

## Brazilian Oral Research

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### Abstract

[MOTA, Solange Machado](#) et al. *Streptococcus mutans* counts in plaque adjacent to orthodontic brackets bonded with resin-modified glass ionomer cement or resin-based composite. *Braz. oral res.* [online]. 2008, vol.22, n.1, pp. 55-60. ISSN . doi: 10.1590/S1806-83242008000100010.

This study investigated the number of *Streptococcus mutans* CFU (colony forming units) in the saliva and plaque adjacent to orthodontic brackets bonded with a glass ionomer cement - GIC (Fuji Ortho) or a resin-based composite - RC (Concise). Twenty male and female patients, aged 12 to 20 years, participated in the study. Saliva was collected before and after placement of appliances. Plaque was collected from areas adjacent to brackets and saliva was again collected on the 15<sup>th</sup>, 30<sup>th</sup>, and 45<sup>th</sup> day after placement. On the 30<sup>th</sup> day, 0.4% stannous fluoride gel was applied for 4 minutes. No significant modification in the number of *Streptococcus mutans* CFU in saliva was observed after placement of the fixed orthodontic appliances. On the 15<sup>th</sup> day, the percentage of *Streptococcus mutans* CFU in plaque was statistically lower in sites adjacent to GIC-bonded brackets (mean = 0.365) than in those adjacent to RC-bonded brackets (mean = 0.935). No evidence was found of a contribution of GIC to the reduction of CFU in plaque after the 15<sup>th</sup> day. Topical application of stannous fluoride gel on the 30<sup>th</sup> day reduced the number of CFU in saliva, but not in plaque. This study suggests that the antimicrobial activity of GIC occurs only in the initial phase and is not responsible for a long-term anticariogenic property.

Keywords : *Streptococcus mutans*; Orthodontic appliances; Glass ionomer cements; Tin fluorides.

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