Methods
90 freshly extracted human third molar teeth were used in the study. Occlusal surfaces of teeth were ground until dentinal surfaces were exposed. Then the specimens were randomly distributed on 3 groups, in which the different CDD (Seek Caries Indicator, Caries Detector, Caries Marker) were applied on dentine surface and each group was further divided into three subgroups (NaOCl, H2O2, distile water) according to cleaning solutions. CDD were applied to the dentine surfaces according to manufacturer's instructions. Then, CDD were rinsed out with cleaning solutions according to sub-groups. CDD residues were measured by a spectrophotometer before the application of CDD and after rinsing out with cleaning solutions. Data were analyzed by two-way analysis of variance (ANOVA) and Tukey's HSD test ($\alpha = 0.05$).
Results
For all CDD groups, the lowest colour differences were observed in NaOHCl ($p < 0.05$) and the highest colour change was observed in water ($p > 0.05$). When comparing the CDDs; Caries Marker yielded the lowest values ($p < 0.05$), the highest colour difference was observed in the Seek Caries Indicator ($p < 0.05$).
Conclusions
Cleaning solutions like NaOHCl can be used for removing the residual CDDs that remains on dentine surfaces.

OPD10.14 MTA effect on the shear bond strength of self-etch adhesive systems towards primary teeth dentine

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Aim
To study MTA effect on the shear bond strength of three adhesive systems towards primary teeth dentine.
Methods
60 samples of primary teeth dentine were under study, 6 groups were formed. In the 1st, 2nd and 3rd groups AdheSE One F, Adper Promt L-Pop, OPtiBond XTR were used. In the 4th, 5th and 6th groups a 5-min exposition with the Russian MTA, Trioxident, was performed first, then the adhesive systems were applied in the same order as in the first three groups. The shear bond strength was measured in accordance with the protocol ADA Professional Product Review//Dentine Shear Bond Strength Test 2007. The U criterion (Mann–Whitney) was used for the statistical assessment of the results.
Results
The shear bond strength (in MPa) was measured in the following order: OptiBond XTR = 26.8 ± 1.4 > Adper Promt L-Pop = 19.7 ± 3.0 > AdheSE One F = 9.26 ± 4.76; after ÌÒÀ exposition (in MPa): OptiBond XTR = 25.5 ± 4.5 > Adper Promt L-Pop = 14.3 ± 3.9 > AdheSE One F = 9.9 ± 2.9. The statistic difference of the indices was determined for the groups 1.4 ($p < 0.05$); 2.5 ($p < 0.05$), for the groups 3.6 ($p > 0.05$) the statistic difference was not determined.
Conclusions
The MTA effect on the shear bond strength of AdheSE One F and Adper Promt L-Pop was determined and statistically reliable; it reduces the adhesion in the interval from 1 to 28 %.

OPD10.15 Evaluation of the bioactive and antibacterial properties of a novel dental composite resin

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Aim
The fabrication of a dental restorative material that will induce remineralisation into a bacteria free environment. The evaluation of the antibacterial and bioactive properties of the material.
Methods
The Ag doped bioactive glass was incorporated into resin composite in concentrations 0, 5, 10 and 15 % wt., to fabricate the new material Ag-doped bioactive glass dental composite (AgBG-COMP). Biofilm was cultivated on cylinder specimens of the above groups ($n = 12$ for each) and evaluated by SEM and CLSM after staining of the bacteria using a live-dead staining kit (Live/Dead Baclight, ThermoFisher Scientific. The images were analyzed with Image J software. The bioactive properties of the materials were assessed by observing the formation of apatite layers after immersion in Simulated Body Fluid.
Results
The incorporation of AgBG provides antibacterial properties into dental composite resin. The data shows statistical significant difference between control (0 % wt. of Ag-BG) and experimental groups as well as a statistical significant trend to decrease the ratio between the live/dead bacteria as the concentration of the AgBG increases. The bioactivity of AgBG-COMP was also shown by the apatite formation on the surface of the specimens. Consistently the amount of apatite formed was increased as the concentration of the AgBG was increased in the resin (qualitative data).
Conclusions
Development of this novel resin composite enhanced its remineralisation potential through hydroxyapatite formation in vitro, while exhibiting significant bactericidal activity. It is thus warranted for testing in the restorative care of high risk Paediatric dental patients.

SESSION OPD 11—ORAL MEDICINE AND PATHOLOGY

OPD11.1 Peripheral cemento-ossifying fibroma associated with an unerupted tooth

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Background
Peripheral cemento-ossifying fibroma (PCOF) is a relatively rare tumor classified between fibroosseous lesions. The mineralized product probably originates from periosteal cells or from the periodontal ligament.
Case report
A 9-year-old female patient referred with a chief complaint of swelling and pain during mastication in her maxillary left incisors region for 1 year with unerupted maxillary incisor.