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ePoster Viewing

Intravascular catheter-related infections

Pathogen distribution and frequency of multi-drug resistant pathogens in central line-associated bloodstream infections

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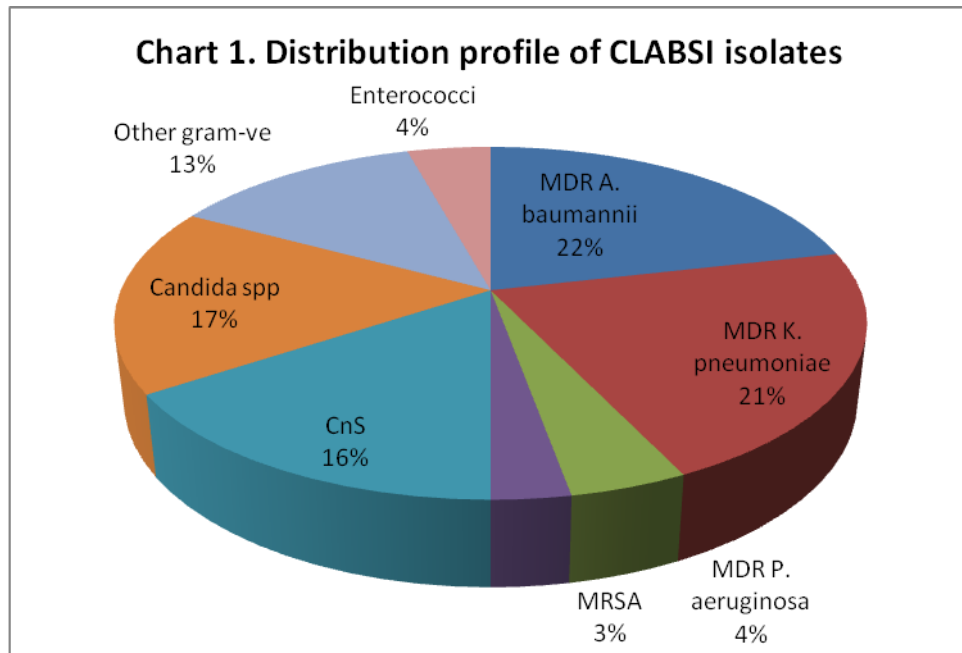
Background: According to the existing data, most bloodstream infections in catheters originate from the skin, with Staphylococci being the most common cause of catheter-related infections. We describe the pathogen distribution and the frequency of multidrug resistant pathogens (MDR) pathogens in central line-associated bloodstream infections (CLABSI) occurred in all of our hospital units during a 2-year period (2014-2015).

Materials/Methods: Identification of isolates and antimicrobial resistance patterns were determined by the VITEK-2 compact system. E-test was performed for confirmation purposes. CLABSI was defined using CDC criteria.

Results: Active surveillance of CLABSIs was performed in all units at our institution during the 2-year period. In total 70 CLABSIs were determined, 18 from PICCs and the 52 CVCs. The distribution of the isolated micro-organisms in CVCs was 34/52(65.3%) Gram-negatives, 12/52 (23%) Gram-positives and 6/52 (11.5%) fungi. The three most frequently isolated pathogens were *Klebsiella pneumoniae* (13/52, 25%), *Acinetobacter baumannii* spp. (14/52, 26.9%), *Staphylococci* coagulase negative (8/52, 15.3%).

The distribution of the isolated microorganisms in PICCs was 8/18 (44.4%) for Gram-negatives, 4/18 (22.4%) for Gram-positives and 6/18(33.3%) for fungi. The most frequently isolated pathogens were *Candida* sp. (6/18, 33.3%), *Staphylococci* coagulase negative (3/18, 16.6%).

Overall, 33/70, (47.1%) of CLABSI isolates were MDR, 15/70 (21.4%) *Acinetobacter baumannii* spp., 15/70 (21.4%) *Klebsiella pneumoniae* and 3/70 (4.2%) *Pseudomonas aeruginosa*.



Conclusion: Apart from *Staphylococcus* coagulase negative, MDR Gram-negative bacteria are also frequent pathogens in CLABSIs from our hospitals. Multidrug resistant organisms rather than skin pathogens should be also targeted when treating CLABSI. Close attention should be paid to their prevention through antimicrobial stewardship, hand hygiene adherence, attention to environmental decontamination, and enhanced local and national microbiological surveillance.