Chemotactic activity of human neutrophils to streptococcus mutans

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Abstrak

Objective: The aim of this study was to evaluate chemotactic activity of neutrophil to S. mutans. Chemotaxix assay was performed in blind well chambers. Materials & methods: Hanks balanced salt solution (HBSS) containing 106 S. mutants, 108 S. mutans, 10-8 M fMLP, or HBSS alone were placed in the lower wells of the chamber and covered with polycarbonate membrane filter. Neutrophils suspension (2X105 cells) was then placed in the upper compartment. After incubation for 60 mins at 37°C in a humidified atmosphere with 5% CO2, the filters were removed and stained with Giemsa. Result: ANOVA revealed statistically significant differences among groups ($p<0.05$), indicating that S. mutans induced neutrophils chemotaxis. The number of neutrophils migration in response to 108 S. mutans and 106 S. mutans were significantly greater compared to fMLP ($p<0.05$). Conclusion: S. mutans may active human neutrophils, resulting in the chemotaxis of the neutrophils.