

Experience of operator and assistant on the survival rate of proximal ART restorations: two-year results

Kemoli, AM; van Amerongen, WE; Opinya, GN

Abstract:

AIM: The objective of the study was to determine the influence of the experience of the operator and the assistant on the survival rate of proximal ART-restorations after 2 years when placed using two methods of tooth-isolation and three glass ionomer cement-brands. **STUDY DESIGN:** A clinical intervention study. **METHODS:** Each of 804 children aged 6-8 years received one proximal restoration in their primary molars. The restorations were placed by experienced/inexperienced operators randomly paired with experienced/inexperienced assistants. The atraumatic restorative treatment (ART) approach was used with 3 brands of glass ionomer cements (GIC) and 2 tooth-isolation methods (rubber dam vs cotton rolls). Trained and calibrated evaluators evaluated the restorations, soon after placement and after 2 years. **STATISTICS:** The data collected were analyzed using SPSS 14.0, to determine and relate the survival rate of the restorations to the operator and assistant with respect to the other factors such as the restorative material used and the isolation method applied. **RESULTS:** After 2 years, the survival rate of the restorations was 30.8%. In general, there were no statistical significant differences in the survival rate of the restorations made by the experienced vs inexperienced operators, but individually, the operator with more experience was associated with a significantly higher survival rate of the restorations. The experienced assistants were associated with significantly higher survival rates of the restorations. The most experienced operator paired with any inexperienced assistant and using rubber dam tooth-isolation method, was associated with a significantly higher survival rate of the restorations. **CONCLUSION:** The combination of the experienced operator and assistant using rubber dam tooth-isolation method had the best chance of survival for proximal ART restorations, irrespective of the material-brand used