

## **Evaluation of Three Commercially Available Materials in Reducing the White Spot Lesions During Fixed Orthodontic Treatment: A Prospective Randomized Controlled Trial**

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**Abstract :** Objectives: Treating white spot lesions (WSL) to create a sound and esthetically pleasing enamel surface is a question yet to be fully answered. The objective of this randomized controlled trial was to measure and compare the degree of regression of WSL during orthodontic treatment achieved by using three commercially available materials. Methods: A single-blinded randomized prospective clinical trial, comprising 80 patients categorized into four groups (one control group and three experimental groups, with 20 subjects per group) using block randomization, was conducted. Group A (control group): Colgate strong toothpaste; and experiments groups were Group B: GC tooth mousse, Group C: Phos-Flur mouthwash and Group D: SHY-NM. Subjects were instructed to use the designated dentifrice/mouthwash and photographs were taken at baseline, third and sixth months, and white spot lesions were reassessed in the maxillomandibular anterior teeth. Results: All the three groups had shown an improvement in WSL. But Group B has shown the greatest difference in mean values of decalcification index (DI) scores. Conclusion: All three commercially available products showed a regression of WSL over a 6-month duration. GC tooth mousse proved to be the most effective means of treating WSL over other regimens.

**Keywords :** white spot lesions, dentifrices, orthodontic therapy, remineralization

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