IN VITRO EFFECT OF Chloroprocta SP. MAGGOTS SECRETION ON Staphylococcus epidermidis BIOFILM AND THE EXPRESSION LEVEL icaA OF GENE

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Abstract	Biofilm formation and the expression of icaA gene can be induced by environment conditions that are potentially toxic for bacterial cells. The effect of green flies maggots secretion to biofilm was studied some years ago to investigate in vitro effect of secretion of Chloroprocta sp. maggots on the formation of Staphylococcus epidermidis biofilm (phenotype) and the expression level of icaA gene (genotype) for indicating its mechanism on bacterial biofilm eradication. Microtiter plate biofilm assay was used to measure the effect of Chloroprocta sp. maggots secretion at various concentration on S. epidermidis biofilm. The expression level of icaA gene was performed by Real TimePCR using lightcycler method. The biofilm susceptibility test was done against maggots excretion/secretion Ã‚Â using MTT assay. Whereas planktonic Ã‚Â susceptibility testing was carried outÃ‚Â using Kirby Bauer method. In the presence of maggots secretion at low concentration (5%), biofilm formation of S. epidermidis 734 was induced. In contrast, the expression level of icaA gene inÃ‚Â production of maggots excretion/ secretion at concentration of 5% was lower than that of without maggots secretion (1/2 Fold). Eradication of bacterial biofilm was demonstrated after 48h incubation (MD=-0,011;P<0,05), but planktonic cell. In vitro difference effect of the Chloroprocta sp. maggots secretion at low concentration to phenotype and genotype of S. epidermidis biofilm showed that the possibility of maggots secretion ability to eradicate bacterial biofilm was not mainly due to the expression level of icaA gene.
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