

timicrobial treatment influence, increased use of invasive devices and the epidemiology of infections related to hospital assistance^{1,2}

Objectives: To describe the bloodstream infections (BSI) in patients with Acute Myeloid Leukemia (AML) in a university hospital of Sao Paulo, Brazil. To analyse the association between mortality and multidrug resistant Gram-negative bloodstream infection (MR-BSI).

Methods: During the period between January 2002 and November 2006 all positive blood cultures were, retrospectively, analyzed. Gram-negative MR-BSI was defined as the isolation of agent resistant for two or more of the following antibiotics: 3rd and 4th generation cephalosporins, carbapenems, fluorquinolones, piperacilin/tazobactam.

Results: We identified 126 episodes of BSI in 58 patients. Polimicrobial BSI occurred in 6 patients. The patients mean age was 47.6 years old (17-88) and 46% (27) were male. The mean time of BSI occurrence was 29.1 days after hospital internment. In the total of 126 agents, 58% were Gram-negative bacteria, 36.5% were Gram-positive and 5.5% were *Candida*. MR Gram-negative bacteria were responsible for 24 episodes of BSI, corresponding for 32.9% of the Gram-negative BSI. Between these MR Gram-negative bacteria *Klebsiella spp.* *Pseudomonas spp.* had been the most prevalent in 9 (37.5%) episodes each one. All MR Gram-negative were resistant to ceftazidime and cefepime. *Pseudomonas spp.* also had shown resistance to imipenem (9 of 9 or 100%) and to ciprofloxacin (7 of 9 or 78%). All *Klebsiella spp.* expressed extended spectrum beta lactamase production. Twenty-seven of 58 patients (46.5%) died within 30 days (7.3 days on average) from the BSI occurrence. The mortality 30 days from BSI occurrence was 59% of patients with BGN-MR BSI and 30.4% of patients without BGN-MR. The mortality 7 days from BSI occurrence was 41% of patients with BGN-MR and 8.7% of patients without BGN-MR BSI.

Conclusions: Gram-negative BSI had predominated. Between these bacteria 32.9% revealed resistance to multiple drugs of frequent use as empirical therapy. Mortality in this population with AML and BSI is extremely high, and stands out the deaths between the patients with multidrug resistance gram-negative bloodstream infection.

References:

1. Clin Infect Dis. 2004 Jul 15; 39 Suppl 1:S25
2. Clin Infect Dis. 2004; Jul 15; 39 Suppl 1:S7

Infections in Surgical Patients and Intensive Care Units, Including Patients with Burns

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Fungal Infections in a Pediatric Burn Care Unit

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Introduction: Fungal infections have been recognized as an important cause of morbidity and mortality in burn patients.

Objectives: The objective of this study was to describe fungal infections in a specialized burn intensive care unit.

Material and Methods: We included prospectively all patients with confirmed fungal infections at any site from January 2002 to March 2006.

Results: We included 41 patients in the study. The mean age of the patients was 48 months (r: 2-144), 29 patients (70%) were boys. The burn surface affected was between 15 and 87% (mean 40%).

Localization of the burns were in upper limbs- 37 patients (73%), lower limbs- 35 patients (85%), trunk- 33 patients (80%) and perineal area- 19 patients (46%). Central and arterial catheterization was present in 40 patients (98%) for a median time of 14 days (r: 4-90 day) vesical catheterization in 40 patients (98%) for a median time of 14 days (r: 4-90 days). Thirty-eight patients (95%) had received previous antibiotics, 2 patients (5%) had received parenteral nutrition. The time lapse between admission and acquisition of fungal infections was between 4 and 90 days (mean 13 days). The most frequent site of isolation was from deep wounds in 38 patients (93%) and blood cultures in 3 patients (7%). In all patients, except 3 (7%) with fungal infections, bacterial infections were found. The predominant fungus recovered was *Candida* species in 18 patients (44%); followed by *Aspergillus* species in 6 patients (15%). Anfotericin B was the drug of choice at the beginning of treatment followed by azoles if feasible. The median time of complete treatment was 23 days (r: 9-90). One patient died (2%).

Conclusions: Fungi play an important role in burn infections. Infection with *Candida* species was the most frequent. Special cultures for yeast are recommended for all cases with burn infection.

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Prevalence of Oxacillin-resistant *Staphylococcus* Strains in Clinical Specimens from Intensive Care Unit Patients

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Background: *Staphylococci* are often involved in infections regarding Intensive Care Unit (ICU) patients and their susceptibility or resistance to oxacillin is of major importance for the appropriate therapeutical approach.

Objectives: To estimate the prevalence of oxacillin-resistant staphylococcal strains isolated from ICU patients.

Methods: Between 1/1/2007 and 31/12/2007, 73 *Staphylococcus* strains were isolated from different samples obtained from ICU patients. Samples included bronchial aspirates, wounds, central venous catheters, blood and nasal swabs. Identification of bacteria was based on routine laboratory proceedings while testing for oxacillin resistance was performed with the disk diffusion method with the use of 30 microgram Cefoxitin disk according to CLSI guidelines. *St. aureus* strains that were characterized as oxacillin resistant were furthermore tested for PBP2a protein production by latex method.

Results: 27 *St. aureus* strains were recovered as well as a total of 46 coagulase-negative staphylococci (CoNS) with *St. epidermidis* and *St. haemolyticus* being the most frequent among them. Oxacillin resistance rates in the *St. aureus* group were 48% and all strains tested positive for PBP2a production. Oxacillin resistance rates in the CoNS group were 86.9%.

Conclusions: About half of *St. aureus* strains and more than 8 out of 10 CoNS recovered from ICU clinical specimens were oxacillin resistant. High oxacillin resistance rates depict an important problem when dealing with staphylococcal infections and underline the necessity for proper surveillance and infection-control measures.