

Clinical Comparison of a Fissure Sealant to a Flowable Composite - A 12 Months Study

The aim of the study was the clinical analysis of a fissure sealant and a flowable composite over a 12-months period. It was necessary to prove the clinical success of sealing with a flowable composite with the use of adhesive system and preventing effect of a fissure sealant on caries development. Our study included 30 children aged from 6 to 12 years and we sealed 60 mandibular permanent first molars, 30 molars with a fissure sealant (Clinpro Sealant, 3M ESPE) and 30 with a flowable composite (Flows-Rite, PULPDENT, USA) in combination with adhesive system. Over a 12-months period, the fissure sealant present was 86.7 % and the flowable composite was 83.4 %. Only 4 molars (13.3%) had sealant absent from fissures and 5 molars (16.6%) had absent flowable composite, so fissure sealing has showed to be an excellent prevention of occlusal caries. Flowable composite used with adhesive system is equal to fissure sealant. Sealing materials show great and durable preventive effect against caries development in the fissure system. Since there are many different sealing materials, adhesives, flowable composites on the market and many different pretreatments of the enamel, future studies are necessary and should have an aim to investigate the best technique and material for fissure sealing.

