

Racial Disparities in Readmission Rates Following Surgical Treatment of Pediatric Developmental Dysplasia of the Hip

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INTRODUCTION:

Across a number of orthopaedic subspecialties, significant racial disparities have been identified with regards to time to surgery as well as postoperative outcomes. Despite these findings among adult orthopaedic patients, the literature assessing these disparities within pediatric orthopaedics is limited. The purpose of this study was to determine the independent predictors, including race, for unplanned readmission following surgical treatment for developmental dysplasia of the hip.

METHODS:

Pediatric patients undergoing hip dysplasia surgery from 2012 to 2019 were identified in the National Surgical Quality Improvement Program-Pediatric database. Two patient groups were defined: patients who had unplanned hospital readmission within 30 days of their surgery and patients who were not readmitted. Clinical characteristics assessed included gender, race, American Society of Anesthesiologists (ASA) class, age, preoperative albumin, sodium, and hematocrit. Comorbidities assessed included pulmonary, cardiac, renal, neurological, gastrointestinal, biliary, immune disease, steroid use, nutritional support, and bleeding or hematologic disorder. Risk factors were assessed using bivariate and multivariate analysis.

RESULTS:

Of 6,561 pediatric patients undergoing surgical treatment for hip dysplasia, 540 (8.2%) had unplanned readmission. On bivariate analysis, non-white race (Black, Asian, Hispanic, American Indian, and Native Hawaiian), an ASA class of III, IV, or V, pulmonary, renal, neurological, and gastrointestinal comorbidities, as well as immune disease, steroid use, and nutritional support were significantly associated with unplanned readmission ($p < 0.05$ for all). After controlling for confounding variables on multivariate analysis, non-white race (OR 1.46; $p = 0.042$) and ASA class of III-V (OR 2.21; $p = 0.002$) were found to be independent predictors for readmission.

DISCUSSION AND CONCLUSION:

Clinicians should be advised of the increased readmission rates observed in non-white patients and those of higher ASA scores. More work is needed to develop a uniformed strategy to investigate contributing factors and solutions to combat disparities within pediatric orthopaedics.