THE INHIBITORY EFFECT OF RED DRAGON FRUIT PEEL EXTRACT
(Hylocereus polyrhizus) TO THE GROWTH OF Aggregatibacter
actinomycetemcomitans

ABSTRACT

Background. Periodontal diseases are infection diseases of periodontal tissues that one of the etiologies is Aggregatibacter actinomycetemcomitans. The use of antibiotics continuously to prevent the systemic spreading of bacteria is less advisable because it can lead to bacterial resistance to antibiotics. Therefore, during the last decade, extracts from plants which have antibacterial activity has been used for preventing the infections, e.g. red dragon fruit (Hylocereus polyrhizus). Purpose. Proving that red dragon fruit peel chloroform extract (Hylocereus polyrhizus) can inhibit the growth of Aggregatibacter actinomycetemcomitans. Method. In this research, the antibacterial activity of chloroform extract from H. polyrhizus peel evaluated using well diffusion assay and disk diffusion assay (only for positive control). The petri dishes were incubated anaerobically at temperature of 37°C for 1x24 hours. Inhibition zones measured using caliper (with accuracy of 0.5 mm). All data would be analyzed using Kruskall Wallis. Result. The research showed that there were inhibition zones formed in concentrations of 12.5%, 25%, 50% and positive control. The result of analytic test showed there was not a difference between concentrations of 12.5%, 25% and 50%, but there were differences between that three concentrations with concentrations of 100% and 6.25%. Conclusions. Red dragon fruit peel chloroform extract (Hylocereus polyrhizus) could inhibit the growth of Aggregatibacter actinomycetemcomitans in the concentrations of 12.5%, 25% and 50%.

Keywords : Hylocereus polyrhizus, Aggregatibacter actinomycetemcomitans, diffusion