

## AESTHETIC RECONSTRUCTIONS OF I AND II CLASS CAVITIES BY SELF-ETCH ADPER PROMPT L-POP AND UNIVERSAL NANOCOMPOSITE FILTEK SUPREME IN AN UNDERGRADUATE COURSE

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### ABSTRACT:

Adhesive systems and resin composite materials have developed dynamically. These materials have applied for an aesthetic reconstruction in posterior teeth and this tendency has increased significantly over the last several years. Student's education is closely connected with learning and training in clinical situation new technologies' materials.

The purpose of this study was to investigate practical students skills needed in aesthetic reconstructions of I and II class cavities by self-etch Adper Prompt L-Pop Adhesive™ and universal nanocomposite Filtek Supreme™.

A clinical follow-up was conducted on 37 resin composite restorations made in an undergraduate course over a 3-month period. It was investigated proximal contact reconstruction, condensable resin composite abilities and student's efforts to obey clinical sequences in adhesive system application according manufacturers.

The authors concluded that technically less-sensitive materials would be suitable as the materials for undergraduate teaching programs where less-experienced students are involved in the restoration work. Such clinical follow-ups will help improve the teaching program and also provide valuable insight into performance of the materials used.

**Key words:** an aesthetic reconstruction, self-etch adhesive, nanocomposite, undergraduate course

### INTRODUCTION

The clinical students training in department of Operative Dentistry is connected with tooth caries treatment. The students education is designed to give knowledge and develop of skills for the correct diagnostic and treatment approach as well as learning and training in traditional and the newest restoration methods. The successful aesthetic reconstruction needed precise clinical work in multi step and much-sensitive adhesive technique.

### AIM

The purpose of this study was to investigate practical students skills needed in aesthetic reconstructions of I and II class cavities by self-etch Adper Prompt L-Pop Adhesive™ and universal nanocomposite Filtek Supreme™.

### MATERIAL AND METHODS

#### 1. Subjects

A clinical follow-up was conducted on 37 resin composite restorations made in the final two years of training of undergraduate students during the period from September 2004 to December 2004. The study group took part in the "Students Expertise Project" supported by 3M ESPE Dental Products.

#### 2. Clinical procedures

All cavities were prepared by students under the supervision of a clinical instructor. A total of restorations were placed in vital teeth and were restored using self-etch adhesive / Adper Prompt L-Pop/ and nanocomposite Filtek Supreme. Enamel was not beveled, nor was any mechanical retention placed. The obturations were restored according to directions supplied by manufacturer. Adper Prompt L-Pop was applied with a light brushing motion for 10- 15 s. The material was gently air dried for 5 s. and was light-cured for 10 s. Filtek Supreme was inserted in increments of 2 mm. Each increment was polymerized for 20 s. using visible light-curing device. After polymerization, finishing was accomplished with polishing discs and brushes /3MESPE, Dental products/

#### 3. Date collection and analysis

Each clinical case in our investigation was photographed with digital camera Canon (Power Shot A 300, 3.2 mega pixels). Graphical analyze was proceed.

## RESULTS AND DISCUSSION

Students restored 14 class I, 9 class II- MO, 10 class II- DO and 4 class II- MOD cavities. Twenty restorations were made on molars, and 17- on premolars. The restoration of medium deep cavities was almost one third (13 cases) of all. 34 of the restoration were classified as deep.

The ability of proximal contact reconstruction was investigated. Students showed excellent practical skills including series of actions that need to be completed in order to achieve aesthetic restoration of I and II class cavities. In our investigation undergraduates successfully solved the problem with proximal contact reconstruction. Filtek Supreme has high degree of thickness, perfect adaptation to cavity floors, precise solidity, does not stick on restorative instrument.

We examined student's efforts to obey clinical sequences in adhesive system application. The adhesive has an easy and a fast clinical application. The attractive and innovative package of Adper Prompt L- Pop reduces possibilities for faults, create favourable practical work and pre-conditions for successful restoration.

In our investigation we examine the students working speed for application of adhesive system. For the adhesive systems, which require application of acid conditioner on dental tissue, average treatment time in minutes are 1 min. 50 sec., while for the self etch adhesives are 25 sec. This fact is very important, because of possibility of contamination.

Some reconstructions are shown in Fig. 1 and Fig. 2

## CONCLUSIONS

A technically less- sensitive materials like Filtek Supreme and Adper Prompt L-Pop would be suitable as the materials for undergraduate teaching programs where less-experienced students are involved in the restoration work.

Fig. 1. Reconstruction of class I

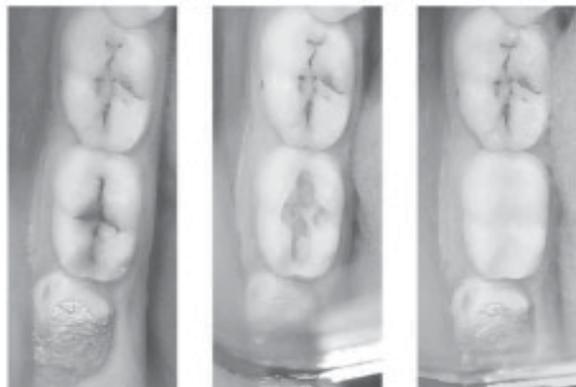
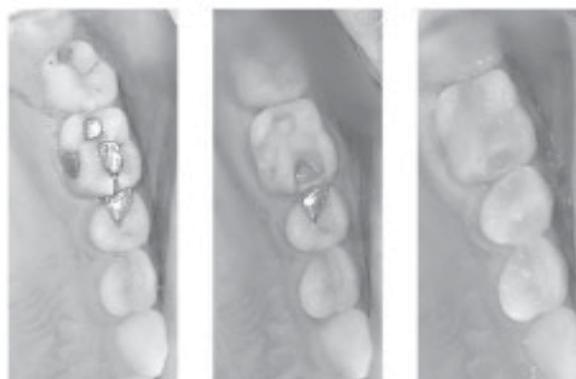


Fig. 2. Reconstruction of class II



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