

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.

©2005 British Editorial Society of Bone and Joint Surgery  
doi:10.1302/0301-620X.87B4.16232  
\$2.00 *J Bone Joint Surg [Br]* 2005;87-B:588-90.

## Infection after total hip arthroplasty

Sir,

We read with interest the paper in the September 2003 issue by Blom et al<sup>1</sup> entitled 'Infection after total hip arthroplasty'. The definition of infection is clearly essential when comparing infection rates. All authors agreed that superficial infection is far more common than deep infection, and there are many patients who have an inflamed wound who are given antibiotics either whilst in hospital or by the GP with no bacterial proof of infection. It would appear from their results, there were only seven of 1567 patients who had proven deep infection, an infection rate of 0.45%.

The Royal Orthopaedic Hospital in Birmingham has taken a very different approach to investigating the incidence of infection following hip replacement. For the past 16 years, the Control of Infection Committee has monitored all positive cultures obtained from any patient who has previously undergone a total hip or knee replacement at this hospital. All cases where an organism has been cultured are investigated, and the infection labelled as either superficial or deep. If a superficial infection subsequently turns into a deep infection then the patient is reclassified, although the risk of this has been found to be low.<sup>2</sup> The hospital has information on 6842 primary total hip replacements in whom there is a 0.4% deep infection rate and a 1.7% superficial infection rate. For the 5863 total knee replacements the deep infection rate is 0.5% and superficial infection rate is 1.8%.

Both of these results appear to be better than those reported in the Trent Arthroplasty Register, but are more in keeping with those reported from other large series.<sup>3,4</sup>

We believe that neither our nor Blom's method of collecting data is perfect. Blom et al<sup>1</sup> have relied upon patients' recollections, which one would hope would be fairly accurate, while we have relied upon hospital records and, therefore, may have missed patients who have been treated elsewhere for post-operative infection.

With the mandatory requirements coming into force in the near future for reporting the site of surgical infection, it is essential that we all agree on what data should be collected and how they should be collected. We are currently carrying out a retrospective review

comparing the results from a two-year period, using the method of Blom et al<sup>1</sup> to see how many patients with deep infection have been missed by our method of data collection, but ultimately it is likely that no one mechanism can be foolproof.

R. J. GRIMER, FRCS(Ed) (Orth)  
A. ABUDU, FRCS(Orth)  
The Royal Orthopaedic Hospital,  
Birmingham, UK.

1. **Blom AW, Taylor AH, Pattison G, Whitehouse S, Bannister GC.** Infection after total hip arthroplasty. *J Bone Joint Surg [Br]* 2003;85-B:956-9.
2. **Abudu A, Sivardeen KA, Grimer RJ, Pynsent PB, Noy M.** The outcome of perioperative wound infection after total hip and knee arthroplasty. *Int Orthop* 2002;26:40-3.
3. **Fender D, Harper WM, Gregg PJ.** Outcome of Charnley total hip replacement across a single health region in England: the results at five years from a regional hip register. *J Bone Joint Surg [Br]* 1999;81-B:577-81.
4. **Garvin KL, Hanssen AD.** Infection after total hip arthroplasty. *J Bone Joint Surg [Am]* 1995;77-A:1576-86.

## Author's reply:

Sir,

I thank Messrs Grimer and Abudu for the interest they have shown in our article. They are correct in saying that defining infection in total hip arthroplasty is difficult. We used a loose criterion of any wound that required extra antibiotics, in the hope that this would be very sensitive and overstate rather than understate our rate of infection. We accept that our definition was not specific and may have included false positives. As we relied on patients' recollection, we may conceivably also have had false negatives.

At present we do not have a measure that is both specific and sensitive in identifying infected arthroplasties. If it becomes mandatory for us to report infections, at surgical sites then we should report all wounds requiring extra antibiotics (very sensitive, but not specific), all positive cultures (fairly sensitive and fairly specific) and all revisions for infection (very specific, but not sensitive).

A. W. BLOM, PhD, FRCS (Tr & Orth)  
University of Bristol,  
Bristol, UK.

## Computer-assisted knee arthroplasty versus a conventional jig-based technique

Sir,

We read with interest the article in the April 2004 issue by Chauhan et al<sup>1</sup> entitled 'Computer-assisted knee arthroplasty versus a conventional jig-based technique'. While we commend the authors on their study design, we would urge caution when recommending such an expensive system for routine total knee arthroplasty (TKA). The authors compared a computer-assisted knee arthroplasty with the standard protocol of intramedullary femoral and extramedullary tibial instrumentation.