

ABSTRACT

Background & objectives: Nowadays, bacterial resistance and the increase in the therapeutic costs are considered as the most important global concerns of medical care system regarding complicated infections. Imipenem is a member of the carbapenem class of beta-lactam antibiotics prescribed mostly in our hospitals because of its broad activity against bacterial infections. Drug Utilization Evaluation (DUE) process is an official, ongoing and systemic program that collects information in order to identify and improve the adverse effect of drugs and the cost of medicalization. The objective of this study was to evaluate the administration and use of imipenem in the Imam Khomeini Teaching hospital in Ardabil in 2018.

Methods: In this prospective, descriptive, cross-sectional study, 110 hospitalized patients, who received imipenem from September to December of 2018, were included in this study. Patient's demographic data, dosing, dosage adjustment in renal failure and other co-prescribed antimicrobial drugs were extracted from current medical file of hospitalized patients and evaluated with medical guidelines.

Results: Sixty four percent of patients received imipenem in the first day of hospitalization and 75.5% of patients were empirically received imipenem while antibiogram test was ordered for only 24.5% of patients. Serum creatinine were ordered for most of the patients, but correct dose regimens for patients who get non-empiric antibiotic therapy were only 25.5%.

Conclusion: High rate of empiric prescription without considering the result of antibiogram test and immediate initiation of antimicrobial therapy at the time of admission were the most important aspects of irrational use of imipenem observed in this study. Paying more attention to sampling, culturing and sensitivity test and prescription of imipenem based on specific guidelines are recommended.

Keywords: Imipenem; Drug Utilization Evaluation; Microbial Drug Resistant