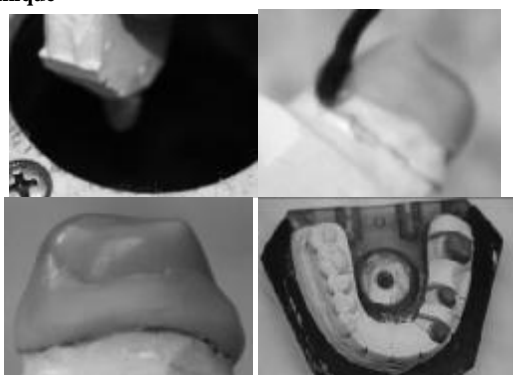
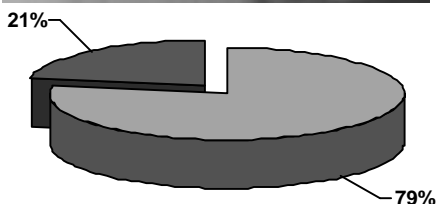
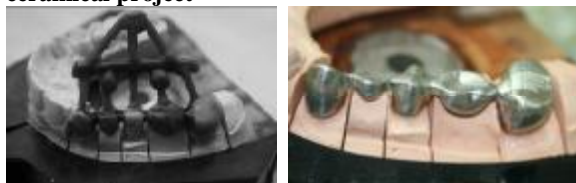


Fig.4. Model with metallic components, The metallic framework of the restoration, The finished metalo-ceramel project



- Immersion technique
- Drip technique

CONCLUSIONS

1. The wax bath maintains constant temperature of the wax, which permits the rapid application of the wax on the

- prepared tooth.
2. The immersion technique of the prepared tooth into the bath, assures the confection in time of the high precision capes exactly adapted to the prepared tooth.
3. In the addition technique with wax in successive layers exists the risk of including air bubbles or extending the not uniformity of the wax layer, so that certain area of the prepared tooth remain uncovered.
4. The obtained cap through immersion represents a framework of the coronary wax inprint with total thickness and assures the rigidity needed so that it may not difform, easing the modelling of the details axial and occlusal side of the finished crown.
5. The immersion technique needs models with a mobile prepared tooth, the equipment therefore must be pretty good, but it offers in exchange high precision at a minimum effort.

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