Effects of resin application on white spot lesions: Laboratory study

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Aim: The aim of this study was to evaluate the effect of resin infiltrant on white spot lesions compared to adhesive resin.

Methods: Artificial white spot lesions were created on the labial surfaces of 65 anterior permanent teeth. 31 teeth (Group A white lesion) were divided into three groups according to treatment applied: control A1, ICON A2 and adhesive A3. The remaining 34 teeth were immersed in a staining solution. The stained lesions were bleached (Group B) then divided to three groups: control B1, ICON bleached B2 and adhesive resin bleached B3. The teeth were photographed at three stages and photos were analyzed to evaluate the color difference ΔE between the lesion area and sound enamel before and after treatment using image software analysis. Then, Vickers micro-hardness test was done for the whole teeth after treatment.

Results: The ICON A2 group showed a highly significant color improvement (P=0.0001) compared to the other groups. The other test groups also showed significant color improvement but not as the ICON group. Icon group A2 showed the highest surface microhardness.

Conclusion: Resin infiltrant is an effective microinvasive approach in masking white spot lesions much more than adhesive resin.

Biography
Ahmed ElSebaai is currently working as Professor of Department of Pediatric Dentistry at Mansoura University-Mansoura- Egypt.

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