

Clinical and patient-reported outcome measures in patients with full-mouth rehabilitation applying minimally invasive glass-ceramic restorations

Abstract

Objectives: The aim of this study was to evaluate the survival rate, technical and biological complications, and patient-reported outcome measures (PROMs) of full mouth rehabilitation with minimally invasive glass-ceramic restorations after a minimum of 1.5 years of clinical service.

Materials and methods: 20 individuals (12 females, 8 males) had received full mouth tooth-supported with minimally invasive glass-ceramic restorations during the years 2009 – 2017 and participated to the follow-up visit. Full dental and periodontal examination was completed, and all the restorations were evaluated according to United States Public Health Service (USPHS) criteria. Kaplan-Meier was used for analysis of the survival time.

Results: Study participants had 439 minimally invasive restorations made from lithium disilicate reinforced glass-ceramic (79.7%), feldspathic porcelain (17.5%) and leucite reinforced glass-ceramic (2.7%). The restoration design included overlays (35.3%), full-contour restorations (31.2%), veneers (27.8%), tabletops (4.6%) and inlays (1.1%). The mean follow-up time from insertion to the examination visit was 4.5 years (1.5–12.4). Five patients lost altogether 13 restorations during the follow-up time. The resulting estimated cumulative Kaplan-Meier 5-year survival rates were 96.6% on restoration level and 86.4% on patient level. The most common complications on restoration level were of technical nature and included marginal discoloration (11.4%) and occlusal wear (14.1%). Larger chippings were seen in 1.1% (n=5) of the restorations. Biological complications (on restoration level) were not common (4.3%). Relatively high amounts (50.4%) of bleeding on probing was seen, which was not associated to the amount of plaque (17.4%). According to the PROMs questionnaire, the patients were very satisfied with esthetics (VAS 9.5) and function (VAS 9.3) of the restorations. Women rated their oral health situation significantly better than men (p=0.03).

Conclusions: Minimally invasive full-mouth rehabilitation with glass-ceramic restorations seem to be a predictable treatment option with high survival rates, few complications and high level of patient satisfaction.

Keywords: minimally invasive, glass-ceramics, full mouth rehabilitation, survival, complications, PROMs

Conflicts of interests:

The authors declare no conflicts of interest.