Survival of Large Posterior Restorations (11/03)


This study evaluated the survival of extensive posterior restorations placed by one dentist over the course of 18 years at a dental school in Belgium. The restorative materials placed in this study were dental amalgam, composite resin, precious metal alloy, and metal ceramic. The restorations were placed in 428 adults and consisted of 722 amalgam, 115 composite resin and 89 crowns. At the closure of the study, 48% of the restorations were functioning well, 24% were dropped and 28% had failed. The most frequent reasons for failure were fracture of the restoration, secondary caries and fracture of a cusp. Failures were more often found in premolars than in molars and occurred in 28% of amalgam restorations, 30% of composite resin restorations, and 24% of the crowns. The Kaplan-Meier median survival times were 12.8 years for amalgam restorations, 7.8 years for resin restorations, and more than 14.6 years for crowns. This prospective, longitudinal study supports the view that extensive amalgam restorations and not composite resin restorations may be used as an acceptable alternative to crowns.

DIS Comment: There are only a few longitudinal studies of the clinical behavior of large restorations. Comparable to results in this study, median survival times for extensive amalgam restorations have been reported as 14.6 years in general practice and 11.5 years in US Air Force clinics. Previous comparisons of conventional composite resin and amalgam restorations in posterior teeth generally favor the amalgam restorations. Limitations of this study may be the narrowed selection of treatment modalities and materials by only one operator and a dental school patient population that may not be representative of the general population. Nonetheless, this study supports the concept of large amalgam restorations serving as acceptable alternatives to crowns.

References