#193 Giovanni Sanchez Advisor(s): Nishant Suneja

Impact of Risk Factors on Postoperative Outcomes in Patients with Acute Long Bone Osteomyelitis

INTRODUCTION: There is a lack of literature that investigates the rates and specific risk factors for adverse postoperative outcomes concerning surgery of acute long bone osteomyelitis (ALBO).
METHODS: The National Surgical Quality Improvement Program was queried to identify patients who underwent debridement, excision, incision, and sequestromy for ALBO. Postoperative outcomes investigated include complications, reoperations, readmissions, extended length of stay and mortality. Binary logistic regression analysis controlling for the modified Charlson Comorbidity Index (mCCI) was used to identify risk factors for these adverse postoperative outcomes.
RESULTS: 158 patients were identified, of whom 54 (34.2%) had postoperative complications, 9 (5.7%) had a reoperation, 17 (10.8%) were readmitted, 62 (39.2%) had an extended length of stay (> 9 days), and 2 (1.3%) died. The most common major 30-day postoperative complications were sepsis (21 patients, 39%) and deep surgical site infection (14 patients, 26%). There were significant differences in progressive renal insufficiency, readmission, and extended length of stay in patients with hypoalbuminemia (all, p<0.036). Open wound was a significant risk factor for extended length of stay (p=0.002). After controlling for mCCI, binary logistic regression analysis showed hypoalbuminemia to be a significant risk factor for readmission (p=0.049) and extended length of stay (9.1 days vs 13.7 days; p=0.021). Open wound was also a significant risk factor for extended length of stay (8.0 days vs 13.6 days; p=0.003).
DISCUSSION: Risk factors for adverse postoperative outcomes in patients with ALBO include open wound and hypoalbuminemia. Patients with hypoalbuminemia and open wounds are more likely to have an extended length of stay. Hypoalbuminemia is also associated with a higher rate of readmission. This builds on prior literature discussing hypoalbuminemia as a good predictor of adverse postoperative outcomes.