

Surgeon Delay in Geriatric Hip Fractures: Overall Time to Surgery Matters, but Not Time from Optimization to Surgery

Mitchell Kai-Sem Ng¹, Jordan B Pasternack, Lucas C Voyvodic, Kevin Kang²

¹Orthopaedic Surgery, Maimonides Medical Center, ²Maimonides Bone & Joint Center

INTRODUCTION: Current US/Canadian guidelines strongly recommend hip fracture surgery within 48 hours of injury to decrease relative morbidity/mortality. Multiple studies have focused on medical optimization as the key component of time to surgery. However, there is inherent bias as patients with multiple comorbidities and/or overall sicker status often take longer to optimize than healthier patients, resulting in increased time to surgery and higher risk for postoperative complications. Our aim was to evaluate the time from medical optimization to surgery (TMOS) and determine if “real surgical delay” is associated with: 1) mortality and 2) overall complications for geriatric hip fracture patients.

METHODS: A retrospective chart review of operative geriatric hip fractures treated from 2015-2018 at a single, level one trauma center was conducted. Univariate logistic regression was performed to identify potential association between time from medical optimization to surgery, and postoperative complication rates. For mortality, the Wilcoxon test was used to compare times from medical optimization to surgery for patients who were successfully discharged following surgery to those who were not.

RESULTS: A total of 972 hip fractures were treated operatively, with a median time from medical optimization to surgery of 12.3 hours (4.9–21.7, 1st-3rd quartiles). Univariate logistic regression models did not identify an association between TMOS and complication rate. As such, no optimal cutoff time could be established for complication rate. For patients successfully discharged, median TMOS was 12.1 hours (4.9–21.6, 1st-3rd quartiles). For the cohort of patients were not successfully discharged, median TMOS was 19.4 hours (9.2–28.7, 1st-3rd quartiles). This difference, however, was not statistically significant ($p = 0.16$).

DISCUSSION AND CONCLUSION: “Real surgical delay” or TMOS is associated with increased complications but not with in-patient mortality for geriatric hip fracture patients. Of note, with few exceptions, our institution adhered to the 48-hour time window from injury to hip surgery. We maintain the belief that timely surgery following medical optimization plays a crucial role in the outcomes of geriatric hip fracture patients.