

Challenging the Concept that OptiBond FL and Clearfil SE Bond in NCCLs Are Gold Standard Adhesives: A Systematic Review and Meta-analysis

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Abstract

PURPOSE: The following PICO (Patient/Population, Intervention, Comparison, and Outcomes) question was proposed: "Are retention rates of composite resin restorations in noncarious cervical lesions (NCCLs) when using adhesives considered "gold standard" (OptiBond FL and Clearfil SE Bond) higher than those obtained with other adhesives brands"? **METHODS:** A search was performed in February 2019 (updated in November 2019) in the PubMed/MEDLINE, EMBASE, LILACS, BBO, Web of Science, Cochrane Library, Grey Literature, and IADR abstracts (1990-2018); unpublished and ongoing trial registries, dissertations, and theses were also searched. Only randomized clinical trials (RCTs) conducted in NCCLs that compared either OptiBond FL or Clearfil SE Bond adhesive with other commercially available adhesives were included. The risk of bias (RoB) was applied by using the Cochrane Collaboration tool. A meta-analysis was performed for retention rates at different follow-up times using a random effects model for both the adhesives. Heterogeneity was assessed with the Cochran Q test and I² statistics. Grading of Recommendations: Assessment, Development and Evaluation (GRADE) assessed the quality of evidence. **RESULTS:** After removal of duplicates and noneligible articles, 25 studies remained for qualitative synthesis, as one study was common to the two adhesives, of which 9 studies were used for the OptiBond FL meta-analysis and 14 for the Clearfil SE Bond meta-analysis. No significant differences were observed for retention rates in follow-up periods of 12-24 months ($p=0.97$), 36-48 months ($p=0.72$), or 108-156 months ($p=0.73$) for OptiBond FL; and for 12-24 months ($p=0.10$) and 36-48 months ($p=0.17$) for Clearfil SE Bond. A significant difference was only found for OptiBond FL at 60-96 months ($p=0.02$), but only three studies were included in this meta-analysis. **CONCLUSIONS:** The evidence from available RCTs conducted in NCCLs that compared OptiBond FL or Clearfil SE Bond does not support the widespread concept that these adhesives are better than any other competitive brands available in the dental market. ©Operative Dentistry, 2021.