

A retrospective clinical study on the longevity of posterior Class II cast gold inlays/onlays.

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print

Abstract

OBJECTIVE:

To investigate the longevity and reasons for failure of posterior cast Class II gold inlays and onlays among a group of Norwegian adults. The term inlay was used for both inlays and onlays.

METHODS:

A cohort of 138 patients regularly attending a general practice for check-up were examined in 2016. The patients had a total of 391 posterior gold inlays placed in the period 1970-2015. The inlays were categorized as successful, repaired or failed. Reasons for failure were classified as either “secondary caries”, “fractures”, “lost inlay” or “other”. Participation was voluntary and no compensation was given.

RESULTS:

The mean age of the patients at placement was 50.8 years (SD: 12.7 yr). Most gold inlays were placed in molars (85.9%) and 14.1% in premolars; 49.4% of the inlays were in the maxilla and the 50.6% in the mandibula. Average length of follow-up was 11.6 years (range: 1-46 years, SD: 7.9); 82.9% were classified as successful, 10.7% as repaired and 6.4% as failed. Reasons for failure were secondary caries (41.3%), lost inlay (25.4%), fractures (23.8%) and other (9.5%). Mean annual failure rate (AFR) was 1.69% for repaired and failed inlays combined. However, if repaired inlays were considered as success, the AFR decreased to 0.57%. Multi-level Cox regression analyses identified low age of the patient and high number of restored surfaces as risk factors for failure.

CONCLUSION:

The present retrospective clinical study demonstrated an acceptable annual failure rate for Class II cast gold inlays.

CLINICAL SIGNIFICANCE:

All dental restorations have a limited lifespan and will eventually need to be repaired or replaced. It is important to have in mind that the longevity of gold restorations have not been shown to be superior to that of resin composite, which should still be the first material of choice. However, gold inlays could be considered when the right indications are present.

Reference

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