

Fissure Sealants vs. Fluoride Varnish: The Battle of Effectiveness

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Citation: Shoaib T. (2023) Fissure Sealants vs. Fluoride Varnish: The Battle of Effectiveness. J Oral Med and Dent Res. 4(2):1-2.

Received: October 16, 2023 | **Published:** October 25, 2023

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Editorial

Childhood caries, a prevalent and preventable dental condition, continues to affect millions of children worldwide. Dental professionals constantly strive to find effective preventive measures to combat this problem. In recent years, the field of dentistry has witnessed a remarkable shift towards minimally invasive and biomimetic approaches. Two widely employed techniques for caries prevention in children are fissure sealants and fluoride varnish. According to the international guidelines, sealants should be placed in all pits and fissures of permanent molars as soon as possible after eruption for higher success rates; rather than placing sealants on occlusal surfaces with early carious. This approach is endorsed by a Cochrane review, which found that the placement of resin-based sealants reduced caries incidence by up to 51% compared to no sealant, when measured at 24 months [1-7].

Topically applied fluoride varnishes have been used extensively as a caries preventive intervention for over three decades. It is one of the best options for increasing the availability of topical fluoride regardless of the levels of fluoride in any water supply. A Cochrane review by Marinho et al, 2013 demonstrated a significant caries-preventive effect of fluoride varnish in both permanent and primary teeth. Moreover, a randomized clinical trial of clinical effectiveness in a community healthcare program suggested that semiannual application of fluoride varnish was not significantly different from that obtained by applying

and maintaining sealants after 36 months.

The last systematic review by Kashbour et al., 2020, comparing pit and fissure sealants with fluoride varnishes explains that there is limited evidence in the effectiveness of combining resin-based sealant with fluoride varnish compared to using fluoride varnish alone. Since the efficacy of both interventions in managing caries compared to no intervention has been previously established, ultimately, by promoting the use of fissure sealants and fluoride varnish, we can significantly reduce the burden of childhood caries, improving the oral health and overall well-being of our young population [3-7].

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