Aesthetic and functional restorations with Panasil impression materials

Fig. 1: The correct application of the gingival retraction technique depends on the health of the surrounding periodontium. An average of three weeks is required following preparation and fitting of the temporary restoration to ensure formation of a stable, compact tissue. — Fig. 2: The one-step putty-wash technique using only cotton-wool retraction cords lead to increased formation of sulcus fluid.

The clinical success of a fixed restoration depends on a precise impression of all the details of the prepared tooth (Fig. 5). In summary, it can be stated that an accurate fit of crowns and fixed partial dentures depends on the impression. Inaccuracies during impression-taking can only be corrected with difficulty or not at all during the subsequent fabrication stages, which has an effect on the marginal adaptation of the restoration we fabricated.

The one-step putty-wash technique was used in this case.
for fabricating the restoration. It has been proven in in vitro studies that impressions fabricated using this technique exhibit a higher detail definition than two-step putty-wash impressions.11-13 As the initial contact of the impression material with the oral mucosa is the critical moment clinically, we focused on a material that becomes hydrophilic with increased relative humidity and maintains its hydrophilicity throughout the entire working time. We therefore selected the impression materials Panasil tray soft and Panasil initial contact light (Kettenbach).10 Panasil initial contact light was applied to the sulcus using a dispensing gun fitted with an application tip (Figs. 4 & 5), while a non-perforated metal impression tray with a reinforced edge was coated thinly with Panasil adhesive beforehand using a brush (Fig. 6), prior to being loaded with Panasil tray soft (Fig. 7).

The flowability of the light material, viscosity of the tray soft and the pressure produced by the dispenser ensure that the impression materials flows uniformly onto the tooth surface, including infra- and gingivally. Another characteristic of this material is that it is easily removed from the mouth, which may be a problem when using polyether materials. The thixotropic properties (positional stability) of Panasil initial contact light prevent the material from flowing into the oral cavity when the impression tray is inserted into the oral cavity. The intra-oral working time of 1 minute and intra-oral setting time of 2 minutes and 50 seconds are very practice-friendly. The combination of Panasil tray soft and Panasil initial contact light is impressive: the products ensure perfect reproduction of all details of the tooth in the impression (Figs. 8, 9 & 10).

Technical procedure

The most commonly used material for fabricating models is Class IV dental stones, owing to their compatibility with all types of impression materials (Fig. 11). The impression material should not be applied with setting agent before pouring. The low volumetric expansion of the model material ensures a flawless volumetric reproduction of the tooth impression (Fig. 12). Working models tolerable to the patient can be easily removed from the mouth, which may be a problem when using polyether materials. The thixotropic properties (positional stability) of Panasil initial contact light prevent the material from flowing into the oral cavity when the impression tray is inserted into the oral cavity. The intra-oral working time of 1 minute and intra-oral setting time of 2 minutes and 50 seconds are very practice-friendly. The combination of Panasil tray soft and Panasil initial contact light is impressive: the products ensure perfect reproduction of all details of the tooth in the impression (Figs. 8, 9 & 10).

A comparative study of various cements established that the glass ionomer cement that we used in this case produced the lowest film thickness of 20 µm.18 A follow-up examination revealed that the glass ionomer cement we used in this case produced the lowest film thickness of 20 µm.18 A follow-up examination revealed that the glass ionomer cement we used in this case produced the lowest film thickness of 20 µm.18 A follow-up examination revealed that the glass ionomer cement we used in this case produced the lowest film thickness of 20 µm.18 A follow-up examination revealed that the glass ionomer cement we used in this case produced the lowest film thickness of 20 µm.18 A follow-up examination revealed that the glass ionomer cement we used in this case produced the lowest film thickness of 20 µm.18 A follow-up examination revealed that the glass ionomer cement we used in this case produced the lowest film thickness of 20 µm.18 A follow-up examination revealed that the glass ionomer cement we used in this case produced the lowest film thickness of 20 µm.18 A follow-up examination revealed that the glass ionomer cement we used in this case produced the lowest film thickness of 20 µm.18 A follow-up examination revealed that the glass ionomer cement we used in this case produced the lowest film thickness of 20 µm.18 A follow-up examination revealed that the glass ionomer cement we used in this case produced the lowest film thickness of 20 µm.18 A follow-up examination revealed that the glass ionomer cement we used in this case produced the lowest film thickness of 20 µm.18 A follow-up examination revealed that the glass ionomer cement we used in this case produced the lowest film thickness of 20 µm.