

These data indicate that combinations of biofilm dispersal agents and antibiotics may extend the therapeutic options for the treatment of S. aureus biofilm associated infections” Hogan et al (2017).

Abstract:

Staphylococcus aureus is a leading cause of healthcare associated infections. The ability of S. aureus to attach and subsequently accumulate on the surfaces of implanted medical devices and in host tissues makes infections caused by this pathogen difficult to treat. Current treatments have been shown to have limited effect on surface-associated S. aureus and may be enhanced by the addition of a dispersal agent. Here, the enzymatic agents dispersin B, lysostaphin, alpha amylase, V8 protease and serrapeptase were assessed alone and in combination with vancomycin and rifampicin against biofilm formed by methicillin resistant and susceptible strains of S. aureus. The efficacy of both antibiotics was enhanced when combined with any of the dispersal agents. Lysostaphin and serrapeptase were the most effective dispersal agents against all strains tested. These data indicate that combinations of biofilm dispersal agents and antibiotics may extend the therapeutic options for the treatment of S. aureus biofilm associated infections.

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Reference:

Hogan, S., Zapotoczna, M., Stevens, N.T., Humphreys, H., O’Gara, J.P. and O’Neill, E. (2017) Potential use of targeted enzymatic agents in the treatment of Staphylococcus aureus biofilm related infections. The Journal of Hospital Infection. February 14th. .

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