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## Effectiveness of Fluoride Varnish in Prevention and/or Treatment of White Spot lesions (WSL) in Orthodontic Patients, A systematic review

**Introduction:** Decalcification of the enamel surface or white spot lesion (WSL) adjacent to orthodontic appliances is a common side effect of the orthodontic treatment. WSL defined as “subsurface enamel porosity from carious demineralization” that presents as “a milky white opacity” at the smooth surfaces without cavity formation.

**Aim:** This systematic review aimed to summarize randomized clinical control trials (RCT) that evaluate the effectiveness of fluoride varnish material application in prevention and treatment of white spots lesions (WSL) in comparison to placebo or different form of remineralizing agents in orthodontic patients.

**Material and Methods:** Information search for randomized controlled studies on humans published between November 2007 and December 2016 was performed in PubMed in English language. The PICOS was: P; Orthodontic patients during or after treatment. I; Fluoride varnish C; Placebo or other remineralization agents. O; Presence and/or absence of WSL. S; Randomized clinical trials.

**Results:** After the screening of the titles and abstracts of 152 articles, 6 studies were identified as eligible for this systematic review. 3 of included studies with significant intergroup differences and one study was significant in DIAGNOdent measure but not in visual assessment, the other 2 remaining studies were non-significant outcomes at the end of studies, regarding fluoride varnish application for preventing development WSL and/or reversing WSL in orthodontic patients.

**Conclusion :** Insufficient clinical trial evidence to make a recommendation and the demand for future high-quality RCT with rigid eligible criteria and homogenous procedures. In order to evaluate the effectiveness of the fluoride varnish or to find the ideal strategy for preventing and/or treatment of WSL during and after orthodontic treatment to achieve more and solid clinically significant evidence-base guidelines. Moreover, the importance of instruction and motivating of patients for controlling their diet and provide an excellent oral hygiene routine with adequate fluoride use.

### Biography

Abdulaziz Alrebdi has completed Bachelor in Dental Sciences & Oral Surgery at Collage of Dentistry from Qassim University, Saudi Arabia. Abdulaziz Alrebdi working as teaching assistant in restorative department at Qassim Dental College. He has obtained his masters in college of dentistry from Malmo University, Sweden

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