



A review of different techniques for masking white spot lesions in pediatric patients

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1 INTRODUCTION

White spot lesions (WSLs) are an early sign of enamel demineralization. Commonly associated to orthodontic treatments and cariogenic challenges particularly in pediatric patients

WSLs treatment options

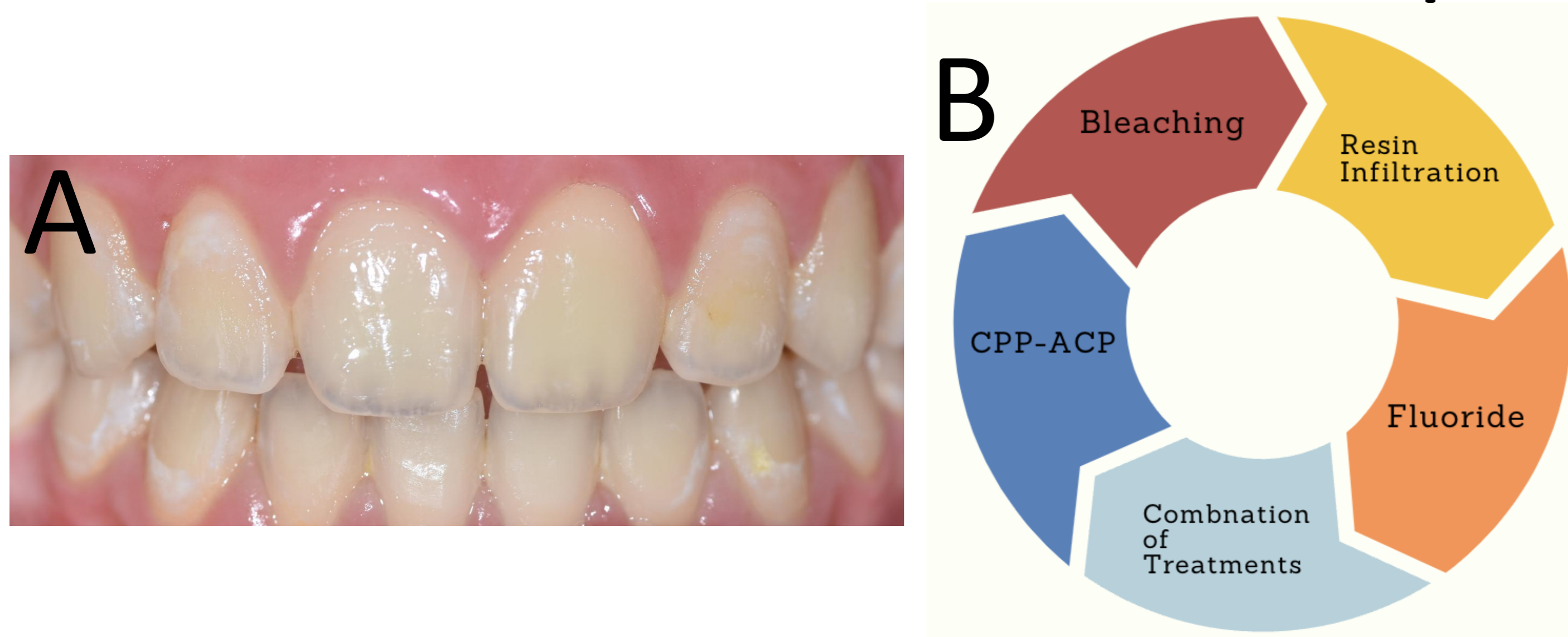


Figure 1. (A) . Post Orthodontic WSL (B) Graphical Representation of WSL and Pie Chart of different Treatments Techniques

2 AIM of the study

Assess the efficacy of combining multiple treatment techniques vs. single treatments in pediatric patients

3 METHODS

PICO Question:

Which clinical approaches combined or isolated (C) influence the treatment and prevention effectiveness (O) of white spot lesions (I) in humans (P) in the last ten years (T)?

Table 1. Pico component

PICO Component	
P (Population)	Patients with white spot lesions.
I (Intervention)	The combination of 2 or more treatment techniques.
C (Comparison)	The use of single techniques or different treatment combinations.
O (Outcome)	Effectiveness in treatment and prevention, including aesthetic improvements or reduction in lesion visibility.
T (Timeframe)	Studies conducted in the last 10 years.

Inclusion criteria: Studies conducted on humans, published in English or Portuguese, published between 2014 and 2024, focusing on a combination of several WSLs treatment techniques, with availability of full-text articles.

Exclusion criteria: Systematic reviews of clinical trials, in vitro studies, critical/narrative reviews, letters to the editor, or guidelines, studies in which only one technique is evaluated and not the combination of several techniques for treating WSL.

