

Spinal anesthesia not superior to general anesthesia for hip-fracture surgery in older adults

Reviewed by Emily Henderson, B.Sc.

Feb 7 2022

Spinal anesthesia is not safer or more effective than general anesthesia in patients who undergo surgery for hip fractures, according to a major study.

The finding, which challenges the accepted view, offers doctors and patients better information in choosing the method that's best for them.

“*The assumption of the anesthesia and surgical communities based on the literature up to the publication of this study was that if a patient could have spinal anesthesia it was probably the safer option.*”

Derek Dillane, co-author, associate professor and acting chair of anesthesiology and pain medicine, University of Alberta's Faculty of Medicine & Dentistry

Those assumptions are being re-evaluated because they are based on older, smaller retrospective studies, which look back on patient records after surgery, Dillane said.

He and his colleagues conducted a prospective study, generally considered the most reliable method of research, which enrolled new patients, randomly assigned them to receive either general or spinal anesthesia, and then monitored their outcomes. It's the largest clinical trial to date on the question, involving 1,600 patients aged 50 and older at 46 American and Canadian hospitals, including 151 patients at the University of Alberta Hospital. The results were published in the prestigious *New England Journal of Medicine*.

The team found no difference between the two types of anesthesia in the primary outcomes: death or an inability to walk three meters independently at two months following surgery. The incidence of post-operative delirium and length of hospital stay were also similar in both groups. The team reported

slightly smaller risks with spinal anesthesia for dying during hospitalization, developing pneumonia or being admitted to intensive care.

"Spinal anesthesia for hip-fracture surgery in older adults was not superior to general anesthesia with respect to survival and recovery of ambulation at 60 days," the researchers concluded.

Approximately 30,000 Canadians fractured their hips over the past year, and more than 400 of them had surgery at the University of Alberta Hospital (UAH).

"These are typically patients who fall, either by slipping on the ice in the wintertime or slipping in the shower," Dillane said. "For them, the ability to walk independently again is of greatest importance."

Dillane said the results of the study will be helpful when discussing anesthesia options with patients and their families. Both types of anesthesia have risks and benefits, Dillane noted. For example, it can be hard for hip fracture patients to roll onto their sides for spinal anesthesia and there is a risk of spinal bleeding if a patient is on blood thinners, while general anesthesia may worsen dementia.

"The method that we choose is always tailored towards the particular patient and that patient's medical status," he explained.

Source:

University of Alberta Faculty of Medicine & Dentistry

Journal reference:

Neuman, M.D., *et al.* (2021) Spinal Anesthesia or General Anesthesia for Hip Surgery in Older Adults. *New England Journal of Medicine*.
doi.org/10.1056/NEJMoa2113514.
