

Factors for higher risk of death following hip fracture surgery than hip replacement

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Patients undergoing surgery for a hip fracture were older and had more medical conditions than patients who underwent an elective total hip replacement, factors that may contribute to the higher risk of in-hospital death and major postoperative complications experienced by hip fracture surgery patients, according to a study in the September 15 issue of *JAMA*.

Although hip surgery can improve mobility and pain, it can be associated with major postoperative medical complications and mortality. Patients undergoing surgery for a [hip fracture](#) are at substantially higher risk of mortality and medical complications compared with patients undergoing an elective total [hip replacement](#) (THR). The effect of older age and other [medical conditions](#) associated with hip fracture on this increased risk has not been known, according to background information in the article.

Yannick Le Manach, M.D., Ph.D., of McMaster University, Hamilton, Ontario, Canada and colleagues examined if there was a difference in hospital mortality among patients who underwent hip fracture surgery relative to an elective THR, after adjustment for age, sex, and preoperative medical conditions. Using the French National Hospital Discharge Database, the researchers included patients older than 45 years who underwent [hip surgery](#) at French hospitals from January 2010 to December 2013. The International Statistical Classification of Diseases and Related Health Problems, 10th Revision, codes were used to determine patients' co-existing conditions and complications after

surgery.

A total of 690,995 eligible patients were included from 864 centers in France. Patients undergoing elective THR surgery (n = 371,191) were younger, more commonly men, and had less medical comorbidity compared with patients undergoing hip fracture surgery. Following hip fracture surgery (n = 319,804), 10,931 patients (3.4 percent) died before hospital discharge and 669 patients (0.18 percent) died after elective THR.

Analysis of the matched populations (n = 234,314) demonstrated a higher risk of mortality (1.8 percent for hip fracture surgery vs 0.3 percent for elective THR) and of major [postoperative complications](#) (5.9 percent for hip fracture surgery vs 2.3 percent for elective THR) among patients undergoing hip fracture surgery.

"Patients undergoing surgery for a hip fracture were older and had more comorbidities than patients who underwent an elective THR, and these differences accounted for some of the difference in outcomes between these groups," the authors write.

"If the absolute risk increases of 1.51 percent for in-hospital mortality and 3.54 percent for major postoperative complications were modifiable, they would be consistent with the number needed to treat of 59 patients for in-hospital mortality and 28 [patients](#) for major postoperative complications. Hip fracture may be associated with physiologic processes that are not present in circumstances leading to elective THR and increase the risk of morbidity and [mortality](#) following surgery."

"Further studies are needed to define the causes for these differences."

More information: *JAMA*, [DOI: 10.1001/jama.2015.10842](https://doi.org/10.1001/jama.2015.10842)

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