Medical Xpress

The price of delirium: New study finds nearly half of patients have delirium

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A new study presented today at the 2015 Annual Meeting of the American Academy of Orthopaedic Surgeons (AAOS) found that 48 percent of hip fracture patients, age 65 and older, had delirium, or acute confusion, before, during and after surgery (perioperative), resulting in significantly longer hospital stays and higher costs for care.

Approximately 300,000 Americans are hospitalized with hip fractures each year. The risk is particularly high in post-menopausal women who face an increased risk for osteoporosis, a disease that diminishes bone mass and increases fracture risk. Delirium is common among older hip fracture patients, and multiple studies have found that patients with postoperative delirium are more likely to have complications, including infections, and less likely to return to their pre-injury level of function. Delirium patients also are more frequently placed in nursing homes following surgery, and have an increased rate of mortality.

In this study, researchers at the University of Toronto sought to determine the economic implications of perioperative delirium in older orthopaedic patients by reviewing hip fracture records between January 2011 and December 2012. A total of 242 hip fracture patients with a mean age of 82 (ages 65 to 103) were studied. Demographic, clinical, surgical and adverse events data were analyzed. Perioperative delirium was assessed using the Confusion Assessment Method (CAM).The study found that 116 patients (48 percent) experienced delirium during hospital admission. The patients with delirium were significantly older (mean age 85), and were more likely to have a higher American Society

of Anesthesiologists (ASA) score ("one" represents a "completely healthy fit patient," and "five," a patient not expected to live beyond 24 hours without surgery). After controlling for these differences, perioperative delirium was associated with 7.4 additional hospital days and $8,282 ($8,649 in U.S. dollars) in additional hospital costs (1.5 times the cost of patients who did not experience delirium).There were no differences in mean time between triage or admission and surgery, length of surgery, or anesthesia type between groups. A significantly greater proportion of patients who experienced perioperative delirium required long-term and/or skilled care facility admission follow their hospital stay (8 percent versus 0 percent).

"Older patients are at high risk of developing delirium during hospitalization for a hip fracture, which is associated with worse outcomes," said orthopaedic surgeon and lead study author Michael G. Zywiel, MD. "Our work demonstrates that delirium also markedly increases the cost of elderly patient care while in the hospital. Given the high number of patients hospitalized every year with a hip fracture, there is a real need to develop and fund improved interventions to prevent in-hospital delirium in these patients.

"Our research suggests that reducing the rate of delirium would simultaneously increase the quality of care while decreasing costs, presenting hospitals, surgeons and other stakeholders with promising opportunities to improve the value of hip fracture care," said Dr. Zywiel.

The American Academy of Orthopaedic Surgeons' (AAOS) new clinical practice guideline, "Management of Hip Fractures in the Elderly", makes a series of recommendations to reduce delirium in older hip fracture patients. They include:

- Preoperative regional analgesia to reduce pain.
- Hip fracture surgery within 48 hours of hospital admission.

- Intensive physical therapy following hospital discharge to improve functional outcomes.
- An osteoporosis evaluation, as well as vitamin D and calcium supplements, for patients following a hip fracture.

Provided by American Academy of Orthopaedic Surgeons

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