論文名：Residual structure of *Streptococcus mutans* biofilm following complete disinfection favors secondary bacterial adhesion and biofilm re-development（要約）

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It has recently been reported that chemical disinfection of oral biofilms often leaves intact biofilm structures. This study aimed to examine whether the residual structure promotes bacterial secondary adhesion. *Streptococcus mutans* biofilms generated on resin-composite disks in a rotating disc reactor were disinfected completely with 70% isopropyl alcohol, and again cultured in the same reactor supplying the same bacterial solution. The specimens were subjected to fluorescence confocal laser scanning microscopy, viable cell counts, and a PCR-Invader assay to observe and quantify the secondarily adhered cells. The fluorescence microscopic analysis, particularly after longitudinal cryosectioning, demonstrated stratified patterns of viable cells on the disinfected biofilm structure. Viable cell counts of test specimens were significantly higher than those of controls (no biofilm structure), and increased according to the amount of residual structure and culture period. Linear regression analysis exhibited a high correlation between viable and total cell counts. It was concluded that disinfected biofilm structures favored the secondary bacterial adhesion.