

Young looking teeth

Wanderley de Almeida Cesar Jr exploits a layering technique which does not involve contouring.

Aside from the necessary theoretical knowledge, working with composites also requires patience and manual skill. This especially applies to the anterior region. Here in particular, it is important to place the respective appropriate amount at the correct place and to apply the layers with particular care, to achieve the ideal clinical result. In work that requires an alteration, reconstruction or transformation, it is generally important to keep the desired target shape, design or image in mind. So the first step should involve a wax-up, an analysis of the smile from different perspectives, as well as consideration of the type of tooth to be formed. Naturally, the patient's concerns should also be taken into consideration when planning treatment.

Clinical case

In the case presented here, the patient expressed a desire for his teeth to be visible when speaking. It bothered him immensely that, in a resting position or half open, his lips totally covered his upper teeth. Furthermore, the patient refused any preparation of his teeth using grinding burs. This meant that possible treatment with ceramic veneers was out of the question. An additive wax-up and an occlusal



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Fig 1: Amaris Flow HO (High Opaque).



Fig 3: Comparison of the tooth shade with a shade from the Vita Classical scale (B3).



Fig 5: Result after tooth whitening.



Fig 7: The contours of the incisal area were defined through a prior wax-up and a silicone impression. A translucent composite was applied as the basis for the characterisation of the incisal area: Amaris Flow HT (High Translucent).

analysis were carried out to check if it was possible to lengthen the anterior teeth with composites, as well as to create incisal edges with an opalescent effect and absorption



Fig 2: Patient's smile with diastemas between the anterior teeth and composite retention after orthodontic treatment. Tooth 22 is missing.



Fig 4: Absolute moisture control prior to tooth whitening.



Fig 6: No upper teeth are visible with lips in a half-open position. From the patient's point of view, this was the main problem.



Fig 8: Composite Amaris Flow HT (High Translucent).

materials for youthful-appearing teeth. To achieve such a youthful effect with composites, attention should be paid to the exact three-dimensional shape of the tooth. It should not be forgotten that a tooth characterised as youthful is more translucent and absorbs light in



Fig 9: The mamelons were built up with a layer of the composite Amaris O1, mixed with a very small quantity of the composite Amaris Flow HO (High Opaque). The mamelons were shaped so that space is available for the translucent materials. An important detail in the build-up of the mamelons is the three-dimensional shape of the applied increments, which are thicker in the cervical area and taper incisally.



Fig 10: Composite Amaris O1: Despite its opacity, this composite is minimally translucent, ranging between eight and 10 per cent. This percentage ensures good reflection of light, while simultaneously allowing a minor amount of light to pass, giving the restoration a natural impression.



Fig 11: A thin strip of composite shade Amaris O2 was applied, in order to form the opaque halo that can usually be found in teeth characterised as youthful. A shade one intensity step lower was selected, because the halo is almost always influenced by the opalescence of the incisal area, which has a slight orange shimmer when light shines through it.



Fig 12: The halo was sculpted using a brush made of marten hair (Line Artiste, Hot Spot Design).



Fig 13: View of the mamelons, irregularly shaped so they appear natural.



Fig 14: A flow composite, Amaris Flow HT (High Translucent) was applied between the mamelons.



Fig 15: This was followed by a layer of enamel composite. A technique that differently characterised the thirds was used. In the cervical third, Amaris TN (Translucent Neutral) was used, in the middle third, the composite Amaris TL (Translucent Light) and in the incisal third, Amaris TN (Translucent Neutral) was used again.



Fig 16: Amaris TL (Translucent Light).



Fig 17: The second layer to seal the tooth: Amaris TL (Translucent Light).



Fig 18: The same procedural method was chosen for the other teeth.



Fig 19: Working with translucent composites in the spaces between the mamelons.



Fig 20: Initial grinding was started with a fine-grain diamond bur (2200, KG Sorensen). A bi-coloured crayon (Hot Spot Design) was used to correctly set the position of the angle for light reflection.

the blue or grey areas between the dentinal mamelons. Conversely, these mamelons reflect light especially in the incisal area. A smaller degree

of light absorption effects can also occur in the approximal areas. In order to form these absorbent areas, we can use pigments or translucent composites. But it is most important to apply the dentine material, in a controlled fashion, from the cervical to the incisal areas, and to leave free spaces for translucent effects between

the mamelons.

