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Poster Session I

Confronting fungal infections

CANDIDAEMIA IN A COIMBRA BURN UNIT, IN PORTUGAL: PREDICTIVE FACTORS FOR INFECTION AND MORTALITY

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Objectives: The aim of this study is to evaluate the epidemiological profile of patients admitted in a Coimbra Burns Unit.

Method: Retrospective review of all patients with a positive blood culture for *Candida spp.*, candidaemia, over a 10-year period, between January 1st 2003 and December 31st 2012.

Results: 57 patients (27 females) were diagnosed with candidaemia (3.3%). Seven species were isolated - *C. albicans* (54.4%), *C. parapsilosis* (33.3%), *C. krusei* and *C. tropicalis* (3.5% each), and *C. norvegensis*, *C. lusitaniae* and *C. glabrata* (1.8% each). All age strata were observed with a mean of 62.4 years old. In the older age groups (>65 years old), candidaemia infections accounted for 3 - 6% of all infections, while in the younger age groups they accounted for 0 - 4%. We found that candidaemia was present in 5.6% of all fire burns and 1.8% of liquid and vapour burns. The percentage of patients with candidaemia increased with the total body surface area (TBSA) of burns.

9.5% of patients under invasive mechanical ventilation had candidaemia, rising to 14.9% when an airway lesion was confirmed. For specific systemic risk factors, 10.9% of patients presented diabetes mellitus, 7.3% had chronic renal failure, 5.5% were drug-addicted p, and 1.8% each of patients with cancer and 1.8% were HIV+. On average, candidaemia was diagnosed for the first time after 21 days from the admission and after 19.4 days under antimicrobial coverage.

18 patients (32.7%) were previous covered with antifungals at the time of the first culture (7 - fluconazole, 5 - voriconazole, 4 - caspofungin, 3 - amphotericin B, 2 - anidulafungin and 1 - nystatin). Antifungals were added after culture to 88.9% of patients; 19 received caspofungin, 16 amphotericin B, 14 voriconazole, 12 fluconazole, 2 anidulafungin and 1 nystatin. An unfavourable fatal outcome was observed in 41.4% of patients with a single isolate and 57.7% of patients with two or more isolates. The involved species also appeared to influence mortality, with a death rate of 60% with *C. albicans*, 36.8% in *C. parapsilosis*. Additional non-blood-borne isolates also influence mortality (71.4% death rate in patients with positive respiratory cultures, 68.4% in positive urine samples, 64.7% in wound infections, 50.0% in central venous line positivity), compared to 30.0% in patients with C alone.

Conclusion: Our data shows an increased rate of infection in females, older age groups, in patients requiring mechanical invasive ventilation. The body surface area affected correlates with the likelihood of candidaemia. Mortality rose with the number of isolates and with infection by *C. albicans*.