Objectives

Leptin is the peripheral signal produced by the adipocyte to regulate energy metabolism. It has been demonstrated that leptin receptor (LEPR) is expressed by human dental pulp cells, being up-regulated in experimental pulpitis. This study aims to assess if leptin signal transduction in human dental pulp involves MAPK phosphorylation.

Materials and Methods

Fifteen dental pulp samples were obtained from freshly caries- and restoration- free extracted human third molars. Pulp samples were processed, and leptin signalling was determined analyzing MAPK phosphorylation by immunoblot.

Results

Leptin stimulated tyrosine/threonine phosphorylation of MAPK by studying phosphorylation of MAPK 1/3. This signalling pathway was confirmed in all human dental pulps. Western blot analysis of leptin-stimulated human dental pulp samples revealed the presence of a protein with an apparent molecular weight of approximately 42-44 kDa, which corresponds, respectively to the estimated molecular weight of tyrosine phosphorylated forms of MAPK.

Conclusions

MAPK is involved in leptin signalling pathways in human dental pulp. The present study is the first to demonstrate the leptin activity in human dental pulp tissues through MAPK signalling pathway.

- Oral Presentation 69

TITLE: Lava Ultimate CAD/CAM Restorations: How to increase its final esthetic integration?

AUTHORS: Sansalvador Millet V, Chávez Gatty M, Molina Garcia K.

SOURCE: J Clin Exp Dent. 2014 1;6 (Supplement1):S33.

* doi:10.4317/jced.17643853

<http://dx.doi.org/10.4317/jced.17643853>

Introduction

The use of adhesive indirect restorations is increasingly being popularized to restore medium and big sized cavities and to limit the disadvantages related to direct techniques with composite. Adhesive indirect restorations are becoming more popular to restore medium and large cavities, as well as to limit the disadvantages related to direct composite techniques in restorations. The introduction to new technologies such as the development of

CAD/CAM, illustrates how this new approach to new restorative odontology may look in the future. However, at present, CAD/CAM systems have their limitations. The process to obtain ceramic blocks or—more recently—resin blocks leads to a simplified anatomy restoration. This means we will be taking another posterior cosmetic treatment to achieve a more esthetic final restoration.

Case report

We intend to present a clinical case, which describes step by step the personalized process by stratification of external laps of composite in a monolithic Lava ultimate restoration.

Conclusions

We hope to illustrate how this technique could also be used to personalize, correct or to repair any other type of indirect restoration.

- Oral Presentation 70

TITLE: Biodentine: a new material in Endodontics and Conservative Dentistry; a literature review

AUTHORS: Santos Cubero J, García Marcos JI, Mena Álvarez J.

SOURCE: J Clin Exp Dent. 2014 1;6 (Supplement1):S33.

* doi:10.4317/jced.17643854

<http://dx.doi.org/10.4317/jced.17643854>

Introduction

Biodentine is a recently introduced to the market in order to replace a new dentin material. It competes with other cements formed by calcium silicate like a calcium hydroxide, Mta, Irm, Cvi.

Description

Biodentine comprises: tricalcium silicate, main component and regulator setting reaction, calcium carbonate, filler acting, dioxide zirconium, providing radiopacity to the material to watch on a radiograph, calcium chloride, accelerates the setting and a polycarboxylate that reduces the viscosity of the cement.

Discussion

Numerous scientific studies endorse it in conservative dentistry (posterior and anterior restorations sealing post, post endodontic reconstructions, direct pulp capping), endodontic and pediatric dentistry field (Perforations, apical caps, retrograde fillings) corroborating excellent mechanical properties, biocompatibility, formation of dentin bridges, good sealing and easy operation.