THE EFFECTIVENESS OF GIVING MONOCLONAL ANTIBODY IgG₁ *Streptococcus mutans* 1© 67 kDa BEFORE THE APPLICATION LIGHT CURING FISSURE SEALANT TOWARD THE NUMBER OF *Streptococcus mutans* IN THE SURFACE OF TEETH OCCLUSAL

ABSTRACT

Till now caries still becomes a problem in all the word especially in developing countries such as Indonesia keep going slowly.

At the time the caries prevention was improved by giving monoclonal antibody IgG₁ *S. mutans* 1© 67 kDa (Monoclonal antibody IgG₁) improved to cover the lack of fissure sealant agent as the prevention agent of teeth caries.

The aim of this study was to now the effectiveness of monoclonal antibody IgG₁ before the application helioseal light curing fissure sealant forward the number of *S. mutans* 1 in the surface of teeth occlusal.

The laboratory experimental study was done the 105 piece of mandible premolar crown that were divided 5 groups, each consists of 7 pieces of crown. The first, second and third group each was given monoclonal antibody IgG₁, each was 5µl, 10µl, 15µl before the application of light curing fissure sealant each was for 24 hours, 48 hours, and 72 hours. The fourth group was given monoclonal antibody IgG1 *S. mutans* 1© 67 kDa 10µl as the positive control group, while the fifth group was done the application of light curing fissure sealant as the negative control group for 24 hours, 48 hours, and 72 hours.

The available data was analyzed for hypothesis test by using one way anava test in the believe degree 95 % and LSD test to now the effect of contact time toward the number of *S. mutans* in teeth occlusal surface. And Dunnett test to now the effect of giving monoclonal antibody IgG1 to the number of *S mutans* in the surface of occlusal teeth.

The result of this study showed that there was significant difference in the group which was given monoclonal antibody volume IgG1 toward the number of *S. mutans* in the surface of occlusal teeth among the contact time 24 hours, 48 hours, and 72 hours it also happened among all groups wheter in the contact time 24 hours, 48 hours, and 72 hours, there was a significant difference. From this result, it could be concluded that the sift of monoclonal
antibody volume IgG₁ was more and the number of *S. mutans* was less in the surface of teeth occlusal, and the contact time was longer among the teeth crown which were given monoclonal antibody volume IgG₁ with *S. mutans* bacteria, so the number of *S. mutans* was less in the surface of teeth occlusal.

Key word: *Streptococcus mutans*, Monoclonal antibodies, light curing fissure sealant.