Antibiofilm Properties of Acetic Acid - DTU Orbit (13/11/2018)

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Bacterial biofilms are known to be extremely tolerant toward antibiotics and other antimicrobial agents. These biofilms cause the persistence of chronic infections. Since antibiotics rarely resolve these infections, the only effective treatment of chronic infections is surgical removal of the infected implant, tissue, or organ and thereby the biofilm. Acetic acid is known for its antimicrobial effect on bacteria in general, but has never been thoroughly tested for its efficacy against bacterial biofilms. In this article, we describe complete eradication of both Gram-positive and Gram-negative biofilms using acetic acid both as a liquid and as a dry salt. In addition, we present our clinical experience of acetic acid treatment of chronic wounds. In conclusion, we here present the first comprehensive in vitro and in vivo testing of acetic acid against bacterial biofilms.

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