

articles with more than 10 years (filter not applied for epidemiological investigations and historical data); studies not in english or not in italian. The articles obtained were mainly reviews published in relevant journals. "In vivo" clinical studies based on an evaluation over time, regarding effectiveness of techniques and materials and retention were evaluated. Epidemiological studies published on the websites of the major national dental and statistical organizations (SidP, SIOI, ISTAT) and publications on dental sites and journals have been considered.

**Results:** The results emerging from this careful analysis show that the first and second permanent molars of all individuals in the developmental age have to be sealed. Moreover this study puts in evidence that prevention has the maximum effectiveness for the subjects with high risk of dental caries. According to the 2016 ADA guidelines, sealing is also indicated in the carious prevention of deciduous elements and sealing premolars could also reduce the incidence of caries.

**Conclusion:** Currently, sealings are still necessary according to the updated guidelines in 2013. The general trend, however, suggests that in the future they could lose the important role they have in prevention, due to a general improvement in people oral hygiene and health. Nevertheless, an excellent field isolation still plays a fundamental role in the sealing prevention therapy.

### Morphostructural analysis, saos-2 cell viability and ph evaluation of two calcium silicate-based cement

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**Aim:** The aim of this study was to evaluate the bioactivity of Pro Root MTA (Dentsply, USA) and Biodentine (Septodont, France) after contact with human osteoblast-like cells (Saos-2). Cell viability was assessed by the mitochondrial dehydrogenase enzymatic (MTT) assay. A Ph analysis during the two different cement setting time was performed to evaluate the clinical effect on the pulp of the tested materials.

**Methods:** Human osteogenic sarcoma cells, SaOS-2, were cultured in Dulbecco's Modified Eagle's Medium (DMEM; Euroclone, Pero, MI, Italy), supplemented with 10% fetal bovine serum (FBS) and antibiotics, and were maintained in a humidified incubator with 5% CO<sub>2</sub> at 37 °C. Cell viability was determined by using MTT assay. Briefly, 5x10<sup>4</sup> SaOS-2 cells were seeded

on Biodentine or MTA Proroot disks and cultured for 24, 48 and 72 hours. Tetrazolium salts (MTT: 3-(4,5-dimethylthiazol-2-yl)-2,5 diphenyltetrazolium bromide, 5 mg/mL suspended in PBS), was added to each well and incubated for 4 h. The formazan crystals are extracted from the cells with a solubilizing solution (DMSO). An ELISA reader (Thermo Fisher, Phadia AB, Uppsala, Sweden) was used to measure the optical density at a wavelength of 570 nm and reference length 630 nm. The results were expressed as optical density values. pH measurement The pH was assessed with pH indicator strips at 24, 48 and 72 hours.

**Results:** The cells exposed with the two bioceramic materials showed differences in terms of viability at 24h, 48h and 72h but not statistically different. No differences between the PH after the cement setting at 24h, 48h and 72h was detected: P>0.1.

**Conclusion:** Bioceramic cements revolutioned endodontic procedures. The biggest limit of ProRoot MTA is the low manipulability so, a new cement was introduced in the market (Biodentine) in order to obtain an easier manipulation. Despite the tests reveal comparable results, the possibility to use a material in a humid clinical condition is a big advantage for the clinician especially in pediatric dentistry. Cell Viability and PH value was comparable between the two tested materials. Further study are necessary to well evaluate the exact role of calcium since, according with the existent literature, MTA shows better clinical outcomes especially in pulp capping procedures.

### Oro-dental manifestations in patients affected by celiac disease: possible diagnostic criteria

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**Aim:** Celiac disease (CD) is an immune-mediated systemic disorder triggered by exposure to dietary gluten and characterized by the presence of small intestinal enteropathy. The first aim of this study was to investigate the correlation between CD and the associated oral manifestations to understand if the dentist could have a primary role in the diagnosis of CD. An early identification of the disease is indeed essential in order to prevent CD's complications. The oral signs examined in the study were the following: enamel defects (ED), recurrent aphthous stomatitis (RAS), dental caries, teeth eruption delay and geographic tongue. The second aim was to understand if there was a direct correlation between