

A Study of Coagulase-Negative *Staphylococci* in the Clinical Isolates of Tertiary Care Hospital of South India

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Abstract

Background: Coagulase Negative Staphylococci (CoNS) is becoming an important cause of nosocomial infections due to the increasing use of transient and permanent medical devices in seriously ill and immunocompromised patients. The aim of the current study is the CoNS isolates from the clinical samples. **Methods:** Only CoNS isolates from positive cultures were selected. Phenotypic identification of an isolate was confirmed based on the coagulase reaction and a series of biochemical reactions from the API Staph system (BioMérieux, France). Antimicrobial susceptibility testing was performed on all isolates by the Kirby-Bauer Disc Diffusion method towards antibiotics Following overnight incubation, the diameter of the inhibition zone was measured and interpreted as susceptible, intermediate, or resistant by referring to the current Clinical and Laboratory Standards Institute (CLSI) Guidelines 2015. **Results:** Urine samples yielded 60% of the total isolates whereas the isolation from blood, conjunctival swab, and pus were 13.63%, 6.36%, and 8.18% respectively. The overall antibiotic resistance pattern of the CoNS isolates was analyzed. The highest resistance was shown against penicillin (91.81%). No resistance was noted to linezolid and vancomycin. Teicoplanin resistance was seen in 4.54% of the isolates Clindamycin sensitivity was seen in 79.09% of the CoNS isolates. **Conclusions:** Coagulase-negative Staphylococci (CoNS) are increasingly becoming of clinical importance hence the identification should be done till species level. *S. hemolyticus* and *S. epidermidis* were the commonly isolated CoNS species. *S. hemolyticus* species had a higher antibiotic resistance antibiotic profile than *S. epidermidis*. Methicillin resistance was noted in 68.18% of the isolates.