

ABSTRACT

Introduction:

Antibiotics are one of the most widely used medications class in clinical practices. Irrational use of antibiotic leading to increase in health care system cost, increase patient's morbidity and mortality as well as increase the chance of antibiotics resistant. In a recent decade microbial resistant caused by the overuse and misuse of antibiotics is one of the most challenging problems in infectious disease fields. First step for rational use of antibiotic is evaluating the pattern of antibiotics utilization in clinical setting, so we decided to evaluate the pattern of antibiotic use for the first time in Fatemi hospital, Ardebil, Iran.

Method:

Study was conducted on 300 hospital admitted patients during second half of 1398 in different wards of Fatemi hospital including: general surgery, Orthopedics, neurosurgery, Ear Nose Throat, neurology and burns. Patient data including demographic, clinical and para-clinical data were recorded. Antibiotics utilization data were reported as DDD/100 bed days and DDD/patient indices, according global updated ACT/DDD system which proposed by World Health Organization for drug utilization studies.

Results:

Out of recruited patients, 170(56.7%) were male and 130 (43.3%) were female with Mean± standard deviation (SD) age of 44.3±19.91. Mean± SD of hospital stay was 6.80 ± 9.50 day. Antibiotics as most prescribed medication class, account for 25.55% of the total prescribed medications and 253 (84.33%) of study patients Received at least one antibiotic agent. The most widely used antibiotics based on DDD/100 bed days were: cefazolin (29.83), ceftriaxone (12.79), metronidazole (11.76), ciprofloxacin (6.03), vancomycin (5.44) and clindamycin (5.39). the most widely used antibiotics based on DDD/patient were: cefazolin (2.03), ceftriaxone (0.87), metronidazole (0.80), ciprofloxacin (0.41) and vancomycin (0.37).

Conclusion and Discussion:

Due to the high consumption of antibiotics in the hospital, it is necessary to prepare the standard protocol for rational use of antibiotics especially for high-consumption antibiotics agents, such as Cefazolin, ceftriaxone and metronidazole.

Key words: Antibiotic, Defined Daily Dose, ATC-DDD, Drug Utilization Evaluation