

The penetration of antibiotic to antibiotic resistant bacteria in simulated biofilm

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Abstract

Antibiotic resistance of bacteria in the biofilm mode of growth contributes to the chronicity of infection and disease. The penetration of antibiotic, through simulated biofilm developed in an *in vitro* model system was investigated. Antibiotic resistant bacteria (*E. coli* and *S. aureus*) were obtained from Culture Collection of Antibiotic Resistant Microbes. Ca-alginate bead used as simulated biofilm and a cell entrapment test using compressed air were experiment for the improvement cell viability. The death rates of antibiotic resistant bacteria in beads after being sequentially exposed to antibiotics(cephalosporin, ofloxacin) were measured. The total viable number of untrapped antibiotic resistant bacteria expressed as colony forming units were determined by using the plate count method with YPD agar.

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