Perioperative Care of the Elderly Patient with Hip Fracture

To the Editor:

We were very encouraged to read Boddaert et al.’s review1 and Colquhoun et al.’s accompanying editorial2 on the contemporary management of elderly patients with hip fracture, an international health problem that would benefit hugely.

References


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from increased U.S. clinical and observational research input. We would like to bring to readers’ attention other relevant publications about hip fracture anesthesia that were not covered by Boddaert et al.’s review.

Hip fracture is prevalent in Northern European countries, particularly in Scandinavia and the United Kingdom, which have traditionally been at the forefront of care improvement for elderly hip fracture patients. The National Hip Fracture Database in the United Kingdom has collected observational data on over a third of a million cases of hip fracture since 2007 and quotes a 30-day mortality of approximately 8%, rather than the 10% quoted by Colquhoun et al.3 One-year mortality in the United Kingdom is approximately 25%, similar to that quoted by Colquhoun et al., but lower than the “one third” quoted by Boddaert et al.

In the United Kingdom, there is an active Hip Fracture Perioperative Network4 of over 300 consultant anesthetists and orthogeriatricians who meet annually at the Age Anaesthesia Association conference to discuss future research and disseminate ideas. Although Boddaert et al. referenced the first publication from this network,7 they did not include the more recent Anaesthesia Sprint Audit of Practice,6 for which anesthetists prospectively collected data on over 11,000 hip fracture patients in 2013, and which found wide variation in national practice, suggesting that standardization of anesthetic technique may have an important role to play in future care improvements.

Over 99% of patients with hip fracture now receive surgical fixation in the United Kingdom, which enables analgesia and rehabilitation. Meta-analysis supports early fixation; in Sweden, the aim is for fixation within 24 h, in England and Wales, within 36 h achieved in 72% cases.3 The Association of Anaesthetists of Great Britain and Ireland have recently produced guidance on the Management of Proximal Femoral Fractures that strongly supports preoperative orthogeriatric care as pivotal in enabling early fixation,8 particularly for frailty patients, not because it seeks to improve what is often poor but unimprovable pathophysiology, but because it ensures simple, consistent medical care—medication review, analgesia, fluid therapy, and nutrition. Expensive medical tests are seldom necessary because they do not change perioperative management. We disagree with Boddaert et al. that a large randomized control trial is required to further determine whether expedited surgery improves outcome; such a trial would likely be unethical as delay would deny some patients’ access to optimal analgesia through fracture fixation.

In turn, it is the role of the anesthetist to focus on keeping patients in status quo, using interventions that aid “re-enablement” by avoiding postoperative pain, immobility, and delirium. We disagree with Boddaert et al.’s un referenced statement that “benzodiazepine withdrawal is the single, main easily preventable cause of postoperative delirium,” given that patients are often sleep deprived, in pain or have had general anesthesia, sedation, or opioid analgesia. Opioid-sparing, age-adjusted, brain-monitored5 general anesthesia or (preferably) sedation-free,10 low-dose spinal anesthesia11 appear to be beneficial in this regard, but further trial research is needed to confirm this. To date, for example, there has never been a randomized comparison of outcome between sedation-free spinal anesthesia and general anesthesia. Even though it remains uncertain whether nerve blocks improve outcome in hip fracture patients, they allow for opioid-sparing “dynamic” analgesia12 preoperatively13 and when positioning patients for spinal anesthesia14 and are increasingly (if not yet widely) administered in the emergency department on admission to hospital in the United Kingdom.15

Colquhoun et al. are correct to identify the potential of the Nottingham Hip Fracture Score in stratifying outcome risk and in comparison with other scores.16 A reliable score is essential both for point prevalence and longitudinal comparisons of care within and between hospitals to identify and learn from those providing excellent care and for stratifying patient-specific risk in future clinical trials. The recently published Surgical Outcome Risk Tool needs comparison against the Nottingham Hip Fracture Score.17

Anesthetists have an important role to play as part of the multidisciplinary care team looking after hip fracture patients, led by orthogeriatricians. Rapid improvements in care could be achieved, for example, both by close collaboration among the Age Anaesthesia Association, European Society of Anaesthesiology, Society for the Advancement of Geriatric Anaesthesia, and the American Geriatrics Association to form an international association promoting perioperative care of hip fracture patients and by the development of a U.S. National Hip Fracture Database—which would be able to collect observational data on as many hip fractures in a single year as its U.K. equivalent has in the past 7 yr.

Competing Interests
Dr. Griffiths is a member of the National Institute for Health and Clinical Excellence 124 Management of Proximal Femoral Fractures, is an immediate past honorary secretary of Association of Anaesthetists of Great Britain and Ireland (AAGBI), chaired the AAGBI Hip Fracture Guidelines Working Party, and founded the Hip Fracture Perioperative Network. Dr. White is a member of AAGBI Hip Fracture Guidelines Working Party, council member of Age Anaesthesia Association whom he represents at the National Hip Fracture Database, national research coordinator for the Hip Fracture Perioperative Network, and Editor of Anaesthesia. Dr. Khan declares no competing interests.


References
In Reply:
We thank Dr. Khan et al. for providing a useful synopsis of recent relevant British and European literature, highlighting the work since 2007 of the National Hip Fracture Database in the United Kingdom. They reinforce the importance of prompt surgery and multidisciplinary team care for managing these complex, frail, elderly patients. We regret that the likelihood for useful data collection from the world’s greatest per capita consumer of health care remains limited. There are no sizeable databases in the United States that focus on these patients. However, we are pleased that the American Academy of Orthopaedic Surgeons has recently published an easy-to-read guideline on the management of hip fractures in the elderly that has been endorsed by eight U.S. Specialist Societies.1 Interestingly, sections on perioperative pain management and anesthesia, seemingly completed without formal input from anesthesiology and associated specialist societies, provide a robust conclusion that “strong evidence supports similar outcomes for general or spinal anesthesia for patients undergoing hip fracture.”2 We compliment our British colleagues on their diligence and multidisciplinary cooperation while concurring that this major, developed world, healthcare problem presents abundant opportunities for further research.

Competing Interests
The authors declare no competing interests.

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References

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In Reply:
We thank Dr. Khan et al. for their comments regarding our recent Clinical Concepts and Commentary of the perioperative management of elderly patients with hip fracture1 and for giving us the opportunity to extend the discussion.
Dr. Khan et al. are correct when indicating that mortality rates may be lower in countries such as Northern European countries, which have been at the forefront of care improvement for elderly patients with hip fracture and orthogeriatric concept.2,3 However, we do not agree with Dr. Khan et al. who consider that a randomized trials concerning early

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