4 RESULTS

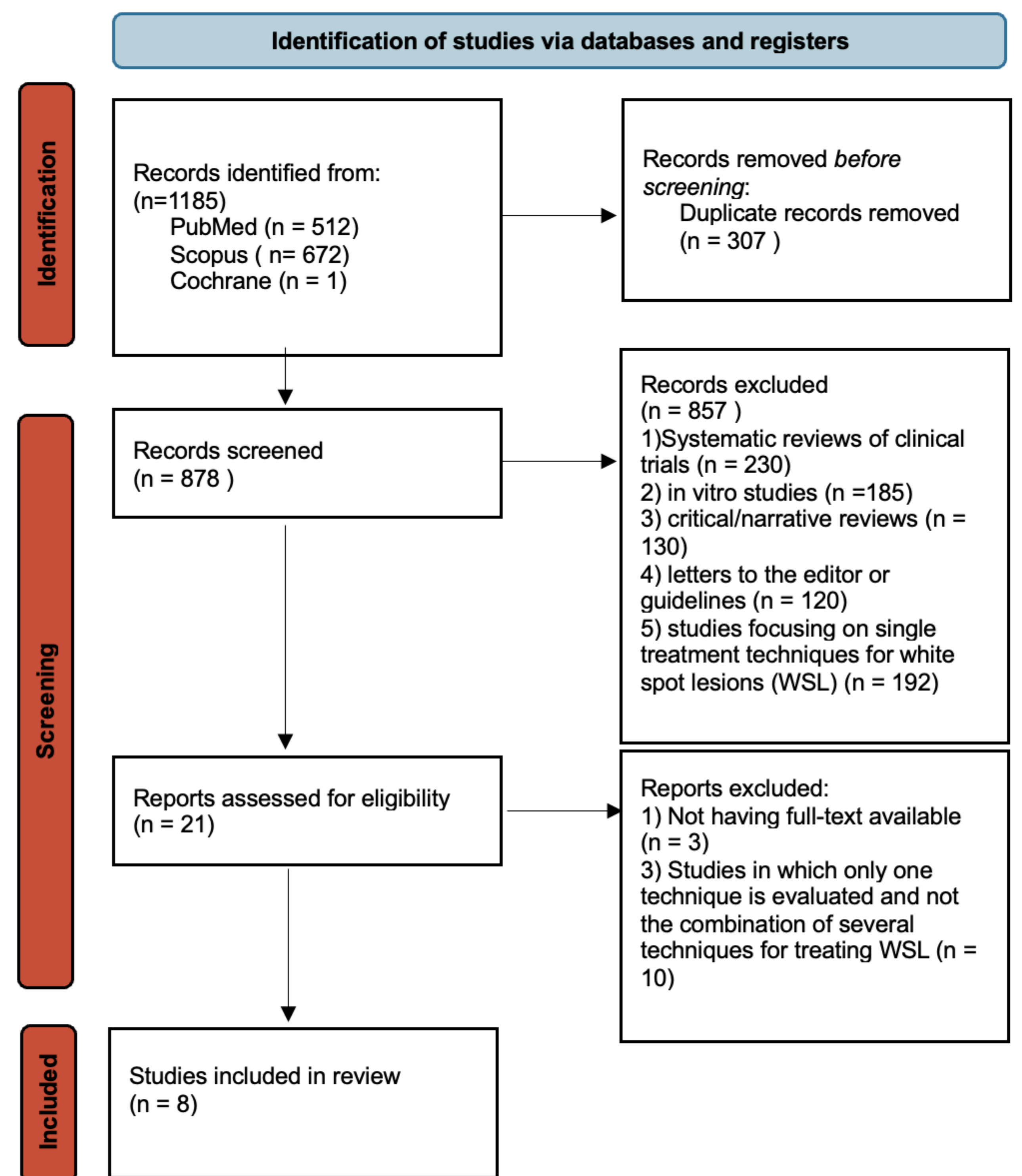


Figure 2. Overview of article selection procedure according to PRISMA guidelines

Table 2. Minimally invasive therapies

Combination	Category
Fluoride Toothpaste + MI Paste Plus + MI Varnish	No Significant Advantage
Fluoride Varnish + Ozone + Octenidine	Effective Combinations
Resin Infiltration + Chlorhexidine Varnish	Effective Combinations
CPP-ACP Paste + Sodium Fluoride Varnish	Effective Combinations

5 CONCLUSIONS

This systematic review highlights that combining minimally invasive therapies yields superior results in the management of white spot lesions compared to single-treatment approaches. The findings emphasize the importance of tailored combination therapies to improve both clinical and aesthetic outcomes, contributing to advancements in pediatric dental care.

REFERENCES

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