

Review of: "Relationship between In Vitro Physical Properties and In Situ Biofilm Formation of Fissure Sealants"

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Potential competing interests: No potential competing interests to declare.

They are aimed to effectively reduce these caries-prone regions for the growth of oral bacteria by blocking the occlusal surfaces of the teeth. Comment: I prefer to add "the pits and fissures" (by blocking the pits and fissures on the occlusal surfaces of the teeth.)

In vitro studies have shown that adding materials such as fluoride, CPP-ACP, xylitol, chlorhexidine, and HAP has the potential to inhibit the growth of cariogenic bacteria in oral biofilms. Comment: Please write the name of this material beside the abbreviation. Casein phosphopeptide-amorphous calcium phosphate (CPP-ACP). Also, Hydroxyapatite.

The results regarding the anti-carcinogenic effects of these dental materials obtained from in vivo and in situ studies are open to debate, and a consensus has not been reached yet. Dental literature is mainly interested in the wear, retention, microleakage, and caries prevention effects of fissure sealants. Comment: Do you mean anti-carcinogenic or anti-cariogenic? Double check, please.

in situ-formed biofilms on these materials, either with or without a HAP-containing paste, were evaluated using SEM. Comment: Write "scanning electron microscope," then put the abbreviation in a bracket (SEM). It is preferable to write the abbreviation for the first time that the full name is mentioned, and then use the abbreviation in the rest of the manuscript. Please do it for the entire text.

Surface roughness of the previously prepared discs of 10 BHAP, 10 E, as well as 10 polished and 10 unpolished samples of the 3 different fissure sealant materials was measured using a profilometer device (Dektak 6M Profilometer Veeco). Measurements were made with a 4- μ m diamond stylus, 90° reading angle, and 0.80 mm cut-off length at five different locations of each sample surface. Comment: Where exactly are these locations, and based on what have those locations been selected? I suggest taking one image of the sample and marking the different locations on the image. Then write a justification for the selection of those locations.

BHAP materials, with the polished and unpolished surfaces of the 3 sealant materials, using Profilometric Analysis, and compared them with artificial BHAP and natural enamel specimens. Table 1 showed the results obtained with statistical significance. Comment: Did you have polished and unpolished surfaces of enamel and BHAP materials? Are artificial BHAP and natural enamel specimens different from the enamel and BHAP materials that have been mentioned at the beginning of this paragraph? I prefer to rephrase this paragraph to make it clearer.

Table 2 showed the correlations and significance observed between 5 different materials. Comment: Please rewrite that sentence. For example, Table 2 showed the correlations and statistically significant differences observed between 5 different materials.

BHAP (Figure 2d) showed the smoothest surface and the most negligible biofilm formation. In addition, Streptococci-like groups can be clearly observed on the materials under X500 and X2000 magnification (Figure 3a, b, c). Comment: Did you mean all the tested materials?

If yes, why did BHAP have negligible biofilm formation?

Please rephrase and mention the name of each material that showed streptococci-like groups.

When SEM photographs of the biofilm under the biofilm-containing HAP were examined at 50X magnification, the irregularity of all material surfaces and the biofilm area on the surfaces were similar. Comment: Please rephrase to make it clearer.

When the children used the HP paste, no correlation was seen in the Clemex program, but a positive correlation was observed between unpolished and polished samples, as well as contact angle measurements of the materials. The microhardness did not reach the significance level (Table 5). Comment: Do you mean HAP? Please correct it.