The pattern of Imipenem/Cilastatin administration in Imam Khomeini hospital (Ardabil) in the year 1397

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Introduction: Nowadays antimicrobial resistance is one of the most important concerns of medical care system in the world. Broad-spectrum antimicrobial drugs are the last gun?? against the complicated microbial infections in the hospitals. Therefore, the indiscriminated use of these drugs in addition to increasing costs of hospitalization, increases the antibiotic resistance and this opportunity makes ecologic change in bacterial spices to develop new resistant infections against our current drugs? Imipenem is of carbapenem class of beta-lactam antibiotics that 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 probable adverse effects of drugs, and shows us complains?? that reduces cost effectivness of medicalization in hospitals.

Objective: To evaluate appropriate use of Imipenem/Cilastatin (IC) antibiotic in educational Imam Khomeini hospital in Ardabil.

Methods and Results: 100 hospitalized patients who received IC from September to December of 2018 were included in this study. Patients' demographic data, dose, dosage adjustment in renal insufficiency and co-prescribed antimicrobial drugs were extracted from current medical file of hospitalized patients and evaluated with Up-to-date and Lexi-comp references.

Results: 75% were empirically received IC and antibiogram tests were ordered for only 25% of patients. 64% of patients received Imipenem in first day of hospitalization. Serum creatinine tests was ordered for most of the patients but correct dose regimens for patients who get non-empiric antibiotic therapy were only 24%.

Conclusions: High rate of empiric prescription of IC without considering culture and antimicrobial susceptibility results and initiation of antimicrobial therapy at the time of admission were the most important aspects of irrational use of this antibiotics are observed in this study. Paying more attention to sampling, culturing and sensitivity tests and prescription of IC based on specific guidelines are recommended.

Key Words: Imipenem/Cilastatin, Drug Utilization Evaluation, Microbial Drug Resistant