Temporalies are indeed “only” an interim solution. They do, however, fulfill important functions until the permanent restorative is available and thus have a lasting effect on the success of the treatment in restorative dentistry. The quality of the temporary restorations especially has great importance with respect to their protective function until the integration of the permanent restoration. Temporary crowns and bridges combined with luting cements protect the dentine and pulp like a dressing from thermal, chemical, mechanical and bacterial damage. Today, modern temporary crown and bridge materials facilitate the fabrication of temporary restorations that meet the highest medical standards of reliability; and they also provide incredible, natural aesthetics.

The challenge of fabricating temporaries

The fabrication of temporary crowns and bridges that provide an accurate fit is not easy. Much effort goes into it and it requires extreme precision to build a perfectly integrated protection for the prepared abutment. For the clinical success of a temporary, there are several aspects of the fabrication to consider. One such aspect is the quality of the marginal seal; the temporary must sufficiently close the preparation border so that the patient does not suffer from sensitivities. Additionally, care must be given to provide a consistent occlusion and appropriate contact points to the neighboring teeth; ultimately, the teeth should not wander until the definitive restoration is inserted. The temporary should also be easy to polish and exhibit good surface quality in the interdentium and region of the
crown boundary. The gingiva is already irritated from the preparation and shaping and should not become infected and retracted because of a temporary’s rough edge. Due to these requirements, materials for the fabrication of temporaries should be used that not only permit safe and quick handling, but also facilitate an optimal, medical and aesthetic result.

The clinical case

Maxillary anterior teeth had to be removed in one of my patients and a bridge prepared for her. The initial situation showed that teeth 11, 21 and 22 could not be preserved (Figure 1). Normally, we would extract the teeth, insert a removable (or an expensive one made by a laboratory) temporary and prepare accordingly, after the post-extraction alveoli have healed. This procedure, however, is accompanied by the problem that the pontics are always recognised as such, since there is no emergence profile, papilla formation typical for the natural tooth.

In contrast, a procedure is used in the following case that permits the fabrication of a bridge with the most naturally appearing bridge pontic area possible. To begin with, a plaster model is fabricated for making a formed component for the long-term temporary (Figure 2). After the preparation and extraction of the teeth to be removed, we went with the fabrication of a long-term temporary with pontics for the formation of the alveoli, for which we use the post-extraction alveoli (Figure 3). In this manner, the emergence profile of the bridge pontics could be made so that they look like they are coming out of the gingiva and thus have the appearance of natural teeth (keyword “red aesthetics”).

Figure 4: Processing the Miniplast tray

Figure 5: Filling the shaped piece with a highly aesthetic provisional crown and bridge material (Structur Premium, VOCO)

Figure 6: Assessing the quality of the edge before finishing

Figure 7: Rough finishing of the temporary bridge with the one-sided sandpaper disc
We used a deep drawn miniplast splint made from a soft foil for the impression and processed it with a special instrument from the preparation kit (Komet) (Figure 4). The shaped piece offers the advantage that it is not sensitive to external influences (shrinkage etc.), can be stored longer and it is more hygienic than a precast. In the next work step, the mould was filled with a highly aesthetic provisional crown and bridge material (Structur Premium, VOCO) (Figure 5). The quality of the margin was assessed after removing the temporary bridge from the formed component (Figure 6). The temporary was subsequently finished with tools from the preparation kit. First, a one-sided sandpaper disc was used (Figure 7), followed by the smooth finishing of the edges with a crosscut carbide bur (Figure 8). We segmented the pontics with the diamond disc from the finishing set (Figure 9) and used a rubber cup for the pre-polish on the temporary (Figure 10). Small irregularities or defects (“bubbles”) were corrected with a highly aesthetic provisional crown and bridge material in incisal shade (Structur Premium QM, VOCO) (Figure 11).

A smooth surface is especially important for the pontics that rest on the alveoli to prevent plaque retention and the potential resulting inflammation.

Figure 8: Smooth finishing of the edges with the crosscut carbide bur

Figure 9: Segmenting the pontics with the diamond disc

Figure 10: Pre-polishing with the rubber cup

Figure 11: Correcting small irregularities and defects (“bubbles”) with a highly aesthetic provisional crown and bridge material in incisal shade (Structur Premium QM, VOCO)

Figure 12: High gloss polish with the fibre buffing disc
We carried out the subsequent high gloss polish with the equally fast and effective fibre buffing disc (Figure 12). For a perfect finish, we applied a nano-filled protective varnish to seal the surface (Easy Glaze, VOCO) (Figure 13), which we light-cured afterwards (Figure 14). The protective varnish also provides a naturally shiny, aesthetic and smooth surface that protects against more than just discolouration.

A smooth surface is especially important for the pontics that rest on the alveoli to prevent plaque retention and the potential resulting inflammation (Figure 15). The completed long-term temporary was finally integrated (Figure 16). It created an ideal initial situation for an aesthetic emergence profile for the future pontics (Figure 17).

Billing for the long-term temporary

In contrast to a removable long-term temporary, a fixed long-term temporary is not covered by insurance. My patients gladly pay the difference, however, because of the increase in comfort. This is especially the case when I describe the positive aesthetic results to them. The fee positions 512 and 514 are added according to the GOZ (German scale of charges). Successful creation of durable long-term temporaries is ensured with the provisional crown and bridge material I used here (Structur Premium, VOCO). Structur Premium is not just for long-term temporaries, it is also my first choice for fabricating ordinary, routine temporaries. DA

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