

Title : Clinical outcomes of critically ill children with cancers admitted to the pediatric intensive care unit of a regional cancer centre in a developing country

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Asbtract :

Background: Improvements in supportive care strategies has contributed to improved survival of children with malignancies. PICU support is one of the pillars of such a supportive care system. Data from developing nations on the outcome estimates of critically ill pediatric oncology patients in the PICU is sparse. Methods: A retrospective review of case records of all PICU admissions from the Kidwai Cancer Institute pediatric oncology unit between May 2017 and April 2018 was undertaken. The aim of the study is to analyse outcome of pediatric oncology patients admitted to PICU and also determine factors predicting poor prognosis. Results: A total of 274 admissions were made in the PICU of the Institute during the study period. 80% of admissions were those with hemato-lymphoid malignancies while the remainder had solid tumours. Chidlren in remission status/newly diagnosed cases contributed to 86.5% of total admissions. The most common indication for ICU admission was sepsis followed by respiratory distress. Children admitted to the PICU in view of neurological deterioration had the highest mortality followed by those admitted for respiratory distress and cardiac complications. 26.3% and 21.5% required inotropic support and ventilation (Invasive/Non invasive) respectively with proportion of survivors being 58.3% and 51.8% in the respective groups. The median PRISM III score at admission in the survivor group was 9 (Range: 1-25) while that in the non-survivor group was 17 (Range: 3-35). Multiorgan dysfunction was present in 23.7% (n=65). Survival in those children with MODS was 29.2% (n=19). Conclusion: Risk factors such as disease status, presence of MODS, need for mechanical ventilation and inotropic support were found to be associated with poor prognosis in children with malignancies requiring PICU care.