We welcome letters to the Editor concerning articles which have recently been published. Such letters will be subject to the usual stages of selection and editing; where appropriate the authors of the original article will be offered the opportunity to reply.

Letters should normally be under 300 words in length, double-spaced throughout, signed by all authors and fully referenced. The edited version will be returned for approval before publication.

©2010 British Editorial Society of Bone and Joint Surgery
\$2.00 *J Bone Joint Surg [Br]* 2010;92-B:747-8.

The impact of national guidelines for the prophylaxis of venous thromboembolism on the complications of arthroplasty of the lower limb

Sir,

We read with interest the paper by Jameson et al¹ in the January 2010 issue entitled 'The impact of national guidelines for the prophylaxis of venous thromboembolism on the complications of arthroplasty of the lower limb'. This large study confirms that venous thromboembolism was an uncommon event prior to National Institute of Clinical Excellence (NICE) guidance and remains so, despite increased use of low molecular weight heparin (LMWH). The study size has given new information on the rare complication of thrombocytopenia after LMWH.

Thrombocytopenia occurs in up to 0.2% of those receiving LMWH. It is fatal in 15% to 30% of cases. This gives an overall mortality of 0.04% to 0.06%. It should be noted that this is a very similar figure to the mortality rate from pulmonary embolism after modern joint replacement surgery in the absence of anticoagulation. It is therefore highly unlikely that the addition of LMWH would save any lives in this patient group.

It has already been shown that potent anticoagulants such as LMWH, fondaparinux, ximelagatran and rivaroxaban are associated with an increased all-cause mortality after total hip replacement and total knee replacement.² Less potent anticoagulants, such as aspirin, may better balance the risks of bleeding, thrombocytopenia, and fatal pulmonary embolism with a low overall mortality and few venous thromboembolism events.^{3,4}

NICE has been heralded as the flag carrier of evidence-based medicine. It must now acknowledge that larger population-based studies are showing no benefit from LMWH in terms of reducing mortality from venous thromboembolism or total mortality. In the absence of definite evidence of benefit and taking into account the definite risks of thrombocytopenia and bleeding it is unreasonable to advocate anticoagulants for all orthopaedic in-patients.

doi:10.1302/0301-620X.92B4.24578

M. A. MCNALLY, MD FRCSEd, FRCS(Orth),
Director of Orthopaedic Surgery
Nuffield Orthopaedic Centre,
Oxford, UK.

1. Jameson SS, Bottle A, Malviya A, Muller SD, Reed MR. The impact of national guidelines for the prophylaxis of venous thromboembolism on the complications of arthroplasty of the lower limb. *J Bone Joint Surg [Br]* 2010;90-B123-9.
2. Sharrock NE, Gonzalez Della Valle A, Go G, Lyman S, Salvati EA. Potent anti-coagulants are associated with a higher all-cause mortality rate after hip and knee arthroplasty. *Clin Orthop* 2008;466:714-21.
3. Cusick LA, Beverland DE. The incidence of fatal pulmonary embolism after primary hip and knee replacement in a consecutive series of 4253 patients. *J Bone Joint Surg [Br]* 2009;91-B:645-8.
4. Parry M, Wylde J, Blom AW. Ninety-day mortality after elective total hip replacement: 1549 patients using aspirin as a thromboprophylactic agent. *J Bone Joint Surg [Br]* 2008;90-B:306-7.

Sir,

I read with interest the paper by Jameson et al¹ in the January 2010 issue entitled, 'The impact of national guidelines for the prophylaxis of venous thromboembolism on the complications of arthroplasty of the lower limb'. In order to understand the political hot potato that is thromboprophylaxis, one needs to go back to the Health Select Committee's report on the topic from 2004-2005.² This report concluded that 'Each year over 25 000 people in England die from VTE contracted in hospital'. Since then this has been translated into there being 25 000 'preventable' deaths a year as a result of venous thromboembolism. Some of the evidence submitted to the Select Committee and much of the more recent scientific evidence makes a mockery of this 25 000 figure.

Linda De Cossart's evidence² talked of an incidence of pulmonary embolism (PE) of approximately 23 per 100 000 per year with an associated mortality of 12%. If one assumes that our population characteristics are similar to those of the United States then this would make the number of fatal PEs in the United Kingdom only approximately 1600 per year. Likewise, the Office of National Statistics (ONS) for the United Kingdom reported that there were just over 3,000 deaths per year with PE as the underlying cause.³ A recent large study in the BMJ⁴ also demonstrated a fatal PE rate much more in line with the figures of De Cossart and the ONS than the Department of Health's number of 25 000. David Warwick and others² also repeatedly quoted a post-operative mortality rate of 0.4% secondary to PE after elective joint replacement surgery, however, recent research shows that this figure is rather out of date.^{5,6} Other evidence presented to the Health Select Committee, including that relating to the mortality of VTE, is arguably deeply flawed and out of date.⁷

The fact that the implementation of the current NICE guidelines on deep vein thrombosis prophylaxis does not appear to have affected the rates of thromboembolic events at all¹ should be of great concern to the Department of Health, especially when chemical thromboprophylaxis may well be causing a significant amount

of patient harm at the same time.¹ Overall, I would argue that the threat of venous thromboembolism has been massively exaggerated for the political and personal gain of a minority. In reality, under 3,000 (not 25,000) people die per year in the UK as a result of PE and the majority of these are probably not preventable. It is strange that the government policy on VTE has been based upon the interpretation of scientific evidence by politicians in this way. doi:10.1302/0301-620X.92B5.24928

B. DEAN, MRCS, BMBChh, MA
Royal Berkshire Hospital,
Reading NHS, Reading, UK

1. Jameson SS, Bottle A, Malviya A, Muller SD, Reed MR. The impact of national guidelines for the prophylaxis of venous thromboembolism on the complications of arthroplasty of the lower limb. *J Bone Joint Surg [Br]* 2010;90-B:123-9.

2. House of Commons Health Committee. The Prevention of Venous Thromboembolism in Hospitalised Patients. Second Report of Session 2004-05. <http://www.publications.parliament.uk/pa/cm200405/cmselect/cmhealth/99/99.pdf> (date last assessed 10 March 2010).

3. Office for National Statistics Report 2008. Mortality Statistics: Deaths registered in 2008. <http://www.statistics.gov.uk/statbase/Product.asp?vlnk=15096> (date last accessed 5 March 2010).

4. Sweetland S, Green J, Liu B, et al. Duration and magnitude of the postoperative risk of venous thromboembolism in middle aged women: prospective cohort study *BMJ* 2009;339:b4583.

5. Cusick LA, Beverland DE. The incidence of fatal pulmonary embolism after primary hip and knee replacement in a consecutive series of 4253 patients. *J Bone Joint Surg [Br]* 2009;91-B:645-8.

6. Parry M, Wylde, Blom AW. Ninety-day mortality after elective total hip replacement: 1549 patients using aspirin as a thromboprophylactic agent. *J Bone Joint Surg [Br]* 2008;90-B:306-7.

7. Eggermayer PM. The mortality of untreated pulmonary embolism. *Chest* 1996;110:303.