

each of the teeth. Clinical photos and RX of the endodontic files introduced in the perforations and the correct location of the root canals are presented, as well as the root canal treatments performed in 2002.

The teeth perforations were exposed afterwards to perform a vestibular givectomy and were sealed with composite, after complete healing of the gingiva, the two teeth were treated with full coverage crowns. Images of the entire treatment were taken. Throughout these 12 years, we have been making regular checks, the patient never again had any pathology. The clinical and esthetic evolution as well as the evolution of the root canal treatment and the perforations were successful. We present photos of the progress of the case and of the current state.

Conclusions

The orientation of the access cavity to pulp chamber and the anatomical knowledge of the tooth are very important to perform endodontic treatments. It must be taken into account the possible abnormalities in the size and shape of the tooth, the position in the arch, possible destruction by caries, abrasions or scuffs when we start to opening the chamber access. The evolution of the case shows that Conservative Dentistry should always be the first treatment option.

- Oral Presentation 50

TITLE: Fluorescence of resin composites: Comparison between shade types of various brands

AUTHORS: Meller C, Connert T, Klein C.

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Objectives

The aim of this study was to determine the fluorescence properties of different commercially available resin composite shades.

Materials and Methods

A total of 234 different colors (122 enamel, 80 dentin, and 32 special shades) of 16 different brands (Miris[®]2: Coltène-Whaledent, Esthet-X[®]HD, Ceram-X[®]Duo, Spectrum[®]: Dentsply-DeTrey, EcuSphere[®]: DMG, ENAMEL-Plus HFO/HRi[®]: GDF, Venus[®], Venus[®] Diamond, Charisma[®]: Heraeus-Kulzer, Tetric-EvoCeram[®], IPS-Empress[®] Direct: Ivoclar-Vivadent, Filtek-TM SupremeXT, FiltekTMZ250: 3M-Espe, Amaris[®] and Grandio[®]: VOCO) were analyzed. The composites were light-cured for 40s with a polymerization lamp

(Bluephase[®], Ivoclar-Vivadent) in 96-well assay microplates (Corning[®]) and fluorescence measurements conducted at 37°C using the monochromator-based fluorescence microplate reader SynergyTM Mx (BioTek[®]). The maximum fluorescence and the corresponding excitation and emission wavelength were evaluated for each shade.

Results

Maximum fluorescence was achieved at a nearly comparable combination of excitation and emission wavelength between shades, but with strongly varying intensities. Only two brands, FiltekTMSupreme XT (dentin shades: 1585±507 RFU, enamel shades: 4473±330 RFU) and FiltekTMZ250, (enamel shades: 867±279 RFU) resembled the fluorescence of natural human enamel and dentin probes. The shades of the other brands showed as much as three to fifteen times higher mean maximum fluorescence (dentin shades: 10331-47774 RFU; enamel shades: 19283-38264 RFU; special shades: 35934-60001 RFU). No relevant differences were recognized at the mean excitation (395-400 nm) and emission (450-458 nm) wave length for the assessed groups.

Conclusions

The results demonstrate that the analyzed composite brand shade types reached their maximum fluorescence at nearly the same excitation emission wavelengths combination, but with varying optical fluorescence intensities. The results provide fluorescence data of a vast sample of different well-known composite shades, data needed not only for the development of new aesthetic materials, but also for diagnostic reasons in routine (re- treatment, forensic and epidemiological research/ analyses).

- Oral Presentation 51

TITLE: Comparative study of the fatigue resistance of different rotary systems

AUTHORS: Mena Álvarez J, Zubizarreta Macho A, Rico Romano C.

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Objectives

The aim of this study is to compare the fatigue resistance of different rotary systems with different transverse section contributing files of taper and similar diameter apical, emphasizing Hyflex and F360 as new systems of rotary instrumentation.