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Antibiotic susceptibility pattern and biofilm formation in Coagulase negative Staphylococci

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Abstract

Twelve species of coagulase negative staphylococci (*S. cohnii* 7, *S. cohnii* ssp *urealyticus* 12, *S. epidermidis* 5, *S. haemolyticus* 20, *S. hominis* 26, *S. intermedius* 4, *S. kloosii* 4, *S. lugdunensis* 4, *S. saprophyticus* 7, *S. sciuri* 5, *S. warneri* 3, and *S. xylosus* 3) exhibited varied susceptibility to antibiotics both within and between species. Species with differing susceptibilities were tested for ability to form biofilms. Antibiotic resistance was highest against tetracycline (74.7%) followed by penicillins (69.5%), fosfomycin (68.4%) and ampicillin (53.7%). Resistance to methicillin was 41%. A comparison between resistance patterns of methicillin resistant and sensitive strains showed that methicillin resistant strains had higher level of resistance to all □-lactams, aminoglycosides, fluoroquinolones, macrolides, tetracycline and trimethoprim-sulfamethoxazole. Multidrug resistance was highest in *S. epidermidis*, *S. haemolyticus*, *S. saprophyticus*, *S. intermedius* and *S. xylosus*. There was a significant association between biofilm formation and resistance to multiple antimicrobial agents in 60% of *S. epidermidis* strains as these were resistant to three or more groups of antibiotics.

Biography

Dr. O. O. Ayepola completed her Ph. D studies at Covenant University in 2012. Her area of research is antimicrobial chemotherapy and molecular epidemiology of pathogenic bacteria especially *Staphylococcus* species.