

Excess mortality associated with second hip fracture

Hip fracture increases death risk. Ten percent of survivors have second hip fracture. It is not known if second hip fracture further increases death risk. Here, we report that second hip fracture increases death risk beyond that expected for an increase in age. Prevention of second hip fracture could save lives.



A recent conference in Oxford brought Boris Sobolev to an exhibition showing Dürer's Four Horsemen, among other rarities. The connection between images on the print and the reality of the hip attack did not escape him. The first horseman, Conquest, the trauma itself, comes to defeat the frail through pain, immobility and suffering. The second horseman, War, brings the battle of competing needs to our health care, making hospitals prioritize one urgent procedure over another. The horseman with scales comes to dispense access to care. And the rider of a pale horse comes to harvest death toll among the injured.

SUPPLEMENT:

Known:

Excess death rate persists for a decade after first hip fracture.

One in ten hip fracture survivors will have a second hip fracture.

It is not clear if second hip fracture further increases death rate and whether there is a difference between men and women.

Key findings:

Higher death rate linked to second hip fracture
No difference in excess death rate after second hip fracture between men and women
Secondary prevention should target both men and women.

We retrieved 42,435 hospitalization records of hip fracture patients aged 60 years or older, who were discharged after admission for hip fracture surgery between 1990 and 2005 in British Columbia, Canada. We then determined time of death for these patients.

During follow-up, the average monthly death rate was 16.2 per 1000 patient months for those without second hip fracture and 21.1 per 1000 patient-months for those with second hip fracture. In other words, the risk of death was 55 % higher for patients with second hip fracture compared to those without second hip fracture. The risk of death was similar for both genders. The risk of death was 58 % higher for men with second hip fracture than in men without second hip fracture, and the risk of death was 54 % higher for women with second hip fracture compared to women without second hip fracture.

Our results are the first to show that second hip fracture increases the risk of death above that anticipated for an increase in age for both men and women. Effective secondary prevention strategies could not only reduce complications after hip fracture but could also save lives.

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