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Abstract:

Infection control is a top priority for hospitals, especially in intensive care units (ICU). In intensive care units, prevalence of infection is estimated to be 30% worldwide, which is a major cause of morbidity and mortality. Many factors are known to increase the risk of infection in ICU patients. Since each of these may lead to different infections, it is important to recognize and identify predisposing factors for early diagnosis and treatment. The regional health care-associated infections (HCAI) prevalence and distribution of risk factors are important strategies in infection control. In this regard, the aim of this point prevalence study was to obtain data related to infections, the prevalence of HCAI among these infections, the epidemiology, agents and antibiotics used among adult ICU patients in the university hospitals, training and research hospitals and public hospitals located in eight of the cities of our region. In the light of these data, we aimed to review and emphasize the guidelines on HCAI prevention. The study included adult ICU patients followed up in nine hospitals in the Eastern and South-eastern Anatolia Regions of eight different cities (Sivas, Erzurum, Mardin, Batman, Diyarbakir Elazig, Van, Adiyaman) in Turkey. Of the hospitals six were university hospitals, one was training and research hospital, and two were public hospitals. The number
of beds ranged from 358 to 1418. A specific day was determined on which the researchers concurrently carried out a prospective surveillance in all adult intensive care unit patients. The researchers collected data and recorded the demographic characteristics (age, gender), underlying diseases, length of hospital stay, presence of invasive intervention (urinary catheter, central venous catheter, external ventricular drainage, mechanical ventilator, presence of risk factors such as burn, trauma and surgery, number of infection cases, type of infection (hospital-acquired, community-acquired), type of microorganisms and whether polymicrobial or monomicrobial, which antibiotics were administered, and duration of antibiotic treatment. Our study assessed data of 429 inpatients in the adult ICU of nine hospitals in eight different cities. There were a total of 881 intensive care beds in these hospitals, and 740 (84%) beds were occupied. Of the study group 49.7% was male with a mean age (min-max) of 64.08 ± 18.78 (2-97) years. The point prevalence of HCAI was 21.7% (n= 93). Of the patients who were followed-up 182 (42.4%) presented infections. Of these infections, 21.4% were diagnosed as community-acquired pneumonia, 18.6% were ventilator-associated pneumonia (VAP), 16.3% were community-acquired urinary tract infection (UTI), and 16.3% were bloodstream infection. In addition, the most commonly administered antibiotics in the study group were piperacillin/tazobactam, carbapenem, quinolone and ceftriaxone, respectively. The most common types of HCAI were community-acquired pneumonia (10.7%), ventilator-associated pneumonia (8.9%) and bloodstream infections (8.2%). The mean length of hospital stay was 32.05 ± 66.85 (1-459) days and the mean duration of antibiotic therapy in patients with HCAIs was 7.76 ± 7.11 (1-41) days. The most widely accepted method to handle infection is to carry out active, prospective and patient-based surveillance studies on a regular basis, and to take control measures and arrange appropriate treatment in the light of the data obtained. We attribute the high prevalence of HCAI in our region to lack of personnel, lack of materials, inappropriate use of antibiotics, insufficiency of physical conditions, and little support for infection control committees. In conclusion, we emphasize that it is of importance to work closely with the hospital administration to take measures and that necessary assistance is provided.

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