

Bacterial Nosocomial Infections and Antimicrobial Susceptibility Pattern among Patients Admitted at Hiwot Fana Specialized University Hospital, Eastern Ethiopia



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Abstract

Nosocomial infections remain major cause of mortality and morbidity worldwide. Despite the highly specialized interventions and policies, the rate of infection is still high due to the emergence of antimicrobial-resistant bacteria. This study described the prevalence of bacterial nosocomial infections and antimicrobial susceptibility pattern of isolates among patients admitted at Hiwot Fana Specialized University Hospital, Eastern Ethiopia. A hospital-based cross-sectional study was conducted among 394 nosocomial infection-suspected patients from March 2017 to July 2017. Data were collected using a structured questionnaire.

Specimens from the respective site of infections were collected and examined for the presence of pathogenic bacteria and their antimicrobial susceptibility using standard culture and serological tests. Data were summarized using descriptive statistics.

Prevalence of culture confirmed bacterial nosocomial

infection was 6.9% (95%CI:4.37.9). Staphylococcus aureus (18.5%) was the most common isolate followed by Escherichia coli (16.7%). S. aureus showed 80% resistance to chloramphenicol and erythromycin, and 70% to cephalexin and tetracycline, respectively. A methicillin-resistant S. aureus made up 88.9% of all S. aureus isolates. Pseudomonas aeruginosa showed 83.7% resistance to each of ceftazidime and cephalexin, and 66.7% to chloramphenicol. Most common multidrug-resistant isolates were P. aeruginosa (30.4%) and S. aureus (21.7%). The prevalence of nosocomial infections in this study was comparable with other findings; however, the high rates of antimicrobial resistant isolates represent substantial threat to the patients, communities, health care providers, and modern medical practices. Bacterial nosocomial infection treatment should be supported by culture isolation and antimicrobial susceptibility testing.



Biography

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