

12 Years of repair of amalgam and composite resins: A clinical study

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Objective: The objective of this study was to clinically evaluate repaired posterior amalgam and composite restorations over a 12 year period, investigate the influence of repair in the survival of restorations, and compare their behavior with respect to controls. **Methods:** Thirty-four patients, 18 to 80 years of age with 167 restorations, 67 composite resin (RC), and 100 amalgam (AM) restorations, participated. Restorations with localized, marginal, anatomical deficiencies and/or secondary caries, and "clinically judged" suitable for repair or replacement according to US Public Health Service (USPHS) criteria, were randomly assigned to four groups: repair (n=35, 20 AM, 15 RC), replacement (n=43, 21 AM, 22 RC), positive control (n=71, 49 AM, 22 RC), or negative control (n=18, 10 AM, 8 RC). The quality of the restorations was blind scored according to the modified USPHS criteria. Two examiners scored them at initial status ($\kappa=0.74$) and after one to five, 10, and 12 years ($\kappa=0.88$). Wilcoxon and Mann-Whitney tests provided for comparisons within the same group and between years, respectively. ©Operative Dentistry, 2018.