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Strategies for enamel remineralization: an overview of systematic reviews

[Estrategias para la remineralización del esmalte: una descripción general de las revisiones sistemáticas]

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Abstract

Introduction: Remineralizing agents are alternative to oral treatment that induce mineral profits; Therefore, the treatment effectiveness is of scientific necessity. **Objective:** The aim of this systematic review is to evaluate the methodological quality of systematic reviews on the effectiveness in the remineralization of incipient lesions in enamel through different therapeutic methods using AMSTAR 2. An overview of systematic reviews (SRs) of randomized controlled trials (RCTs) and in vitro studies was performed. **Methods:** The search was performed using four digital databases and the grey literature. SRs on the remineralization of white spot lesions (WSLs) through different therapeutic alternatives were included. **Results:** The results evaluated were changes in the enamel structure. Eleven SRs were included. Two studies reported that casein phosphopeptide-amorphous calcium phosphate (CPP-ACP) had greater remineralization potential than other compounds. Two studies found no significant difference between CPP-ACP and fluoridated agents. Four studies reported on the efficacy of fluoridated agents. One study found no difference between CPP-ACP and CPP-amorphous calcium fluoride phosphate (CPP-ACFP). Three studies did not yield conclusive results. **Conclusions:** Methodological quality was classified as high risk of bias for seven SRs and moderate risk of bias for four SRs. With a confidence level ranging from moderate to low, fluoridated compounds, nonfluoridated compounds, and combined compounds in randomized controlled trials show a potential to remineralize WSLs. Nonfluoridated compounds in in vitro studies (CPP-ACP) show statistically significant changes in enamel structure, but these results should be interpreted with caution. © 2023, Editorial Ciencias Medicas. All rights reserved.

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