ABSTRACT

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Effect of deproteinization on composite bond strength in hypocalcified amelogenesis imperfecta

Isil Saroglu, Sevgi Arasa, Derya Oztas

a Department of Pediatric Dentistry, Ankara University School of Dentistry, Turkey
b Department of Prosthodontics, Ankara University School of Dentistry, Turkey

Objective: The aim of this study was to evaluate the effect of the treatment of sodium hypochlorite (NaOCl) after acid conditioning of the enamel and dentin of the primary teeth affected with hypocalcified amelogenesis imperfecta (HCAI) on the shear bond strength of the composite material.

Materials and methods: Primary teeth from a 12-year-old girl affected with HCAI and primary teeth collected from apparently healthy children were used. A total of four groups, experimental and control with and without NaOCl treatment were specified. The control group conventional composite procedure was performed and in the treatment group 5% NaOCl was applied after acid conditioning and then the procedure continued as in the control group.

Results: In teeth affected with HCAI, enamel shear bond strengths were significantly enhanced in the treatment group compared with the conventional procedure.

Conclusion: Deproteinization could be attributed as effective in enhancing the enamel bonding in HCAI teeth and could be used to overcome the high failure rates of adhesive restorations in HCAI cases.