

An Observational Analytical Study of Causes, Severity, Risk Factors and Outcome of Thrombocytopenia in a Pediatric Intensive Care Unit

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Abstract

Aims and 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 and 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: 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%). 237 (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: 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.

Biography:

Dr Chhaya Akshay Divecha has completed her Undergraduate as well as postgraduate (MD Pediatrics) from the reputed Seth G.S. Medical College & KEM Hospital at Mumbai, India. She has also obtained fellowships in Neonatal Intensive Care and Pediatric Intensive Care from the same reputed institution. She is currently Assistant Professor in Pediatrics at College of Medicine, National University of Science and Technology (formerly Oman Medical College) at Sohar, Sultanate of Oman. She has more than 10 years of teaching experience and has published many papers in reputed journals as well as contributed to chapters in four textbooks.

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