RISK OF STAPHYLOCOCCUS AUREUS EXPOSURE AMONG WORKERS IN SELECTED CATTLE AND SMALL RUMINANTS SLAUGHTERHOUSES IN TANZANIA

1141

Introduction: The occupations involving working with animal production have for so long been known to bring significant health risks to workers, with distinctive attention to injuries. However, workers employed at slaughterhouses are at risk of pathogen exposure and especially zoonotic ones due to general working condition that exposes them directly to live animals, carcasses and viscera of possibly infected animals. The increased use and misuse of antimicrobials in animal treatments and feed to promote growth have increased the development of antimicrobial resistance, exposing workers to a more serious infection. This study aimed to determine the prevalence of nasal antibiotic resistant *Staphylococcus aureus* and associated risk factors.

Methods: A cross-sectional study was conducted to collect data using questionnaire for information on occupational and personal history, checklist for working conditions and nasal swabs from 427 workers at slaughterhouses in Dar es Salaam, Dodoma and Arusha regions in Tanzania. Swabs were tested for *S. aureus* and later isolates were screened for antibiotic susceptibility.

Results: Overall prevalence of *S. aureus* nasal carriage was about 30.0% where as 5% was resistant to antibiotic. The prevalence was higher in slaughter or carcass processing workers but also about 5 times higher in cleaning. Many slaughterhouses had poor infrastructure, less than 60% had a toilet and less than 20% had hand-washing facilities. Slaughtering of sick animals was observed in about 10% of slaughterhouses. Less than half of workers wore personal protective clothing.

Conclusion: Working conditions of majority of cattle slaughterhouses visited in Tanzania are not in line with the health and safety recommendations. Current facilities and practices may increase occupational exposure to biological hazards. Cattle slaughterhouse workers may have increased exposure to livestock-associated *S. aureus*, particularly MRSA. Therefore, further epidemiologic investigation on occupational exposure to livestock-associated *S. aureus* is required.