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Identification and Macrolide-Lincosamide-Streptogramin B (MLSB) resistance phenotypes and slime production of coagulase-negative *Staphylococci* isolated from bloodstream infections in Turkey

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Aim: The aim of this study is identification and determination of the MLSB type resistance, antibiotic resistance patterns and slime production of CoNS isolated from blood cultures of hospitalized patients with bacteremia.

Methodology & Theoretical Orientation: Blood cultures were analyzed by the Bactec 9120 system. The identification and antimicrobial resistance of the CoNS were determined by Phoenix automated system and MALDI-TOF MS. Antibiotic susceptibilities were evaluated according to EUCAST. The slime production was evaluated with Congo red agar method.

Findings: A total of 160 CoNS strains were isolated from blood samples of patients with true bacteremia who were hospitalized in intensive care units and in other departments of Istanbul University Cerrahpasa Medical Hospital between 2015 and 2017. Among CoNS isolates, *Staphylococcus epidermidis* was the most prevalent species (51.2%) followed by *Staphylococcus hominis* (20%), *Staphylococcus haemolyticus* (11.8%), *Staphylococcus capitis* (4.3%), *Staphylococcus saprophyticus* (1.8%), *Staphylococcus cohnii* (1.25%), *Staphylococcus lugdunensis* (0.6%), *Staphylococcus schleiferi* (0.6%), *Staphylococcus warneri* (0.6%) and *Staphylococcus pettenkoferi* (0.6%). Resistance to methicillin was detected in 80.5% of CoNS isolates. Methicillin-resistant CoNS isolates (MRCoNS) were determined to be more resistant to antibiotics than methicillin-susceptible CoNS isolates (MSCoNS). Resistance rates of MRCoNS and MSCoNS isolates to the antibacterial agents, respectively, were as follows: Gentamicin 38.7% and 0%, erythromycin 83.5% and 32%, clindamycin 38.6% and 14.8%, trimethoprim-sulfamethoxazole 49.4% and 8.3%, ciprofloxacin 67.8% and 21.7% tetracycline 50% and 34.7%, rifampicin 42% and 0%, teicoplanin 4.9% and 0%. None of the isolates were resistant to vancomycin. The inducible MLSB, structural MLSB and efflux type resistance were determined in 44.9%, 1.12% and 38.2% of MRCoNS and in 14.8%, 0% and 14.8% of MSCoNS, respectively. Slime production was determined higher in MRCoNS.

Conclusion & Significance: These results underline the importance of continuous surveillance and efforts to improve the outcome of serious bloodstream.

Biography

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