

mobile prosthesis and assessed the necessary height, insert the small silicone tube cut at the right height in the ball-attachment. Then the Teflon is inserted. The silicone tube adheres above the Teflon to the gingiva, protecting the whole of the retentive attack. Mixed the acrylic resin is inserted in the right quantity filling the 50% the previously prepared cavity and expects the polymerization. After curing, the mobile prosthesis can be removed very easily as the acrylic resin will be present only around the Teflon and will have filled all the walls of the cavity previously prepared leaving them smooth. The resin hardly goes any further.

Results: The use of this technique greatly helps the dentist as it reduces to zero cancels the risk that the resin can end up in the undercut of the ball-attachment, also reduces the working time and finishing.

Conclusion: This technique allows to stabilize the prosthesis in elderly patients not very cooperative even when the space is reduced for the insertion of the metallic container for Teflon. The dentist finds the use of this procedure very convenient both in the time of insertion of the Teflon and for the safety during the processing.

Marginal fit of CAD/CAM lithium disilicate occlusal veneers with two preparation designs: a scanning electron microscope quantitative evaluation

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Aim: The use of all-ceramic conservative occlusal veneers is becoming more popular in the clinical setting thanks to the recent improvement of the mechanical and esthetical properties of the restorative materials. Furthermore, the option of CAD/CAM fabrication may constitute a further advantage for both clinicians and patients. Since little is known about the influence of the occlusal veneer preparation design on the marginal fit of the final restoration, the present study compared the marginal fit of two preparation designs.

Methods: Sixteen maxillary molars were selected from a pool of freshly extracted teeth and received 1-mm cusp reduction by using silicon indexes as reference. The teeth were randomly divided into two groups identified by the preparation design: conservative full-coverage occlusal veneer with a 90° rounded shoulder margin (n=8) and marginal chamfer (n=8). At the end of the preparation process, the exposed

dentine surfaces were immediately sealed with a self-etch adhesive system. Lithium disilicate restorations (IPS e.max CAD) were produced with the Cerec 3 CAD/CAM system. The intaglio surface of the occlusal veneers was conditioned with hydrofluoric acid and silane, while the tooth surface underwent silicization, enamel etching, and adhesive system application. The occlusal veneers were luted with Variolink II cement. The specimens were embedded into acrylic resin simulating the periodontal ligament with a layer of vinyl polysiloxane; then, they were subjected to thermomechanical aging with a chewing machine (1,250,000 cycles, 1 Hz, 5–55°C). A quantitative marginal fit evaluation was performed observing at the scanning electron microscope resin replicas of the specimens obtained before and after the thermomechanical aging simulation. For each replica, a single trained blinded operator measured the marginal gap along 120 equidistant points of the adhesive interface. Collected data were tested for the assumptions for using parametric tests. The marginal fit measured at different experimental time points was compared within the same group with a paired-sample t-test, while the two groups were compared at the same time point with an independent-sample t-test (p<0.05).

Results: At baseline, the occlusal veneer with a 90° rounded shoulder margin group showed a mean marginal gap equal to 103.83±54.97 µm, while the conservative preparation design with a marginal chamfer 120.43±58.92 µm. The difference between the two preparation designs in terms of marginal fit was not significant at any experimental time point. Thermomechanical aging caused a slight not significant reduction of the marginal gap in both groups.

Conclusion: The present study on extracted molars demonstrated that a new minimally invasive preparation for CAD/CAM lithium disilicate occlusal veneers with marginal chamfer is capable of marginal fit comparable to that of a standard conservative preparation.

Full digital workflow for an implant retained overdenture by digital smile project to guided surgery and prosthetic rehabilitation

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Aim: The development of digital technologies in dentistry