Does Obesity Affect Outcomes In Children Admitted From Trauma Centers? by Prashanth Shanmugham | Bala Totapally

Abstract Details

Introduction and Research Objectives: Pediatric obesity has reached epidemic proportions in the United States. In the critical care setting, obesity has yet to be fully studied. We sought to evaluate the effects of obesity in children who are admitted to a hospital from trauma centers using Kid's Inpatient Database (KID) during 2009.

Methods: The study examined inpatient admissions from pediatric trauma patients in 2009 using the Kids’ Inpatient Database (KID). Patients (n=27599) were selected from the KID based on Age (AGE>1) and Admission Type (ATYPE=5) and assessed on Race, Sex, Length of Stay (LOS), Number of Diagnoses and Procedures, Severity of Illness (SOI), Risk of Mortality (ROM), Co-morbidities, and Intubation by comparing obese and non-obese cohorts. Chi-square test and student t-test were used to analyze the data. All variables were weighted to get national estimates.

Results: The overall prevalence of obesity (those coded as having obesity as co-morbidity) was 1.6% with significantly higher prevalence among Blacks (1.8%), Hispanics (2.3%), and Native Americans (4.1%; p<0.001). Obesity was more prevalent among females (2.4% vs 1.2%; p<.001). Overall mortality in the cohort was 4.8%. Obesity was significantly lower among children who died during hospitalization (0.5% vs 1.6%; p<0.002). However, obese children had significantly longer LOS, greater number of diagnoses, more procedures and greater than expected loss of function due to SOI when compared with non-obese cohort (p<.001). Deficiency anemia, diabetes, hypertension, liver disease, and fluid and electrolyte disorders are all strongly associated with the presence of obesity (p<.005). The rate of intubation is similar between obese and non-obese cohorts.

Conclusion: Our study using KID national database found that obese children who are admitted from trauma centers have a higher morbidity and LOS but lower mortality. Racial and gender inequalities of obesity prevalence is consistent with previous

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