



ORIGINAL RESEARCH

Prevalence and Susceptibility of Animal-associated *Staphylococcal* Species Isolated from the Urine of Healthy Students in Jos, Nigeria

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ABSTRACT

Background: Globally, about 1,000,000 cases of illness and millions of deaths occur every year due to zoonoses. Human colonization and infections with livestock associated *Staphylococcal* species has been reported mainly among farm workers.

Objective: The purpose of the study was to establish the profile of *Staphylococcal* species in healthy community carriers.

Methods: Urine samples obtained from 217 healthy volunteers were screened for staphylococcal species and isolates characterized by conventional cultural and biochemical methods including rapid test kits (Microgen ID test kit). The isolates were subjected to susceptibility tests against a panel of antibiotics.

Results: Out of 217 samples collected; 171 isolates were positive for staphylococcal species giving a prevalence of 78.8 %. With the Microgen ID[®] test kit, 73 (33.6 %) isolates were identified as *S. aureus* and 62 (28.6 %) isolates were non-*Staph aureus*, some of which are associated with animals. The staphylococcal species identified are *S. hominis* (humans), *S. hyicus* (swine, cattle, poultry), *S. intermedius* (carnivores, domestic horses, poultry), *S. xylosum* (human skin, rodents, mammals, birds), *S. schleiferi* (human clinical specimens, carnivores), *S. cohnii* (humans) and *S. haemolyticus* (human skin, primates, horses, artiodactyls). Only *S. cohnii* (18.1 – 81.8 %) and *S. intermedius* (12.5 – 56.3 %) were susceptible to all test antibiotics.

Conclusion: The detection of animal-associated organisms isolated from the urine of healthy human volunteers and their susceptibility pattern is of public health concern. There is a need to properly identify the organisms in specimens and select the appropriate antibiotic for treatment.

Keywords: *Staphylococcal* species; Urine; Healthy volunteers; Livestock; Zoonoses; Students