Extended Abstract

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The international debate on An observational analytical study of causes, severity, risk factors and outcome of thrombocytopenia in a pediatric intensive care unit

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Aims & Objectives: Thrombocytopenia, commonly encountered in intensive care units, has been shown to be independent predictor of mortality and prolonged hospital stay in critically ill. We conducted a study in pediatric intensive care unit (PICU) to determine the causes and severity of thrombocytopenia as well as patient outcomes (bleeding and mortality).

Materials & Methods: Observational study was conducted in PICU of tertiary care hospital, India after ethics committee approval. Data was derived from routine examinations and investigations. Detailed information about demographic data, clinical data, length of stay (LOS), periodic platelet counts, primary diagnosis, complications, sites of bleeding (if any), use of mechanical ventilation and outcome in PICU were noted.

Results: The results indicated that the occurrence of thrombocytopenia in study population (N=491) was 60.3%. Mild, moderate, severe and very severe thrombocytopenia was seen in 27%, 32.1%, 34.1% and 6.8% patients respectively. Causes of thrombocytopenia were sepsis (27%), part of primary illness (25.7%), undetermined cause (24.7%), nosocomial sepsis (21.2%) and drugs (1.4%). Two hundred thirty-seven (48.3%) patients had bleeding during PICU stay. Maximum patients (26.1%) had respiratory system involvement. Risk factors associated with thrombocytopenia were sepsis, shock and mechanical ventilation. Patients with thrombocytopenia had longer PICU and hospital stay. Patients with infectious disease and haematological disorders had statistically significant chances of thrombocytopenia. Shock was significantly associated with increasing severity of thrombocytopenia. Presence of thrombocytopenia and increasing severity were associated with higher mortality.

Conclusions: This study confirms that thrombocytopenia is a readily available risk marker of mortality and increased PICU stay. Patients having sepsis, shock and mechanical ventilation are at higher risk of developing thrombocytopenia

Note: This work is partly presented at 11th Annual Congress on Pulmonology & Respiratory Medicine | March 18-19, held at Amsterdam, Netherlands