- Oral Presentation 16
TITLE: Effect of different surface pretreatment and aging on composite onlays bond strength.

AUTHORS: Cura M, González-González I, Fuentes MV, Ceballos L.

Objectives
To evaluate the influence of different surface pretreatments on microtensile bond strength (μTBS) of composite onlays after aging.

Materials and Methods
Composite onlays (Filtek Z250, 3M ESPE)(Ø 8 X 4 mm high) were randomly assigned to 6 groups, according to surface treatment: 1. Al2O3+1XT: Sandblasting with 27 µm Al2O3 particles + Adper Scotchbond 1XT (3M ESPE); 2. Al2O3+Si+1XT: Sandblasting with 27 µm Al2O3 particles + Silane application (ESPE SIL, 3M ESPE)+ Adper Scotchbond 1XT; 3. Al2O3+Universal: Sandblasting with 27 µm Al2O3 particles + Scotchbond Universal (3M ESPE); 4. Silica+1XT: Tribochemical silica coating 30 µm particles (Cojet, 3M ESPE) + Adper Scotchbond 1XT; 5. Silica+Si+1XT: Tribochemical silica coating 30 µm particles + Silane application +Adper Scotchbond 1XT; 6. Silica+Universal: Tribochemical silica coating 30 µm particles + Scotchbond Universal. Composite overlays were luted using RelyX Ultimate resin cement (3M ESPE) to fresh resin composite specimens. Bonded assemblies were stored in water (24h or 6 months) and subsequently prepared for μTBS testing. Data were analyzed by two-way ANOVA, SNK and student t-tests (p<0.05). Failure mode distribution was recorded and selected fractured beams were observed under SEM.

Results
μTBS mean values in MPa and standard deviations (sd) are shown in the table. Different letters indicate statistically different μTBS values among groups. *Means statistical differences between 24 hours and 6 months.

Conclusions
Sandblasting followed by Adper Scotchbond 1XT or Scotchbond Universal adhesives application provided higher adhesive strength values at 24 hours. The latter was the experimental group that presented higher bond strength also 6 months later. The application of sandblasting or tribochemical silica coating before Schotchbond Universal adhesive produced stable bond strength values after 6 months storage.

- Oral Presentation 17
TITLE: Influence of ultrasonics used in endodontics on cardiac pacemakers and implantable automatic defibrillators

AUTHORS: De los Mozos García I, Bach Álvarez A, Campo Nieves L, Sánchez Garrido E, García Barbero E.

Objectives
The aim of this study is to determine whether ultrasound devices, commonly used in Endodontics, affect the functioning of cardiac pacemakers and implantable automatic defibrillators.

Materials and Methods
We selected two models of cardiac pacemakers and three models of automatic defibrillators. All of them were used with ultrasonic tips Star-X connected to two types of ultrasounds: Kavo and Newton P.S of Satelec. The pacemakers and defibrillators were analyzed with a clinical measurement system (Medtronic® 2090 Programmer B.V. Netherlads). A closed circuit was created by immersing one unir-
radicular tooth in a 5cmx5cmx30cm container. The circuit was closed by connecting the cardiac pacemaker cable with the opposite end of the container. We monitored the pacemaker baseline in different situations. First, when the ultrasound was switched on, then using 1, 2, and 3 power switches, in the case of Kavo ultrasound, and then with all power switches, from 1 to 20, in the Newtron ultrasound case. Each of the activations, in turn, was performed at 30 cm and 2 cm from the pacemaker’s sensor.

The positive control was made by touching the alginate with the electrode of the electric scalpel. The negative control was made by touching the adjacent alginate with the tip of the Sonic Activator Endoactivator. The pacemaker’s operation was monitored using the Medtronic system.

Results
Ultrasounds altered the functioning of pacemakers and defibrillators in the same way that the electrical scalpel that was used as a positive control. They produced graphics altered by noise and changes in the mode of contraction.

Conclusions
Ultrasonic devices adversely affect the operation of pacemakers and cardiodefibrillators. We believe that its use in patients with pacemakers or cardiodefibrillators should be contraindicated and we think more studies are needed which corroborate these results.

- Oral Presentation 18
TITLE: Endodontic and restorative treatment of two discolored incisors with silver points

AUTHORS: de Pablo OV, Diaz-Sanchez C.
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Introduction
The color change in an anterior tooth is a major cosmetic problem and a challenge for the dentist who should solve it. It is important to identify the cause to establish an appropriate treatment.

Case report
We report a patient who underwent root canals with silver points in several upper teeth. Years later, the patient came with chronic apical periodontitis in two incisors and an unsatisfactory aesthetic result of the staining produced by said filling. After assessing the various treatment options, we chose to approach the case conservatively. At endodontic level, we remove both silver points and due to wide apical caliper the canals were sealed with MTA and gutta-percha. Once retreatments were finished, we performed a cervical proper sealing glass ionomer and proceeded to perform an internal bleaching. The product used was sodium perborate mixed with distilled water and renewed weekly. Once the teeth had regained its original color, were restored conservatively with direct composite veneers. In subsequent recalls, we see the resolution of the apical periodontitis and the good performance of the restorations.

Conclusions
When performing endodontic treatment of a tooth we have to discard materials that can alter the color of it, avoiding future problems. Internal bleaching with sodium perborate, in this case, has reversed staining produced by silver tips; endodontic retreatment with MTA and gutta percha has succeeded in healing a chronic apical periodontitis; and with the natural color of the teeth, veneers direct composite involves an aesthetic alternative satisfactory for the patient.

- Oral Presentation 19
TITLE: Indirect composite restoration performed through digital workflow

AUTHORS: De Vega Calleja S, Da Silva D, Fuentes MV, Luengo M, Ceballos L.
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Introduction
The application of digital technology to Dentistry brought important changes to the daily practice of clinicians, not only by simplifying procedures, but also by gradually improving the quality of treatments. Besides the simplification process of the clinical steps brought by the digital flux, the development of new CAD-CAM materials endows restorations with improved mechanical behaviour and better accuracy when compared with conventional techniques, improving the marginal adjustment, the anatomy and the contact points.

Case report
A patient (65 year old man) requires to be treated in the URJC University Clinic. Following clinical and radiographic studies, the need for endodontic and restorative treatment with an onlay in the 1.6 was detected. After performing the endodontic treatment, tooth preparation...