Introduction

Nowadays, it is considered that the viability of a non-vital tooth is reduced by the loss of tooth tissue, so if it is less dental tissue, the tooth is more susceptible to fracture. There are interesting techniques that allow us to preserve the more possible dental tissue. Endocrown consists of a unique structure that uses the camera as retention and covers the overall occlusal surface without using intracanal pin.

Case report

42 year old patient who came to the Multidisciplinary Master Aesthetic Dentistry at the University of Granada to present symptoms at upper right second molar. Endodontics was performed with the same system files Protaper and sealed with Thermafil. As an alternative to conventional restoration techniques, post and crowns, we chose conducting a Endocrown indirect composite.

Conclusions

Currently, Endocrown is a good alternative instead of using full coverage crowns, because it respects more dental tissue by using pulp camera as retention. Using pins is not required, and also, with the current adhesion system, we have a good prognosis against occlusal loadings and a good biomechanical behaviour.

- Oral Presentation 6

TITLE: Anterior front rehabilitation with lithium disilicate crowns

AUTHORS: Armenteros Pe érez A, Palomares Muriana T, Gonza ález Villafranca P, Rodri íguez Pe érez M, Otero A Ávila A, Costas Soto A, Gonza ález Lo ópez S.

SOURCE: J Clin Exp Dent. 2014 August 1;6 (Supplement1):S3.

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<http://dx.doi.org/10.4317/jced.17643790>

Introduction

Esthetic and functional rehabilitation with lithium disilicate crowns in anterior front.

Case report

46-year-old female patient comes to Esthetic Master demanding for a restorative treatment of anterior front. After a periodontal and radiological evaluation, we designed a treatment plan which included an esthetic rehabilitation using lithium disilicate full coverage crowns. Treatment consisted in extraction of 12, root canal treatment in 21, reinforcing it with glass fiber post, and placement of lithium disilicate crowns in 21, 22 and 23

and a same material bridge from 13 to 11, after phase with long term provisional crowns and ovate pontic in 12 to remodel soft tissues.

Conclusions

Lithium disilicate crowns play an integral role in providing high-quality and natural-appearing restorations as long as we can obtain enough ferrule effect that guaranties their longevity.

- Oral Presentation 7

TITLE: Microtensile bond strength of aged Lava Ultimate composite repaired following different protocols

AUTHORS: Arpa C, Ceballos L, Fuentes MV, Perdigão J.

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Objectives

To evaluate the effect of surface conditioning on repair microtensile bond strength (μ TBS) of artificially aged Lava Ultimate (LU) indirect restorative material.

Materials and Methods

Twenty-one LU blocks (6.0x6.0x5.5) were prepared, thermocycled (10,000 cycles, 5-55°C) and then randomly assigned to one of seven surface conditioning protocols: A. Silica coating (Cojet, 3M ESPE) and Scotchbond Universal Adhesive (SBU, 3M ESPE); B. Silica coating, silane (SI, ESPESil, 3M ESPE) and Adper Scotchbond 1XT Adhesive (XT, 3M ESPE); C. Sandblasting with alumina particles, phosphoric acid (PA) and SBU; D. Alumina sandblasting, PA, SI and XT; E. Abrasion with 280 grit SiC paper, PA and SBU; F. 4.9 % Hydrofluoric acid (IPS Ceramic Etching Gel, Ivoclar Vivadent) etching for 20s and silane application (Monobond Plus, Ivoclar Vivadent); G. PA and XT. All specimens were repaired with Filtek Supreme XTE (A4B, 3M ESPE) resin composite. Repaired blocks were sectioned in order to obtain stick-shaped specimens (0.8mm²) and submitted to μ TBS test. Data were analyzed with Kruskal-Wallis, Mann-Whitney U and Bonferroni tests ($p < 0.05$). The lowest μ TBS value obtained for each group was assigned to pre-test failures.

Results

Mean μ TBS in MPa and standard deviations are shown in Table. Surface conditioning with hydrofluoric acid and silane application resulted in 100% pre-test failures.

Surface conditioning	μ TBS values (MPa)		
	x (sd)	a	n
Silica coating+SBU	57.9 (15.2)	a	19
Silica coating + SI + XT	52.3 (16.1)	a	18
Alumina sandblasting + PA + SBU	43.0 (29.9)	a	15
Alumina sandblasting + PA + SI + XT	58.9 (13.4)	a	13
280 grit SiC paper + PA + SBU	41.6 (13.5)	a	14
Hydrofluoric acid + Silane	0		51
PA + XT	7.9 (1.2)	b	30

Similar mean μ TBS were obtained for the other surface treatments except for the groups in which specimens were repaired with PA application followed by XT Adhesive, which exhibited statistically lower results.

Conclusions. The application of hydrofluoric acid is not recommended to repair Lava Ultimate resin composite.

- Oral Presentation 8

TITLE: Fiberglass reinforcement in rebuilding fractured teeth

AUTHORS: Arroyo Bote S, Martínez Osorio J.
SOURCE: J Clin Exp Dent. 2014 1;6
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Introduction

The anterior fracture is a common situation that represents a major clinical challenge. The goal of treatment should be to restore the anatomy and function of the fractured teeth, however the percentage of teeth that undergo re-fracture is high, so the use of all materials and techniques that can help restore fracture resistance of the tooth must be considered when we decide to start the treatment.

Case report

We present several cases of incisal angle fracture of upper anterior teeth, treated with esthetic materials: Adhesives, Composites and fiberglass-reinforced composite. In one case the treatment has been performed by re-attaching the broken tooth fragment to the remaining tooth structure with a fiberglass piece and in the remaining cases was performed fracture reconstruction by applying adhesive, composite and fiberglass. The aesthetic and functional result of the restorations has been satisfactory, doing control seasons of the restorations along to five years.

Conclusions

The aesthetic result of fractured anterior teeth restorations made with adhesive techniques and fiberglass composites is optimal, we can obtaining restorations with greater resistance to fracture than those performed without glass fiber reinforcement, so we should consider this materials in the restoration of teeth fractured as the best option.

- Oral Presentation 9

TITLE: Influence of different root dentin pre-treatments on the bond strength of fiber posts

AUTHORS: Baena E, Flores A, Ceballos L.
SOURCE: J Clin Exp Dent. 2014 1;6
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Objectives

The aim of this study was to assess whether different dentin conditioning protocols with strong or mild acids (phosphoric acid, ethylenediaminetetraacetic acid (EDTA) and polyacrylic acid) influence the bond strength of the self-adhesive resin cement RelyX® Unicem2 Automix (3M ESPE) when used to lute fiber posts along the radicular depth.

Material and Methods

Twenty single-rooted teeth were randomly divided into four experimental groups (n=5) according to the pre-treatment procedure performed before luting RelyX Fiber Post (3M ESPE). Group 1: no dentin pretreatment; Group 2: pretreatment with 35% phosphoric acid for 10s; Group 3: pretreatment with EDTA gel 17% for 60s and Group 4: pretreatment with 25% polyacrylic acid for 30s. Roots were transversally sectioned into nine 1 mm thick specimens, three corresponding to each root third: coronal, middle and apical third and push-out