



Correspondence

J-E. Gjertsen,
S. A. Lie,
T. Vinje,
L. B. Engesaeter,
G. Hallan,
K. Matre,
O. Furnes

From Norwegian
Arthroplasty
Register, Norway

■ J-E. Gjertsen, MD, PhD,
Orthopaedic Surgeon
■ T. Vinje, MD, Orthopaedic
Surgeon
■ L. B. Engesaeter, MD, PhD,
Professor, Orthopaedic
Surgeon
■ G. Hallan, MD, PhD,
Orthopaedic Surgeon
■ K. Matre, MD, Orthopaedic
Surgeon
■ O. Furnes, MD, PhD,
Orthopaedic Surgeon,
Professor
Haukeland University Hospital,
Department of Orthopaedic
Surgery, N-5021 Bergen,
Norway.

■ S. A. Lie, MSc, PhD,
Professor, Statistician
University of Bergen,
Department of Surgical
Sciences, N-5021 Bergen,
Norway.

Correspondence should be
sent to Mr R. N. Villar; email:
editorbjj@boneandjoint.org.uk

©2013 The British Editorial
Society of Bone & Joint
Surgery
doi:10.1302/0301-620X.95B6.
32236 \$2.00

Bone Joint J
2013;95-B:862.

Received 22 April 2013;
Accepted after revision 23 April
2013

We welcome letters to the Editor concerning articles that 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.

Authors' reply Cobb correspondence re: J-E. Gjertsen, S. A. Lie, T. Vinje, et al. More re-operations after uncemented than cemented hemiarthroplasty used in the treatment of displaced fractures of the femoral neck: An observational study of 11 116 hemiarthroplasties from a national register.

J Bone Joint Surg [Br] 2012;94-B:1113–1119.

Dear Sir,

We thank Professor Cobb for his comments on our article which looked at re-operations and reported peri-operative complications after cemented and uncemented hemiarthroplasty for hip fracture. Professor Cobb raises a very important question. The use of cemented hemiarthroplasty has, as he states, both positive and negative consequences for the patient. We certainly find the increased risk of intra-operative death worrying and share his concerns. There is no doubt that intra-operative death is the worst possible outcome, not only for the patient but also for the surgeon. One difficult but important question to consider is how many extra re-operations after uncemented hemiarthroplasty are acceptable to avoid one peri-operative death from a cemented prosthesis. Based on the results of our study we, and probably many other orthopaedic surgeons, find this question difficult to answer. We believe that the peri-operative mortality must be investigated in greater depth before further conclusions can be drawn.

When considering this important issue it should be kept in mind that the number of extra operations needed because of the design of an uncemented prosthesis was much greater than the number of patients with a cemented hemiarthroplasty who died during surgery. Every re-operation is traumatic for the patient. We did not, in our study, investigate the peri-operative mortality for the additional re-operations in the uncemented group. This increase in mortality must also be taken into account when deciding whether to use a cemented or uncemented implant.

Patients with a fracture of the hip have a one-year mortality of approximately 25%: most

have several comorbidities that increase the risk of death. Most of the patients in our study who died peri-operatively had an ASA score of four, i.e. they had uncompensated comorbidities. For these frail patients in particular, it is especially important to reduce complications related to the use of cement. A distal venting hole in the femur has been shown to reduce the intramedullary pressure during cementation.¹ Also, reducing the size of the prosthesis in relation to that of the reamer may lessen the intramedullary pressure during cementation, thereby minimising the number of complications. Close teamwork with the anaesthetists during the cementation is important.

We believe that the mortality after replacement surgery is much more complicated than can be analysed by surgeon-reported frequency analyses of intra-operative complications. Proper survival analyses should be carried out, adjusting for age, gender, comorbidities, and other important possible confounders. Furthermore, both the short- and long-term mortality should be thoroughly investigated. Even before our study was performed, a study had been started from our registry which compared the mortality after cemented and uncemented hemiarthroplasty. This was the main reason why no further investigation of mortality was undertaken in our study. It has now been published² and we hope that it will further contribute to the body of knowledge.

J-E. Gjertsen, S.A. Lie, T. Vinje, L. B. Engesaeter, G. Hallan, K. Matre, O. Furnes. *The Norwegian Arthroplasty Register, Bergen, Norway.*

References

1. Engesaeter LB, Strand T, Raugstad TS, Husebo S, Langeland N. Effects of a distal venting hole in the femur during total hip replacement. *Arch Orthop Trauma Surg* 1984;103:328–331.
2. Talsnes O, Vinje T, Gjertsen JE, et al. Perioperative mortality in hip fracture patients treated with cemented and uncemented hemiprosthesis: a register study of 11,210 patients. *Int Orthop* 2013;Epub.