Daya antibakteri nisin 10% sebagai bahan irigasi terhadap biofilm enterococcus faecalis (penelitian eksperimental laboratorik) = Antibacterial efficacy of 10% nisin as an irrigant against enterococcus faecalis biofilm

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Abstrak

Penelitian ini dilakukan untuk menguji daya antibakteri bahan irigasi nisin 10%, klorheksidin 2%, natrium hipoklorit 2,5% terhadap pertumbuhan biofilm E. faecalis secara in vitro. Bakteri E. faecalis ATCC 29212 dibiakkan pada media agar BHI kemudian diinkubasi 24 jam pada suhu 370C. Bakteri diinokulasi pada membran filter selulosa nitrat selama 72 jam agar terbentuk biofilm. Dilakukan uji kontak langsung antara bahan uji dan biofilm selama 10 menit. Dilakukan kuantifikasi DNA bakteri yang hidup melalui penambahan PMA pada Real time PCR. Hasilnya nisin 10% mempunyai daya antibakteri terhadap biofilm E.faecalis, namun tidak sebanding dengan klorheksidin 2% dan natrium hipoklorit 2,5%.
.....The aim of this study was to evaluate antibacterial efficacy of 10% nisin, 2% chlorhexidine, 2.5% sodium hypochlorite against E.faecalis biofilm in vitro. Petri dishes containing BHI agar were seeded with E. faecalis ATCC 29212, incubated overnight at 370C. Celullose nitrate filter membrane was inoculated with E.faecalis for 72 hours to grown a biofilm. Direct contact test was performed between the test solutions and biofilm for 10 minutes. DNA quantification was performed using Real time PCR with PMA additive to count the lived cell. It was concluded that 10% nisin possessed antibacterial effect against E.faecalis biofilm, but not comparable with 2% chlorhexidine and 2.5% sodium hypochlorite.