

Candida bloodstream infections in a general hospital of Southwestern Greece during a five-year period

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Background: Since bloodstream infections due to *Candida* species cause significant morbidity and mortality it is necessary to detect trends in species distribution and antifungal resistance in our region, in order to perform the appropriate initial medical treatment.

Materials/methods: In order to define the rate of *Candida* isolates among all positive blood cultures, species distribution between *albicans* and *non-albicans*, and antifungal susceptibility test among them, we performed a retrospective study of all blood cultures that were send in our laboratory between January 2011 and November 2015. All hospitalized patients who had ≥ 1 blood culture positive for *Candida* were included in the study. The blood cultures were performed using the Bactec 9120 (Becton Dickinson). All isolates were identified by the automatic Vitek 2 system (Biomerieux). The *in vitro* susceptibility of the yeast isolates to antifungal agents was also determined by the automatic Vitek 2 system (Biomerieux). The antifungal agents that were tested were: Amphotericin B, Fluconazole, Flucytosine, Voriconazole, Caspofungin and Micafungin.

Results: Total number of 630 positive blood cultures from corresponding patients was reviewed. Fungi were detected in 32 patients (5.08%). All patients that detected with *Candida* bloodstream infection had been hospitalized for more than 3 days and had previous antibiotic treatment. 50% of patients were neonates nursed in neonates intensive unit care for 3 – 4 months. The other 50% of patients were nursed in adult intensive care unit, in the internal medicine and surgical department. Species analysis proved *Candida albicans* to be the dominate isolate 16 stems (50.0%), followed by *Candida parapsilosis* 13 stems (40.6%) and 3 stems of *Candida famata* (9.4%). All *Candida* isolates were sensitive to all antifungal agents that were tested.

Conclusion: Candidemia is a significant problem especially in medical words. Early recognition and prompt empirical treatment are essential to improve outcomes of patients at risk for developing Candidemia. Improvement of surveillance is crucial to recognizing emergence of highly resistant strains and not to be quiescent of the sensitivity that exists now.