



Pit and fissure sealants or fluoride varnishes?

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European Journal of Paediatric Dentistry

editorial

Despite the general advances in dental care, dental caries is still a global health problem affecting many children.

Occlusal surfaces of first permanent molars are the most susceptible sites in the developing permanent dentition. Dentists should use sealants or fluoride varnish – as well as other means – to limit the onset of tooth decay. Application of sealants is a recommended procedure to prevent or control caries. Sealing occlusal surfaces of newly erupted permanent molars in children and teenagers delays caries onset up to 48 months compared with unsealed teeth. However longer follow-ups shows a reduction of the preventive effect [Tikhonova et al., 2015]. A review of 2013 pointed out how sealants are effective in high risk children, however information about the benefits of sealing in other conditions is still scant [Ahovuo-Saloranta et al., 2013]. Fluoride varnishes are frequently used to prevent early childhood caries and reduce caries increment in very young children [Weintraub et al., 2006] and in the most vulnerable populations, where the prevalence of caries is higher and specialist visits are occasional [Chu et al., 2010].

Many studies have reported the effectiveness of different types and forms of fluoride agents in preventing dental caries among children and adolescents [Divaris et al., 2013]. A review clarifies that professional application of a 5% sodium fluoride varnish leads to remineralisation of early enamel caries in children. Solutions of 38% silver diamine fluoride are effective in arresting active dentine caries [Gao et al., 2016].

The last systematic review [Ahovuo-Saloranta et al., 2016], comparing pit and fissure sealants with fluoride varnishes explains that the pooled estimate slightly favours resin sealants over fluoride varnishes at two years. At four and nine years, the only comparative study (with high drop-out rates) found more caries on fluoride-varnished occlusal surfaces than on resin-sealed surfaces. There is evidence suggesting the superiority of resin-based fissure sealants over fluoride varnishes for prevention of occlusal caries in permanent molars, however it is not relevant. Eventually, Ahovuo-Saloranta et al. state that current data do not allow to draw definitive conclusions on whether to apply sealants or fluoride varnishes on occlusal surfaces of permanent molars [2016].

We will publish your opinion and experiences related to this topic in the next EJPD issue: join the discussion and write a letter to the editor!

References

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