

## **Evaluating the pattern of antibiotic use in patients admitted to The Poursina Educational Medical center in Rasht during 1401**

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**Introduction and aim:** Antibiotics are one of the most important drugs used in treatment. Due to the relationship between the ways antibiotics are used and drug resistance, examining their usage pattern is important and the first step in optimizing the use of these drugs. Since the use of antibiotics is irrational and sometimes continues until the patient is hospitalized, the correct use of antibiotics has been considered especially for the purpose of prophylaxis. For this reason, the pattern of antibiotic use in different wards of Rasht's Poursina Medical Training Center was investigated.

**Materials and methods:** During a descriptive cross-sectional study, the information of the patients of Poursina Hospital in Rasht was collected through medical records in 1401. The information includes age, sex, inpatient ward, type of disease, duration of receiving antibiotics, dose, cause and type of antibiotic used. Finally, the collected data were entered into SPSS version 26 software and subjected to statistical analysis.

**Results:** In this study, the number of 432 antibiotics used in the Poursina Medical Training Center of Rasht in March 2023 was examined. The highest percentage of frequency related to the prescription of cefazolin in 54.7% of patients, followed by the combined prescription of ceftriaxone and metronidazole in 39% of patients. 89.3% of cefazolin was prescribed in orthopedic patients, also the combination of two antibiotics ceftriaxone and metronidazole was prescribed in only surgical departments. In this study, the prescribed dose of cefazolin was correct in 99.4% of patients, but the duration of its administration was prescribed correctly in only 4.5% of patients, also ceftriaxone was prescribed in 95.4% of patients and metronidazole in 99.2% of patients with the correct dose. But in only 2.6% of patients, the prescribed duration was correct. In this study, cefazolin was prescribed in 97.5% of cases and the combination of ceftriaxone and metronidazole in 94.7% to prevent infection.

**Conclusion:** In this study, the most common cause of the prescription of antibiotics was to prevent infection during surgery. The noteworthy point is the duration of antibiotic use, which despite prescribing the correct dose of antibiotics, the duration of its use in most cases is longer than the time determined according to the guidelines, and due to the relationship between incorrect use and antibiotic resistance and increasing the cost of treatment, It needs serious revision.

**Keywords:** Antibiotic, pattern of use