Performance of resin composite restorations placed in high caries risk children: a clinical retrospective study

- Rojas, Sandra[a] Send mail to Rojas S.;
- Echeverria, Sonia[a];
- Oliva, Jetzabel[a];
- Fernández, Eduardo[b, c];
- Gil, Alain Manuel Chaple[d];
- Tala, María Jesús[a];
- Campos, María Pilar[a];
- Lenzi, Thatiane Larissa[e];
- Casagrande, Luciano[f];
- de Araujo, Fernando Borba

Abstract

Background: Resin composite has been usually used for restoring primary teeth. Nevertheless, there is a lack of supporting clinical data regarding the survival of resin composite restorations and risk factors that may dictate the service time of the treatment in children. Aim: To evaluate the survival and factors associated with composite resin restoration failure in high caries risk children treated under risk-factor management clinical protocol for dental caries prior to restorative therapy. Design: A total of 230 restorations in primary teeth from records of 48 patients were included in the study. Restoration longevity, up to 3-year follow-up, was assessed using the Kaplan-Meier survival test. Multivariate Cox regression analysis with shared frailty was used to evaluate the factors associated with failures ($p<0.05$). Results: Mean survival time was 2.7-year (95 %CI: 0.75-0.87). Restoration survival reached 82.5 % up to 3-year evaluation, with an overall annual failure rate of 6.2 %. The unadjusted model showed restorations performed in children with dmf-t greater than 10 had more restoration failure risk (HR 5.59, 95 % CI 1.03-30.34; $p=0.04$) However, this association lost significance in the adjusted analysis ($p=0.08$). Conclusions: Composite resin restorations in primary teeth presented satisfactory survival after 3-year follow-up.

Author keywords

adhesive restoration; primary teeth; survival analysis