Abstract

Objective: To review the in-service performance of Class I & II restorations of a reinforced glass-ionomer (Fuji IX, GC Europe NV, Leuven, Belgium) placed, in two UK general practices, as a more aesthetic, mercury-free alternative to amalgam that is less technique sensitive than the placement of direct or indirect composite materials. Method: The 2 general practitioners who had placed the restorations assessed, using modified Ryge criteria, a total of 101 restorations (38 Class I and 63 Class II) placed in 75 patients. The mean age of the restorations at review was 24 months (range 5 – 56 months). Results: All the restorations were present, intact and no caries detected. The results were as follows (where 0 = Optimal).

Anatomical form: 87% 0, 13% 1, 0% 2 and 0% 3
Marginal adaptation:
Occlusal 92% 0, 7% 1, 1%* 2, and 0% 3
Proximal 97% 0, 0% 1, 3%* 2, and 0% 3
Gingival 97% 0, 3% 1, 0% 2 and 0% 3
Enamel marginal discolouration:
Occlusal 91% 0, 8% 1, 1% 2 and 0% 3
Proximal 96% 0, 4% 1, 0% 2 and 0% 3
Dentine margin discolouration: Gingival 94% 0, 6% 1, 0% 2 and 0% 3
Surface roughness: Occlusal 55% 0, 45% 1, 0% 2 and 0% 3
Proximal 82% 0, 18% 1, 0% 2 and 0% 3
Colour match: 23% 0, 77% 1, 0% 2 and 0% 3

Unacceptable scores.

Conclusion: The use of reinforced glass-ionomer cements as an alternative material to amalgam in load-bearing situations has been advocated but there is little data available. This preliminary review suggests that the material may perform well in restorations of this type but more investigation is required.

Acknowledgement: The support of GC Europe NV, Leuven, Belgium is acknowledged.