

Session/Poster#

Presenter

C15

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The Impact of Preoperative and Demographic Risk Factors on Reoperation and Readmission on Slipped Capital Femoral Epiphysis Patients: A NSQIP-Pediatric Analysis Between 2012 and 2016

Introduction: Slipped capital femoral epiphysis (SCFE) occurs primarily in overweight or obese children and can lead to serious complications. Data examining risk factors contributing to readmission and reoperation of SCFE patients after repair is scarce.

Methods: The American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) database was queried via CPT codes from 2012-2016 to identify patients who underwent SCFE surgery. Patients were grouped based on whether they required readmission or reoperation. Patient demographics, comorbidities, 30-day postoperative outcomes, and other risk factors were analyzed with univariate analysis and multivariate logistic regression models.

Results: Of 2,660 patients identified, 32 required readmission and 31 required reoperation. 39.5% were African American, 59.3% were overweight, and 40.7% were obese. Common comorbidities were asthma (7.3%), congenital malformation (4.2%), developmental delay (3.5%), and premature birth (3.1%). Patients requiring readmission were more likely to be ASA class 2 (68.6%, $p<0.001$) while those requiring reoperation were more likely to be ASA class 3 (12.9%, $p<0.001$). ASA class 4 was an independent predictor for readmission (OR 522.6 [35.4-8629.4]; $p<0.001$) and reoperation (OR 46.3 [3.5-604.4]; $p=0.003$). Structural CNS abnormalities were a risk factor for readmission (OR 8.3 [1.0-67.2; $p=0.048$) while requiring nutritional support was a risk factor for readmission (OR 23.1 [1.8-301.9]; $p=0.017$) and reoperation (OR 22.9 [1.8-299.4]; $p=0.017$). No differences in readmission or reoperation were noted pertaining to race or body mass index (BMI) (all, $p>0.116$).

Conclusion: Patients in higher ASA classes, with structural CNS abnormalities, or requiring nutritional support were at higher risk for readmission and reoperation after SCFE repair. Importantly, BMI and race were not found to be risk factors of these outcomes. These findings can be used to guide management of SCFE patients.