

Program Adı

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Tezin Adı

Prevalence Study Of Antibiotic Usage And Health Care Associated Infections At Near East University Hospital In Northern Cyprus

Tezi Hazırlayan

Wissal Mohamed JAME

Danışman

Assoc. Prof. Dr. Bilgen BAŞGUT

ABSTRACT

Objective: This study aimed at providing a prevalence survey of antibiotic usage pattern and antibiotic therapy cost, and estimate health care associated infection at Near East University hospital.

Methodology: By using period prevalence method, this study was conducted to estimate antibiotic usage and prevalence of hospital acquired infection through inpatients in surgery, medicine, paediatrics and ICU at the hospital in April 2016. The desired data on antibiotic and HAIs were registered using pre-prepared survey. Appropriateness of antibiotic was evaluated according to the indication of antibiotic use, dose, the spectrum of antibiotics, dose frequency and dosage regimen.

Results: Of 137 inpatients, 54 (39.4%) were on one or two antibiotics. Among patients receiving antibiotics, 7 were on surgery ward, 35 were on medicine ward, 6 on pediatric ward and 6 on ICU unit. The usage of antibiotic was appropriate in 38(70.4%) patients and inappropriate in 16(29.6%) patients. The most common inappropriate use of antibiotic was 37.1% through patients on medicine wards. The most prevalent cause of inappropriate usage was improper choice of the right antibiotic after getting the result of AST and prolonged empirical use of broad spectrum antibiotics without presence of clear diagnosis. At the time of analyzing the

appropriate use of antibiotic according to indication, it was found out that, the most prevalent appropriate use was for empirical (80.6%) and prophylaxis (69.2%), while the most common reason why antibiotic was used inappropriately was for definitive therapy (60.0%). During the study period, 59 antibiotics were used by 54 patients and (88.9%) of them prescribed by I.V rout. the most commonly used antibiotic was cephalosporin 29 (49.2%). Overall, 15(10.9%) of hospitalized patients with hospital acquired infections, ranging from 11 (12.8%) in medicine to 4 (33%) in intensive care unit. The most prevalent infections was urinary tract infections 5(33.3%) and blood stream infections 3(20%). The most prevalent isolated bacteria in patients with nosocomial infections was Staphylococcus species. Prevalence of HAIs was high in patients over 30 years old and in those in hospital more than 10 days. The overall daily cost of antibiotic therapy in one day wasVII (\$919.61) while the total daily cost for nosocomial infections was (\$ 482) and the mean daily cost per patient was (\$17.02) and mean daily cost per patient with hospital infections was (\$32.13). The mean daily cost per patient was (\$ 8.12) in surgical wards, (\$21.57) in medical wards, (\$ 6.94) in pediatrics and (\$5.79) in ICU ward.

Conclusion: This survey showed that the rate of inappropriate use of antibiotic in our hospital was low when compared with other studies and antibiotic usage rates which was detected in this study was relatively low and this is may be due to the low number of total hospitalized patients. Definitive therapy is still a major problem, Also widely use of broad spectrum antibiotics as empirical therapy without culture result to guide therapy was determined in this study.

The prevalence of HAI was relatively high in this centre as a private hospital and this type of infections are an important part of extra costs in the hospital.

Keywords: Antibiotic, prevalence, HAIs, rational use.