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Predictors of Candidemia infections and its associated risk of mortality among adult and pediatric cancer patients: A retrospective study in Lahore, Punjab, Pakistan

Objectives: As the cancer patients are at higher risk of premature deaths due to candidemia. So, the present study aims to evaluate the predictors of candidemia along with its outcomes among hospitalized adults and pediatric cancer patients.

Methods: A retrospective study was conducted at a tertiary care cancer hospital in Lahore, Pakistan. The data was collected from the medical records of all the patients who were found positive for Candida species between 1st January 2017 and 31st June 2017. Data were analyzed by using Statistical Packages for Social Sciences (IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp.) and Microsoft Excel (MS Office 2010).

Results: Overall, 135 patients were detected with candidemia. Based on blood culture test results, it was found that out of 100 cultures positive for any microorganism there were 2 cases of candidemia. Multivariate analysis revealed that hematological malignancies (AOR: 2.1), and shock (AOR: 9.1) were significantly associated with high risk of mortalities during the index hospitalization, while risk of mortality among cancer patients suffering from Candida albican infection (AOR: 0.47) and those who were administered with antifungal agent after sensitivity report of the fungal culture (AOR: 0.2) was significantly less. Also, there was no significant association of empiric therapy of antifungal agent with the risk of mortality before a positive culture found ($p>0.05$).

Conclusion: Although, no risk factor was found to be associated significantly with candidemia among cancer patients. But hematological malignancies, non-albican candidemia and shock were predictors of higher risk mortality during index hospitalization.