Epidemiology, Risk Factors, and Prognosis of Candidemia

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Background : Bloodstream infections due to Candida species are an increasingly important complication in hospitalized patients. This study was undertaken to determine the epidemiology, risk factors and prognostic indicators related to candidemia. **Methods** : Medical records of patients with candidemia from January 1997 to December 2004 in a 2200-bed tertiary hospital were investigated retrospectively. **Results :** During 8-year study period, 350 episodes of candidemia were documented in Asan Medical Center. Community-acquired candidemia was noted in 14%(49/350). C. albicans was the most common isolate (43.7%, 153/350), followed by C. tropicalis (20.6%, 72/350), C. parapsilosis (17.4%, 61/350), C. glabrata (15.4%, 54/350), C. krusei (2.3%, 8/350), and other Candida species (0.6%, 2/350). Among 350 candidemia patients, 291 patients (83%) were receiving antibiotics therapy for bacterial or suspected infections before candidemia. Overall hospital mortality was 43% (150/350). Factors associated with mortality by multivariate analysis were initial presentation with severe sepsis or septic shock, prior antimicrobial use, azotemia and heart failure. **Conclusions :** Overall mortality of candidemia was high, 43%. Risk factors of candidemia-related mortality was initial presentation with severe sepsis or septic shock and prior antimicrobial use, azotemia and heart failure.

Comparison of Pitt bacteremia score and Charlson weighted index of comorbidity vs APACHE II for prediction of severity in ICU-acquired sepsis patients

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Background : APACHE II is useful to evaluate the severity in critical ill patients with sepsis. Even though this system of evaluation is well established, it needs blood labs and calculation of this scoring system is complicated. We evaluated a combination scoring system of Pitt bacteremia score(PBS) and Charlson weighted index of comorbidity(CWIC) to replace APACHE II scoring system in the patients with sepsis at ICU. **Methods :** A retospective chart review of 134 patients was completed. patients were included, if all of the variables necessary to calculate PBS, CWIC, and APACHE II scoring system were obtained. Statistical analyses were carried out with SPSS 11.0 (SPSS Inc., Chicago, USA). **Results :** Overall. mean APACHE II score (Mean acute physiology score was 12.46±6.71 and mean chronic health point was 3.88±1.80) was 16.36±7.15, mean PBS was 3.28±2.51 and mean CWIC was 4.12±2.37. An increasing score for PBS and APACHE II scoring system directly related to mortality in the ICU-acquired sepsis patients. PBS was as good as APACHE II score as a predicting tool of mortality (area of ROC: 0.799 vs 0.720, p<0.000). The Cox regression analysis showed that APACHE II scoring system and combination scoring system of PBS and CWIC were correlated independently with mortality. **Conclusion :** Combination scoring system of PBS and CWIC could calculate APACHE II scoring system without lab data by using the correlation coefficient, which was found from this study. We could predict mortality rate in the patients with sepsis in ICU by using combination scoring system of PBS and CWIC instead of complicated APACHE II score. **Key words:** Pitt bacteremia score, Charlson weighted index of comorbidity, APACHE II scoring system, sepsis, critically ill patients