

عنوان مقاله:

Fluoride Release and Recharge in Conventional Varnishes, Compared to a Giomer and a Resin Modified Glass Ionomer

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خلاصه مقاله:

Introduction: Fluoride varnishes are used for caries prevention and treatment of dentin hypersensitivity, and its main purpose is to prolong the contact time between fluoride and tooth. The present study aimed to compare the amount of fluoride released and recharge from three conventional varnishes with resin-modified glass ionomer (RMGI). Methods: This experimental in vitro study was carried on blocks of human teeth extracted for orthodontic reasons. Three commercially available fluoride varnishes (Fluor protector (FP), Duraphat (DP), Clinpro White Varnish (CWV)) a Giomer (PRG-Barrier Coat), and an RMGI (Clinpro XT) were applied in these blocks, divided into five groups (eight samples each one). The readings were carried out using an ion-selective electrode and a potentiometer. After 30 days of study, the recharge capacity of these materials was evaluated immersing the samples in 20,000 parts per million (ppm) sodium fluoride gel. Results: Significant differences were found when comparing FP with the rest of the materials analyzed in this study since it released the lowest amount of fluoride with 1.01 ppm. The Giomer released 1.90 ppm, whereas CWV and DP released the highest amount of fluoride with 5.41 ppm and 4.76 ppm, respectively. The RMGI was more constant during the first five days and demonstrated a greater recharge capacity. Conclusion: All varnishes demonstrated the greatest fluoride release during the first 24 h, and a marked decrease was observed after this period. The RMGI presented a considerable amount of fluoride and the best capacity for recharge

کلمات کلیدی:

Fluoride release, giomer, Glass Ionomer, Recharge, Varnishes

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