

TREATMENT OF APPROXIMAL CARIES IN THE ANTERIOR REGION

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ABSTRACT:

In this case report, esthetic rehabilitation of anterior region and direct composite technique which was performed by taking economic and social factors of the patient who was uncomfortable about the tooth decay on the anterior surface has been told.

Without making any preparation on the enamel surface, the teeth have been restored using composite resin, layering technique, phosphoric acid gel and a bonding agent of % 37. Finally, the restoration was polished with surface finishing discs.

The patients were reviewed after six months and not any discoloration or fractures were observed.

Key words: Approximal Caries, Aesthetic, Composites, Layering Method

INTRODUCTION:

Invasive treatment applications nowadays have been superseded by non-invasive treatment. Therefore, composite resins are in an important position among restorative materials. Composite resins have a longer lifetime, lower cost and an excellent aesthetic potential in the treatment of anterior teeth contrary to other restorations [1,2].

Mine in vivo shows effect as the reduction of apparent color saturation of dentin on the perceived dentine color. This factor is influenced by the light transmittance of the enamel. Moreover environmental factors have effects on the light transmittance of the enamel and perceived dentin color, as well. For this reason, for a quality restoration, enamel

and dentin should be evaluated separately [3].

In anterior restorations in which aesthetics is important, restorations similar to the natural tooth appearance can be provided by applying layering technique to resins in different contents. In layering technique, a thin layer of 0.5 mm-0.3mm is planted on palatal surface of the teeth (for example on anterior fractures). Then, several dentin body of different thickness changing according to the depth of the lesion are applied. Finally, resin providing transparency is placed in incisal tooth regions. After these stages, physicians can use opacity and colorants that provide transparency in order to provide excellent aesthetics [4].

The aim of this study is to tell the needed operations to treat the front region

aesthetic by using composite resins and describe them through clinical cases.

CASE DETAIL:

Oral examination of a 30 year-old female patient who was not pleased with aesthetic appearance of her teeth has been done at Inonu University, Faculty of Dentistry, Department of Restorative Dentistry (Figure 1). In the clinical examination, secondary caries were detected on the upper front area teeth in the approximal surfaces of the patient. After both evaluating the patient's expectations and considering the economic conditions, minimally invasive and direct composite restorations that meet aesthetic expectations was decided.

After 35% phosphoric acid gel (Scotchbond Multi-Purpose Etchant; ESPE, USA) was applied to all enamel surfaces for 30 seconds, it was washed with water spray for 15 seconds and then was dried by squeezing mild weather. The prepared binding agent (CLEARFIL SE Bond Kuraray, Japan) was applied to all enamel surfaces and was polymerized by light for ten seconds. The previously selected colors were respectively applied in layers and each layer was polymerized by light for 40 seconds. Finally, finishing and polishing process was completed using disc-type sanders (Sof-Lex, 3M ESPE, USA) and composite polishers (Flexi-Snap KIT, EDENTA, Switzerland) in series. The treatment the patient has met all aesthetic, functional and economic expectations of the patient (Figure 1). The patient was given oral hygiene education required to comply.

DISCUSSION:

While restoring anterior teeth, some deviations can be made in the choice of color by taking the age, gender, curvature of the tooth and the patient's wishes into consideration. Also made some changes in the contour of the restoration of the teeth can cause different perceptions. If we give examples of these, light and dark colored teeth with the same crown length appear in different sizes. Light-colored teeth appear larger than dark-colored teeth. Lines on the cutting edge of restoration make the teeth appear longer [4].

The most important element in the prevention of approximal caries is removal of plaque at the interface. Brushing the teeth for plaque control at the interface was found to be ineffective. Therefore, floss must be used in order to prevent the formation of approximal caries areas. Patients see interdental cleaning as time consuming, difficult and a tedious process. What is basically effective in removing plaque on interface areas is mechanical debridement. In both maintaining periodontal health and in preventing dental decay in interfaces, interface parts cleaning tools are necessary for a regular oral hygiene [5-10].

CONCLUSION:

When a dentist treating caries in the anterior region considers treatment alternatives in which aesthetic comes first; he/she shouldn't ignore the cost, time and social factors. In this case report, direct composite technique applied to the patients by taking these factors into

consideration has been explained. For the success of the techniques, motivation of oral hygiene, proper indications and good cooperation of the patient are required.

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FIGURES:



Figure 1: A .The front view of the patient's anterior teeth, B. The profile view of patient's teeth, C .The profile view of patient's teeth, D. Anterior view of the patient after the treatment, E. the profile of the patient after the end of treatment, F. The profile of the patient after the end of treatment.