

Carriage Rate of Coagulase Negative Staphylococci in a Rural Human Population with or without Companion Livestock

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ABSTRACT

Background: The emergence of antibiotic-resistance in coagulase negative staphylococci (CoNS) in both humans and companion livestock has been recognized to be an issue of public health concern. There are limited studies reported to evaluate the risk of transmission of antibiotic resistant CoNS from companion livestock to their human owners.

Material & Methods: A random of 200 households, 100 each with or without companion livestock were included in the study (sub-grouped as SgrIa and SgrIb resp.). All the selected subjects were sampled from different anatomical sites, CoNS were identified by standard procedures and subjected to AST.

Results: Out of a total 400 and 440 samples from SgrIa and SgrIb, 232(58%) and 162(37%) resp. showed positive isolation for CoNS with *S.epidermidis* as the most common isolated species. Two species of CoNS viz. *S.scuiri* and *S.warneri* were also isolated from SgrIa subjects alone. Methicillin resistance was found to be high among all the CoNS isolates. Resistance rates towards non- β lactam antibiotics were found to be significantly higher among SgrIa compared to SgrIb.

Conclusion: The present study suggests that transmission of various species as well as resistance genes can be possible from companion livestock to their owners. Hence human population in rural community with companion livestock should be routinely monitored for acquisition of antimicrobial resistance so as to prevent the further spread to human community.

Keywords: CoNS, Antibiotic resistance, Companion livestock, Rural population

Abbreviations

CoNS: Coagulase negative staphylococci; MRCoNS: Methicillin resistant Coagulase negative staphylococci; sgr: Subgroup

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