

#191 Benjamin Krasnyanskiy

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### **Evaluation of Postoperative Outcomes in Iron Deficiency Anemia Patients Undergoing Femur Open Reduction and Internal Fixation Surgery**

**INTRODUCTION:** Preoperative anemia is a known risk factor for patients undergoing major surgery. However, the effects of iron deficiency anemia (IDA) on patients who have undergone open reduction and internal fixation (ORIF) surgery were unknown. The purpose of this study is to evaluate the impact that IDA has on femur ORIF patients regarding postoperative complications, reoperation, readmission, and in-hospital mortality with minimum two-year follow-up.

**METHODS:** The Statewide Planning and Research Cooperative System was retrospectively queried between 2009 and 2013. 33,719 patients undergoing femur ORIF were isolated and split into two groups with or without IDA. Patients were then 1:1 propensity score matched. Patient demographics, perioperative variables, and postoperative outcomes were compared. Multivariate regression analysis was utilized to evaluate IDA as an independent predictor of postoperative outcomes.

**RESULTS:** The IDA group was found to have a longer length of stay (8.03 vs 8.99,  $p=0.016$ ), higher frequency of surgical complications, wound complications, postoperative transfusion of blood, pulmonary embolism, and reoperation (all,  $p<0.05$ ). Univariate logistic regression demonstrated IDA as an independent predictor of surgical complications ( $p<0.001$ ), wound complications, pulmonary embolism, and reoperation (all  $p<0.05$ ), with postoperative transfusion of blood being the most significant ( $p<0.001$ ). Multivariate logistic regression did not determine wound complications to be a significant variable ( $p=0.052$ ).

**DISCUSSION:** IDA significantly predicted postoperative complications and reoperation after femur ORIF surgery with two-year minimum follow-up. Total length of stay was higher in patients with IDA. Surgeons should be aware of the impact that IDA may have on their patients undergoing femur ORIF.

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