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ISOLATION AND ANTIBIOTIC SUSCEPTIBILITY PATTERN OF METHICILLIN RESISTANT BACTERIA SPECIES ASSOCIATED WITH ITEMS CARRIAGE FROM SUPERMARKETS IN AKURE, ONDO STATE, NIGERIA

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Colonisation by methicillin-resistant *Staphylococcus aureus* (MRSA) and *Staphylococcus epidermidis* (MRSE) of objects being commonly shared among people has generated a lot of public health concerns. With the spread of supermarkets and *hyper*markets across the world, people are brought together and thus facilitate transmission of microbes either directly through hand to hand contact or indirectly through inanimate objects such as shopping trolleys and shopping baskets within the supermarkets. This study focused on investigating the presence of MRSA and MRSE on carriage items from Shoprite (SHP), Ceci (CC), OK (OUK) and Feelbest (FB) supermarkets in Akure, Nigeria and the genes responsible for their resistance were determined through conventional polymerase chain reaction (cPCR). Swabs samples were obtained from handles of trolleys and baskets used by customers. A total of 253 samples were collected and each sample was immediately transferred into 5ml of peptone water. The samples were processed using standard microbiological method. Bacterial growths were identified based on cultural, morphological and biochemical characteristics. Susceptibility test of the isolates was done on Mueller-Hinton agar. MRSA and MRSE were detected using Cefoxitin (1µg) and were further tested by cPCR to determine the resistant genes using five different primers. The study shows that out of the 353 isolates identified, 37.1% were S.aureus, 49.6% were *S.epidermidis*, 5.7% were *Klebsiella spp*, and 7.6% were *E.coli*. Ten (10) MRSA and Five (5) MRSE isolates possess *MecA, Sul1, Aph, blaM, AmpC* and *EreA* genes. Out of the sites sampled, SHP carriage items had the highest microbial contamination (70.5%) whereas FB carriage items had the lowest. The prevalence of 2.8% MRSA reported from this study requires measures to curb the possible adverse health implications. Regular disinfection of trolleys and educating people to improve hand washing habits are recommended as measures to decreasing transmission of MRSA, MRSE and their infections.

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