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The evaluation of novel antimicrobial agents for the treatment of human bacterial infections

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Objectives: The aim of the study was to determine minimum inhibitory concentration (MIC) of four antimicrobial disinfecting agents (Cl, A, B and C) against 12 bacterial strains and to evaluate the effect of exposure to sub-MIC levels of these antimicrobial compounds on the bacteria to see if this promotes antimicrobial resistance.

Methods: The bacterial strains were obtained from environmental and clinical isolates. After determining the MIC for each agent, 12 bacterial isolates were exposed to sub-MIC levels of the different agents for 5 days. Antibiotic profiles test, were used to assess the development of bacterial resistance to the agents.

Results: The MIC range for the antimicrobial agents varied with different pathogens. Compared to the controls, exposure of *P.aeruginosa* strains to sub MIC antimicrobial levels did not lead to significant changes in the antibiotic resistance but, potentially, the antimicrobial effects of the agents (sensitivity) could be affected at higher MIC levels.

Conclusions: This study went on to prove that when the bacteria were cultured for 5 days in the presence of sub-MIC levels of the antimicrobial agents there was no apparent development of antibiotic resistance, which has important implications for the potential use of these reagents in a clinical setting.

Biography

Tarfah has completed MD from Saudi Arabia and doing her postgraduate studies MSC in Infection and Immunity from University College London, UK. She is working as demonstrator in microbiology department at King Saud University in Riyadh, Saudi Arabia she has attend number of conferences and workshops.

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