**SOURCE: J Clin Exp Dent. 2014 1;6
(Supplement1):S31.**

* doi:10.4317/jced.17643850

<http://dx.doi.org/10.4317/jced.17643850>

Objectives

The use of antimicrobial solutions has been recommended to disinfect demineralized dentin prior to placing the filling material. The aim of this study was to evaluate the ability of several antimicrobials in controlling *Streptococcus mutans* biofilm formed in dentin.

Materials and Methods

Antimicrobial activity of 1% and 2% alexidine, 0.2% and 2% chlorhexidine, 0.2% cetrimide and 0.2%, 0.5%, was assayed on 1-week *S. mutans* biofilm formed on standardized coronal dentin blocks. Results of *S. mutans* biofilm antimicrobial activity by different protocols were, respectively, expressed as the kill percentage of biofilm and the term "eradication" was used to denote the kill of 100% of the bacterial population. To compare the efficacies of the different protocols the Student t test was used, previously subjecting data to the Anscombe transformation.

Results

All alexidine concentrations tested and 0.2% cetrimide achieved a kill percentage higher than 99%, followed by 2% chlorhexidine with percentages above 96% (no statistically significant difference among them). Whereas 2% alexidine and 0.2% cetrimide respectively showed eradication in 10 and 9 of the twelve specimens, 0.2% chlorhexidine did not produce eradication in any case.

Conclusions

The present study shows that, when used for one minute, 2% and 1% alexidine, and 0.2% cetrimide, achieve eradication of *Streptococcus mutans* biofilm in most specimens when applied to a dentin-volumetric model.

- Oral Presentation 67

TITLE: Minimally invasive aesthetics through interdisciplinary orthodontic-restorative treatment

AUTHORS: Ruiz-Sánchez C, Faus-Matoses V, Faus-Matoses I, Alegre-Domingo T, Faus-Llácer VJ.

**SOURCE: J Clin Exp Dent. 2014 1;6
(Supplement1):S32.**

* doi:10.4317/jced.17643851

<http://dx.doi.org/10.4317/jced.17643851>

Introduction

One of the greatest challenges which the professional faces is to fulfill the aesthetic expectations of the patient for the restoration of anterior teeth. Patients increasingly demand more aesthetics without excessive teeth preparation.

An interdisciplinary management should be planned in order to satisfy the aesthetic and the conservative needs of the patient.

Case report

A 50-year-old woman came to the office asking for an improvement of the aesthetics of the maxillary incisors. Clinical examination showed the discoloration of the maxillary anterior teeth was observed due to a calcification caused by an occlusal trauma, along with attrition and compensatory extrusion.

The treatment plan consisted of the intrusion of the maxillary central incisors to bring gingival zenith to their original location and the alignment of the mandibular incisors with orthodontic treatment to prevent further occlusal trauma.

Once the orthodontic treatment was finished, coreless feldspathic veneers (Noritake, Japan) were placed in 1.1 and 2.1 with a minimally invasive preparation.

After diagnostic wax-up, a mock-up made of Integrity resin (DeTrey Dentsply, Konstanz, Germany) was performed. The impression was taken with Aquasil Hard Putty and Aquasil Ultra XLV (DeTrey Dentsply, Konstanz, Germany).

In a subsequent appointment, try-in and placement were performed under complete isolation. Adhesive Prime & Bond NT (Dentsply DeTrey, Konstanz, Germany) and translucent cement Calibra (Dentsply DeTrey, Konstanz, Germany) were used for bonding.

Conclusions

The combined orthodontic-restorative treatment allowed the resolution of the aesthetic and functional problems of the patient with a minimally invasive approach that preserved all the healthy dental tissue.

- Oral Presentation 68

TITLE: MAPK is involved in leptin signalling pathways in human dental pulp

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**SOURCE: J Clin Exp Dent. 2014 1;6
(Supplement1):S32.**

* doi:10.4317/jced.17643852

<http://dx.doi.org/10.4317/jced.17643852>