ANTIMICROBIAL RESISTANCE & INFECTION CONTROL

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P010: Bloodstream infections by drug-resistant organisms in a secondary hospital

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Introduction

Bloodstream infections (BSI) are important causes of morbidity and mortality. Most of all, when are caused by drug-resistant organisms (DR).

Objectives

To investigate the epidemiology, etiology, systemic response and treatment of DR-BSI.

Methods

A retrospective study was conducted about all BSI diagnosed in a secondary hospital during one year. The pattern resistant pathogen study was *EPINE-EPPS* project. Comparisons between groups were performed by means of the X^2 test for categorical variables or analysis of variances (ANOVA) for continuous variables.

Results

We included 60 patients [median and interquartile range (IQR) age, 73.5 years (60.5-79.5), 57.1% males, median (IQR) Charlson comorbidity index, 3 (2-4), median (IQR) acute physiology and chronic health evaluation (APACHE) II score, 11 (8-15)] with 63 DR-BSI of which 71.5% were nosocomial and healthcare-associated BSI.

Unknown and intravascular catheter-related DR-BSI accounted for 49.2% of cases. Among secundary infections, the source was 37.5% urinary track, 31.2% intra-abdominal and 15.6% respiratory track infections.

Overall DR-BSI, DR-Gram-positive cocci were 55.6%. The most common isolated pathogens were staphylococcus coagulase-negative and *S. aureus*. Among DR-Gram-negative bacilli, 12.2% of enterobacteracea family produced extended-spectrum B-lactamasas. We found 5 DR-BSI caused by *Acitetobacter* carbapenem resistant and 3 DR-BSI by *P. aeruginosa* carbapenem resistant.

Median time to diagnosis for DR-Nosocomial BSI was 14 days (IQR), 7-35 days after hospital admission. For Gram-negative was 11 days (7.5-31.5) and for Gram-positive 19 days (7-29).

Only 31.7% of DR-BSI received appropriate initial empirical antimicrobial therapy versus 73.5% of non DR-BSI ($p<0.001$). More than one third (36.5%) of the episodes occur with significant systemic response (severe sepsis or septic shock). The crude mortality rate was 25.4 % ($p<0.001$). If the patient developed severe sepsis or septic shock crude mortality rose to 52.2%.

Conclusion

Information about local epidemiology is important to develop prevention and control strategies in drug–resistant microorganism and to improve the management of BSI.

Disclosure of interest

None declared.

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