For this, it is important to select a composite that reflects light, without being too opaque. This is why Amaris (Voco) was used, a highly aesthetic light-curing restorative material, the system design of which (with



Fig 21: The red lines are polished away. They served to mark excess material.



Fig 24: A rubber polisher (Optimize, TDV) was used to remove the traces of the diamond burs left during shaping.



Fig 27: The high-lustre polish was created using a velvet-like polishing wheel and an aluminium oxide paste (Praxis Polish, TDV).



Fig 30: The teeth are now visible when the lips are in a resting position.



Fig 22: The premolar (tooth 24) was optically transformed into a canine and the canine was optically transformed into a lateral incisor.



Fig 25: The same rubber polisher was used to widen the mesial and distal grooves and thereby turned more into recesses.



Fig 28: Immediate result.



Fig 31: Lateral view: the canine tooth (tooth 23) was optically transformed into a lateral incisor (tooth 22) and the premolar (tooth 24) was optically transformed into a canine (tooth 23). In order to adjust the course of the altered tooth form, the characterising colour of the transformed 'ex-canine' was cervically changed.



Fig 23: After completion of the anatomical basic form, the mesial and distal longitudinal grooves were created.



Fig 26: The lustre is created with a small silicon carbide brush (TDV).



Fig 29: Side view of smile.



Fig 32: Detailed view.



Fig 33: Photo of the vestibular surfaces of the middle incisors. Note the regularity of the morphology.



Fig 34: Before treatment.

☛ Opaque base or dentine shades, translucent enamel shades and individual or effect shades) enables natural dental aesthetics in an easy to use layering technique. Amaris is versatile and extremely aesthetic, very easy to use and enables intuitive shade selection. The Amaris system consists of five base or dentine shades, three translucent enamel shades and two individual or effect shades (the latter as liquid composites):

Base or dentine shades: O1 (Amaris Opaque 1), O2 (Amaris Opaque 2), O3 (Amaris Opaque 3), O4 (Amaris Opaque 4), O5 (Amaris Opaque 5).

Enamel shades: TL (Amaris Translucent Light), TN (Amaris Translucent Neutral), TD (Amaris Translucent Dark)

Individual or effect shades: HT (Amaris Flow High Translucent), HO (Amaris Flow High Opaque).

With this concept, Amaris takes a pioneering role in active shade management through dentists, whereby even less experienced users are able to select the correct shade far more easily.

Intuitive methods for visual assessment

The following describes the

sequence of intuitive shade management with the Amaris ☛



Fig 35: End result.



Fig 36: The composite facets in the upper jaw, up to the premolars, after completion and without any erosion of the dental hard tissue. Note that tooth 23, which was optically transformed into tooth 22, is larger than its counterpart, tooth 12, in the opposite quadrant. This shows that the canine was indeed not ground before its transformation into a lateral incisor. It should be emphasised once more that this procedural method was selected at the request of the patient and his aversion to the use of grinding burs remained undiminished throughout the treatment.

system, which facilitates the correction of the shade during the restoration. The same procedural method also applies for a prior restoration mock-up:

1. Initially, the dentine is layered after the selection of one of the system's opaque base shades.
2. Checking the colour:
 - If it approximately corresponds to the desired colour, continue layering with Translucent Neutral TN, in order to maintain the shade appearance and create depth.
 - If it is too pale, continue layering with Translucent Dark TD, because this shade reduces the brightness and colour intensity of the restoration and provides depth.
 - If it is too dark, continue layering with Translucent Light TL, because this shade increases the brightness and colour intensity, while maintaining the required depth and translucency.

3. In the third step, the restoration can be finished with the selected translucent shade or effects can be applied using the individual shades. For example: provide more colour intensity cervically, increase the brightness in the middle third, and so on.

In the illustrated clinical case the teeth were not prepared in any way, the enamel was merely etched, which is indicated here and ensures a pure enamel bond as well as a reliable outcome. Light-activated dental whitening using a UV lamp (Zoom 2!, Discus Dental) was carried out in advance and the expected result was achieved in two sessions. Layering is facilitated on a light surface.

There is a documentation of the individual treatment steps with each fig.