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Editorial

Gram-Negative Bacillary Bacteremia in Adult Patients

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Despite the availability of potent antimicrobial therapy and advances in supportive care, bloodstream infection is still a main cause of morbidity and mortality. These microorganisms contribute to serious therapeutic problems due to the increasing incidence of multidrug resistance. Gram-negative bacillary sepsis with shock has a mortality rate of 12 to 38%, mortality varies depending, in part, on whether the patients receive timely and appropriate antimicrobial therapy. Gram-negative bacteremia is a frequent cause of severe sepsis and septic shock, prior to the receipt of microbiological data. Gram-negative bacilli are the cause of approximately 25 to 5o% of all bloodstream infections, depending on geographic region, whether the onset of the infection is in the community or hospital, and other patient risk factors.

Since 1980s, gram-positive aerobes and Candida species have increased in relative significant, although gram-negative bacilli were once the major microorganisms associated with hospital-onset bloodstream infections in the United States. This change was particularly evident in the intensive care unit (ICU) population and thought to be largely caused by device-related infections. Data from the United States National Healthcare Safety Network revealed that approximately 25% of reported central line-associated bloodstream infections from 2009 to 2010 were caused by gram-negative bacilli. Cultures of blood, urine, and sputum should be performed, as well as other sites as clinically indicated. After performing the cultures, antimicrobial therapy should be started immediately and before the culture results are available. Identification of a likely site (or sites) of infection as well as knowledge of the specific epidemiology (antibiotic resistance patterns or antibiogram) of the bacteria in particular community or hospital environment will allow an educated selection of empiric antibiotic. This initial antimicrobial regimen should be modified when culture results become available.

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