

4<sup>th</sup> International Conference on  
**Dental and Clinical Dentistry**

July 08-09, 2019 | Berlin, Germany

**Influence of fluoride releasing light cured resin coat on enamel mineralization and survival of metallic brackets in orthodontic patients: A 12-months randomized clinical trial**

**Essam Nassar**

Imam Abdulrahman Bin Faisal University, Saudi Arabia

Enamel demineralization around orthodontic brackets is a common sequel of fixed orthodontic treatment. White spot lesions can be developed within 4 weeks of orthodontic treatment with a 72.9% to 75.6% prevalence rates among orthodontic patients. Researches advocated use of antibacterial agents such as fluoride, chlorhexidine and cetylpyridinium chloride to prevent white spot lesion. The purpose of this study is to evaluate the effect of a fluoride releasing light cured resin coat on the mineralization and survival rate of orthodontic brackets.

**Methodology:** Metal brackets (n=360) were bonded to the teeth mesial to the first molars in 20 patients. A split-mouth design was used to randomly allocate diagonally opposite quadrants and Ortho-Choice Ortho-Coat was applied to half of the teeth after bonding. The bracket bond survival rate was assessed afterwards for a period of 12 months. Enamel mineralization was evaluated using Laser fluorescence (DIAGNOdent).

**Findings:** Ortho-Coat significantly reduced enamel demineralization. No significant difference was found in bracket bond survival rates, with and without application of Ortho-Coat. The highest survival rates were recorded on incisors (96.2% with coat and 94.6% without a coat). The lowest survival rates were recorded on premolars (91.7% with coat and 88.3% without a coat).

**Clinical Significance:** Ortho-Coat effectively prevents enamel demineralization around orthodontic brackets over a 12-month period, but it has no pronounced effects on enhancing the bracket bond survival rate.

enassar@iau.edu.sa