

Trends of Empiric Antibiotic Usage in an Accident and Emergency Department in a Secondary Care Hospital

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Background: Several strategies to optimize the use of antibiotics have been developed. Most of these interventions can be classified as educational or restrictive. Restrictive measures are considered to be more effective, but the enforcement of these measures may be difficult and may lead to conflicts with prescribers. Any intervention should be aimed at targets with the highest impact on antibiotic prescribing¹.

Objective: To evaluate the current practices of prescribing antibiotics at the time of admission and to assess the adequacy of empiric antibiotic use and to identify risk factors for inadequate treatment and targets for intervention.

Design: A prospective observational study.

Setting: Salmaniya Medical Complex.

Method: From November 2007 to March 2008, patients admitted in the medical department through the emergency and who received antibiotic therapy within 24 hours were included. Antibiotic therapy was considered adequate if the spectrum of coverage, dose, application mode and duration of therapy were appropriate according to local recommendations or published international guidelines.

Result: Two hundred admitted patients were evaluated. One hundred nineteen patients' records were traced and evaluated after patients were discharged. Twenty (16.8%) patients received antibiotics within 4 hours; 99 (83.2%) had their first dose of antibiotics within 24 hours of admissions. Empirical antibiotic therapy was inadequate in 14 (11.8%) patients. Initial therapy was adjusted in 61 (51.3%) patients.

Conclusion: We found a high rate of inappropriate empiric antibiotic use in our institution, which is similar to other studies. A well-structured and organized antimicrobial team has to be established to implement antimicrobial management program in the hospital. That will ultimately improve the rate of inadequate antibiotic use.