

An Analysis of Cost and Complications for Patients Sustaining a Second Contralateral Hip Fracture Within 1 Year

Gabriel Makar, MD; Daniella Barreto Rocha, MD; Jordan Nester, MD; Daniel Torino, MD; Idorenyin F. Udoeyo, MPH; Hemil H. Maniar, MD; Daniel S. Horwitz, MD

Purpose: Hip fractures are an increasingly common occurrence among the aging population. With prolonged lifespan and advancements in medicine, patients sustaining a hip fracture are at an increasing risk of sustaining a contralateral hip fracture. The estimated incidence of a contralateral hip fracture varies from 2 to 10% and is reportedly associated with a higher incidence of complications; however, all studies evaluating this have compared a second hip fracture with patients who had only 1 hip fracture. We aimed to investigate the overall complications and associated costs as they relate to the first hip fracture and contrast this to the same patient's contralateral, second hip fracture.

Methods: We performed a retrospective review of all patients in our health system's electronic database who were found to have surgically treated hip fractures between January 2004 and July 2019. Patients with surgically treated hip fractures (CPT codes: 27235, 27236, 27245, 27244), who sustained a second contralateral hip fracture were included. Medical complications within 30 days of either procedure (ie, pneumonia, urinary tract infection, etc), length of stay, orthopaedic complications (ie, wound complications, infection, hardware failure, nonunion), type of implants, costs, comorbidities, and American Society of Anesthesiologists class as well as mortality were reviewed.

Results: A total of 4870 hip fractures were identified during the study period where 137 patients sustained a second hip fracture, and 47 of which were within the first year after their index hip fracture. There was no significant difference in length of stay ($P = 0.68$), medical ($P > 0.99$), or orthopaedic complications ($P > 0.99$) between patients' first and second hip fractures. There was an increased incidence of cognitive impairment with the second hip fracture ($P = 0.0002$). For the patients who underwent operative treatment of a second hip fracture, the total cost of care was higher for the second surgery (mean difference 757.38 USD) but the difference was not statistically significant ($P = 0.31$). The 1-year mortality rate was 14.9%.

Conclusion: Despite previous literature, our study demonstrates there is no statistically significant difference between the first and second surgery regarding length of stay, medical or orthopaedic complications, and cost.