

patients should be avoided. However, anaesthetists should be mindful of the available evidence which shows that, in terms of mortality at 1 yr, young or low-risk patients suffer the greatest detriment as a result of delayed surgery. Mortality benefit should not be touted as a justification for proceeding with urgent surgical fixation for high-risk fractured hip patients.

Declaration of interest

None declared.

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Reply from the authors

Editor—I thank Dr French for his interest in our paper.¹ There is inconsistent evidence regarding the potential benefit or harm of early surgery in the high-risk patient. Our data are supported by others^{2–4} who have found that early surgery appears to be of benefit overall for patients with fragility hip fracture with regard to long-term mortality. In our study, this difference was greatest for younger and fitter patients as defined by Nottingham Hip Fracture Score⁵ ≤ 4 . We found no significant difference in 1 yr mortality for high-risk patients (NHFS >4) between early and late surgery, but we would caution against over-interpretation of these data. This was not a randomized controlled study, and the high-risk cohort will include patients who were delayed for medical reasons and those who were delayed for administrative reasons. Khan and colleagues' comprehensive, qualitative review of the literature until 2007 concluded that there were no adequate studies that suggested an increased risk from early operation. There are, however, data suggesting that length of hospital stay and morbidity are adversely affected by delay to surgery.⁶ The benefit of operation as the best form of analgesia is well recognized. I agree with Dr French that 'mortality benefit should not be touted as a justification for proceeding with urgent surgical fixation for high risk fractured hip patients'. However, there are other humanitarian and potential healthcare cost benefits to operating sooner. At the risk of courting controversy, I would suggest that clinicians and healthcare providers should justify why surgery is delayed in any patient with hip fracture.

Declaration of interest

I.K.M. is on the editorial board of the *British Journal of Anaesthesia*.

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Bibliometrics of anaesthesia researchers in the UK

Editor—I read with interest the article by Moppett and Hardman.¹ The authors are to be commended for their comprehensive approach to measuring bibliometrics of UK anaesthesia researchers. This article provides valuable information for benchmarking research performance of anaesthesia researchers. It also highlights the difficulties of determining citation profiles of researchers using scientific citation databases and which single-number citation indices may best measure the research performance of individual researchers.

Despite the increased use of bibliometrics for measuring the scientific performance of clinician scientists in recent years, there is still no consensus on which bibliometrics should be used for measuring research performance of individual researchers in medicine, and which researchers may be assessed successfully using bibliometrics.

Hirsch² first described the *h*-index for elite physicists—winners of the Nobel prize in physics and newly elected members of the National Academy of Sciences. However, the *h*-index—and its variations—may not always be applied with the same success to other scientific populations with

more diverse scientific impact and greater heterogeneity, such as in medicine. Compared with researchers in the physical sciences, researchers in medicine may have smaller numbers of researchers in each field, differing areas of research interest, differing citation practices, and varying levels of academic commitment. Bibliometrics can be measured with increasing ease due to electronic scientific citation databases, and benchmarking of research performance of individuals is valuable due to the increasing use of bibliometrics to assess those applying for funding or academic promotion. However, it may be more appropriate to apply bibliometrics to high achieving researchers in medicine rather than 'young' researchers with few publications, which is becoming more common. I would suggest that because of the 'citation window' of scientific publications and the known limitations of citation indices,³ a standardized timeframe should be introduced before bibliometrics are used to assess research performance of researchers in medicine, or at a minimum, for assessing researchers of a young academic age.

Hirsch advocated that 'a single number can never give more than a rough approximation to an individual's multifaceted profile' and similarly bibliometrics should not be used exclusively to evaluate performance of researchers in medicine.

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Reply from the authors

Editor—We thank Dr O'Leary for his interest in our paper.¹ We would agree that neither a single number (such as the *h*-index) nor even a panel of bibliometrics as we presented in our paper can provide a complete description of research quality or potential. However, they do seem to co-associate with other markers of academic standing such as professorships² and membership of journal editorial boards.³ Other markers of quality, such as grant income, are also problematic, partly due to the self-propagating nature of grant awards. Whatever the shortcomings, bibliometrics are used and it is important that the anaesthesia research community has some understanding of its current metrics. As Dr O'Leary correctly implies, the *h*-index and most other indices are time-

dependent and therefore favour longer established researchers. We believe that research in this field should be explicit about the time frame studied. We therefore selected a recent publication window (2004–8) in an attempt to define contemporary rather than historical research output. Of course, this is still disadvantageous to very new researchers, but it does allow future studies in this field to compare like with like. Although there have been other attempts to correct for academic 'age'⁴ or output,⁵ none of them works particularly well at the very early stages of an academic career.

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I.K.M. and J.G.H. serve on the editorial board of the *British Journal of Anaesthesia*.

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Increase in cerebral metabolites during induction of propofol anaesthesia

Editor—We performed microdialysis of cerebral interstitial metabolites during induction of propofol anaesthesia and tracheal intubation in a case series of patients undergoing asleep–awake–asleep brain tumour surgery. While it is generally assumed that propofol is associated with suppression of cerebral metabolism,^{1,2} we found an unexpected transient increase in cerebral metabolites in parallel with an increase in heart rate after tracheal intubation.

Three patients underwent awake brain surgery for brain tumour resection. Anaesthesia included propofol (4–8 mg kg⁻¹ h⁻¹) supplemented by remifentanyl (0.1–1 µg kg⁻¹ h⁻¹) with mivacurium as a neuromuscular blocking agent. After craniotomy and opening of the dura, a microdialysis catheter (CMA, Stockholm, Sweden) was placed in white matter of normal appearance within the predefined tumour resection area. Microdialysis samples (0.5 µl min⁻¹ flow rate, 10–60 min intervals) were analysed for glucose, lactate, pyruvate, glycerol, and glutamate (CMA 600