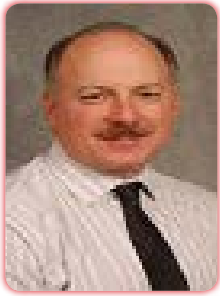


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Blood transfusion is associated with adverse outcomes in pediatric oncology patients following tumor resection

Aim: The aim of the study is to understand whether blood transfusion is associated with adverse outcomes in pediatric oncology patients following tumor resection.

Materials & Methods: A retrospective review was performed of all children who underwent resection of a solid malignancy over an 11-year period. Outcomes variables included ICU stay, hospital length of stay (LOS), infectious complications, disease free interval, tumor recurrence, and mortality. Univariate and multivariate analyses were performed.

Results: 197/373 patients received a blood transfusion within 30 days of operation (52.8%) for an average nadir hemoglobin of 8.1 ± 1.4 g/dL. On univariate analysis, those who received a transfusion had longer hospital LOS (median 5 vs 7 days, $p < 0.0001$), were more likely to be admitted to the ICU (5.7% vs 35%, $p < 0.0001$), had higher rates of infectious complications (2.9% vs 13.7%, $p < 0.0002$), higher rates of tumor recurrence (10.9% vs 31%, $p < 0.0001$), shorter disease free interval (39 vs 30 days, $p < 0.0001$) and higher mortality rates (6.3% vs 21.8%, $p < 0.0001$). After controlling for sex, age at tumor resection, nadir hemoglobin, number of units transfused, tumor type, and operation location, patients who received a blood transfusion were more likely to require ICU admission and to experience infectious complications.

Conclusion: We hypothesized that children with solid tumors who receive a PRBC transfusion within 30 days of tumor resection will have higher rates of recurrence, mortality, and infectious complications. Among children with solid tumor malignancies undergoing resection, PRBC transfusion within 30 days of operation is associated with longer hospital LOS, need for ICU stay, higher rates of infectious complications, higher rates of tumor recurrence, shorter disease free survival and higher mortality.

Biography

D Partrick completed his Doctorate of Medicine from the University of Washington, School of Medicine, and completed Clinical Surgical and Pediatric Surgical Training at the University of Colorado. He is the Director of Surgical Endoscopy and Surgical Director of the Digestive Health Institute at Children's Hospital Colorado, and Professor of Surgery at the University of Colorado. He has published more than 100 papers in reputed journals and is active in many professional societies.

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