

The aesthetic functional rehabilitation, from mock-up to definitive restorations

Cases of aesthetic-functional rehabilitation require accurate planning and the use of reliable materials that reproduce details accurately, allowing for efficient clinical-technical communication and, as such, successful rehabilitation.

Examination of the patient's problems

The patient, male, 62 years old, in good general health, shows worn dentition caused by friction and erosion, previous incongruous restorations, several non-carious cervical lesions (NCCL), as well as temporomandibular disorders (TMD) with myofascial pain and limited opening (Fig. 1). Once the symptoms and joint limitations have been resolved, a minimally invasive rehabilitation procedure through complete and partial adhesive restorations is planned with the aim of restoring the correct vertical and aesthetic dimension. Intra and extra-oral photographs, impressions in silicone, face bow, aesthetic analyses and the magnitude of increase in vertical dimension are sent to the dental technician in order to create a diagnostic wax-up (Fig. 2).

Clear and detailed planning of the treatment program

It's essential to send accurate, precise records to ensure that the dental technician can evaluate both the details of the dental and gum tissue and to find correspondence between the photographic documentation and plaster models. This allows the technician to be able to work to his or her best capacity, to be able to compare results usefully with the clinician, obtaining optimum outcomes right from the initial steps of rehabilitation, which is highly rewarding both for the clinician and for the patient.

The mock-up is then "impressed" into the patient's oral cavity using a bis-acryl resin with special resistance to abrasion and adequate aesthetic features (Visalys Temp), not only as a means to assess the new aesthetic aspect of the smile, but also the function of the dental arches. The mock-up is further personalized, through removal, using diamond drills and, in addition, by affixing photopolymerizable composite resin (Fig. 3).

A new set of photographs is taken and a new aesthetic analysis is carried out (macro, mini and micro aesthetic) which is shared with the dental technician and the patient. The patient "wears" the mock-up for a period of about 30 days, during which he or she can appreciate their new dental morphology and "test" the functionality of the project, providing the clinician with important feedback, during a phase which can, at that point, be fully reversed or modified.

Execution of treatments

Once the project is approved, the necessary conservative treatments are carried out, the missing posterior elements are restored by inserting implants. Some elements of the dental arches are prepared fully, others only partially, depending on the dental structure and quantity of remaining enamel. The impressions are made using Panasil Putty Soft and Panasil initial contact X-light silicones (Fig. 4). The occlusal and facial bow relations by means of a Futar D elastomer, this material, thanks to its physical properties, represents the ideal material to transfer this type of information to the laboratory. The polymerization time and hardness achieved by this elastomer make the material extremely precise and easy to use by the clinician (Fig. 5 and 6).

The definitive restorations in lithium silicate laminate on the labial surface are tested using water soluble, colored glycerin Try-In Paste to assess the influence of the chroma of the cement in rendering the color of the ceramic restorations, and subsequently the prostheses are cemented (Fig. 7). The delivery of the definitive restorations is the final step of the rehabilitation process which begins with the first consultation and diagnosis. During each intermediate step, it is crucial to respect the operational protocols that allows achievement of the planned results (Fig. 8,9,10,11).

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Fig. 1: Occlusion before treatment, front view



Fig. 2: Wax-up



Fig. 3: Mock-up

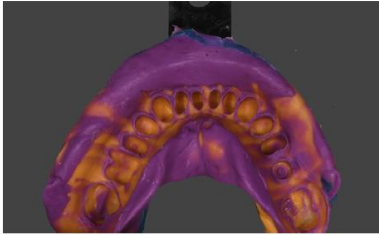


Fig. 4: Precision impression using Panasil® Putty Soft and Panasil® initial contact X-Light



Fig. 5: Futar® D Bite Registration

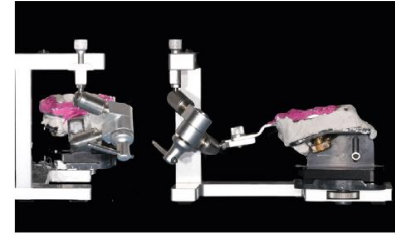


Fig. 6: Face bow transfer table with Futar® D



Fig. 7: Lithium silicate crowns and facets



Fig. 8: Occlusion before and after treatment, front view



Fig. 9: Occlusion before and after treatment, lateral view



Fig. 10: Occlusal surface, before and after treatment



Fig. 11: Smile before and after treatment, front view



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