Karakteristik komposit resin berkemampuan mengalir

Abstrak

The use of resin composites as posterior restoratives has markedly increased over the past decade. The patients demand for better esthetics, concerns related to possible mercury toxicity from amalgam and improvements in resin composite materials have significantly contributed the popularity of these materials. Early problems related to composites included excessive wear, less of anatomic form, post operative sensitivity, secondary caries and marginal leakage. Marginal adaptation still remains an unavoidable problem for composite restoration, especially at the gingival wall of cervical or Class II restoration. In an attempt to improve marginal sealing, many techniques and lining materials have been designed. To reduce stress generated by polymerization shrinkage, applying and curing of resin composites in layers is often recommended. Using a thick adhesive layer or a low-viscosity resin may, due to its elastic properties, serve as a flexible intermediate layer and compensate for the polymerization stress created in resin composite. Flowable composites were created by retaining the same small practicle size of traditional hybrid composite but reducing the filler content and allowing the increased resin to reduce the viscosity of the mixture. Flowable composites were introduced in 1996 as liners, fissure sealants and also in tunnel preparations. They have been suggested for Class I, II, III and V cavity restorations, preventive resin restorations and composite, porcelain and amalgam repairing. Their usage as a liner under high filled resins in posterior restorations has been shown to improve the adaptation of composites and effectively achieve clinically acceptable results. This article attempts to give a broad characteristics of different types of flowable composites.