

Decrease in streptococcus mutans after applying sealants to the occlusal surfaces of permanent teeth in adults [Decreimiento de streptococcus mutans después de la aplicación de sellantes en superficies oclusales de molares permanentes en adultos]

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Introduction: The main strategy for the prevention of caries disease is the use of pit and fissure sealants, which are indicated for posterior occlusal surfaces that are difficult to clean and cannot be protected very well by fluoride. This strategy is considered to be very important in caries prevention, especially in patients at high cariogenic risk. Objective: Evaluate whether the count of colony forming units of *S. mutans* per cm² on the occlusal surface of posterior permanent teeth changes after applying resin-based sealant. Methods: A study was conducted of 38 patients of both genders aged 18-30 years. The patients were at high cariogenic risk and had an indication of occlusal sealant application on at least one permanent posterior tooth. Two samples were taken of dental biofilm from the same teeth before (group T0) and after (group T1) applying sealant obtained by direct impression by tray technique with trypticase yeast extract, cysteine, sucrose with bacitracin (TYCSB), and agar previously made and solidified. The samples were incubated at 37 °C for 48 hours. The colony forming units (CFU/cm²) were counted. The results were statistically analyzed with the Wilcoxon test at 95 % confidence. Results: Average expression in CFU/cm² before applying the sealant (T0) and standard deviation was 13.48 (\pm 14.2), whereas after applying the sealant (T1) it was 5.37 (\pm 8.90). There was a statistical difference between the two measures T0 and T1 ($p <$

0.05). Conclusions: Sealant application on occlusal surfaces of posterior permanent teeth significantly reduces the count of CFU/cm² of *S. mutans*. © 2019, Editorial Ciencias Medicas. All rights reserved.

Composite resins

Permanent dental restoration

Pit and fissure sealants

Streptococcus mutans