

Excellent for direct veneering

A case study using 4 Seasons*: Tooth lengthening

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The public interest in good looks is increasing, promoted to a great extent by the growing number of reality TV makeover programs which place emphasis on beauty and lifestyle. Our patients increasingly demand what can be done to improve their smile. Thus, the general dentist should be able to offer their patients alternatives for aesthetic dental solutions. Such an alternative involves e.g. direct veneering using composite material.

The patient is a female aged 38, who is unhappy with the appearance of her teeth. The teeth are short and vital tooth whitening resulted to be unsatisfactory (Fig. 1). At the initial appointment, the patient chose to be treated with direct veneering instead of ceramic veneers, as she did not want her teeth to be ground. Composite was decided to be applied to teeth 14, 13, 12, 11, 21, 22, 23 and 24. A diagnostic wax-up of the finished case was fabricated and a polyvinyl siloxane (PVS) key was taken of the diagnostic model. This key will be used intra-orally to guide the application of composite for lengthening the teeth (Fig. 2). As a pre-treatment tooth shade C2 was selected. The composite system of 4 Seasons® (Ivoclar Vivadent) was chosen for this patient, as it provides the dentist with the opportunity to imitate the tooth structure. The handling is excellent and overall aesthetic results are impeccable.

Procedure

A rubber dam was placed. The tooth shades were selected together with the patient. The teeth were cleaned with a mixture of pumice and water. Work was set on in Tooth 21. A clear matrix was used to isolate the teeth before they were etched with phosphoric acid (37%) for 30 seconds. The etchant was rinsed off for



15 seconds and the bonding agent (Excite®, Ivoclar Vivadent) applied.

Using the PVS key, the palatal layer was designed by applying the dentin shade D2 on the incisal edge of the tooth (Fig. 3). This shade was selected because of its

*: 4 Seasons is sold in other countries as Artemis®



opaque properties which mask out the dark oral cavity. The layer is cured for 30 seconds before the key is removed. Subsequently, the palatal surface is cured for another 20 seconds. The enamel shade XL was cervically applied, XXL on the mid-buccal area. After finishing this procedure, the composite is processed with a brush that has been immersed in unfilled adhesive material (Fig. 4).

Blue Effect was used in the incisal area to imitate translucency. The first inter-proximal and incisal third was covered with Superclear, thus allowing Blue Effect to imitate the translucent area in the incisal region. The inter-proximal surfaces were shaped and polished (Fig. 5). The procedure used in tooth 21 was repeated in teeth 11,12, 22, 13, 23, 14, 24 (Fig. 6). A finely tapered diamond was used at high speed without water to remove the composite residues at the cervical margin.

Checks concerning the symmetry were first made by looking at the teeth from the front when the patient was seated, and then from behind and looking down over the patient. Appropriate adjustments were carried out. The lengths of the teeth are assessed and adjusted together with the incisal embrasures. Excursive movements were checked using articulating paper to identify occlusal interferences on the palatal surfaces.

Final polishing is achieved with Astropol® products (Ivoclar Vivadent) (Fig. 7). Thus, a highly polished surface is obtained. It is imperative to take one's time for polishing, as this will reduce the possible development of stains on the composite and provide a long-lasting aesthetic result. The patient was very satisfied with the obtained aesthetic result (Fig. 8). □

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