Helen Handoll · Martyn Parker

Letter to the Editor

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Dear Editor,

Though the review by Audigé et al. [1] examining the role of cephalo-condylic nailing of the proximal femur in terms of the basic stability of inter-trochanteric fractures addresses a good question, we have reservations over the methods and conclusions of their paper.

Crucially, Audigé et al. failed to locate/include several trials that are included in both the Cochrane Central Register of Controlled Trials in The Cochrane Library and in our Cochrane review on this topic [4]. The failure to locate and/or include relevant trials in a meta-analysis is well recognised as a key source of bias [2]. Another important source of bias results from multiple publications of the same study. By failing to recognise that “Fornander, 1994” and “Ahrengart, 2002” were reports of the same multi-centre study, Audigé et al. included duplicate data in their analysis. Conversely, by failing to locate other publications of another multi-centre study, Audigé et al. only included the sub-group of patients reported in “Madsen et al, 1998”.

Sub-group analysis should always be done and interpreted with caution, since there is a great risk of drawing misleading conclusions [3]. Even more caution is advised when comparisons are made between rather than within studies, as in Audigé et al. In conducting our Cochrane review on this topic [4], we too have considered sub-group analysis by fracture type, including stable versus unstable trochanteric fractures. However, we decided this was inappropriate because we found, like Audigé et al., that separate outcome data for unstable fractures are not available for the majority of trials. We consider the sub-

group analysis presented by Audigé et al. was inadvisable, and we strongly recommend that no conclusions or inferences should be drawn from it. In addition, readers should also be aware of the many serious errors with the data in Fig. 1 of their paper: these include incorrect trial labels and missing data as well as errors resulting from the problems mentioned in the above paragraph.

Given that the studies to date do not allow sub-group analysis related to fracture type, conclusions on the comparisons between nails and dynamic screw plates have to be based on all types of fractures. Our Cochrane review, like Audigé et al., found no difference in cut out between intramedullary nails versus screw plates (20 trials; 40/1478 versus 35/1509; relative risk (RR) (fixed)=1.19, 95% confidence interval (CI)=0.77–1.84). However, we found a significantly higher incidence of operative fracture of the femur (19 trials; 27/1469 versus 4/1486; RR=3.44, 95%CI=1.68–7.05), later fracture of the femur (19 trials; 36/1295 versus 2/1299; RR=5.38; 95%CI=2.53–11.45) and the overall technical complications of fixation (21 trials; 114/1470 versus 54/1493; RR=2.15, 95%CI=1.57–2.93) in the intramedullary nail group. This increased complication rate is reflected in a significantly higher re-operation rate for intramedullary devices. In real terms, these nails result in one extra re-operation in every 50 patients (95%CI 1 in 25 to 1 in 100).

Thus, our results contradict Audigé et al.’s conclusion that there is “no significant difference in the frequency of implant-related complications between the two types of devices.” Additionally, it is also incorrect to dismiss iatrogenic femoral fracture as “rare” compared with cut out.

H. Handoll
University of Teesside, UK

M. Parker
Peterborough District Hospital, UK

H. Handoll (✉)
Department of Orthopaedic Surgery,
Royal Infirmary of Edinburgh,
Old Dalkeith Road, Little France, Edinburgh, EH16 4SU, UK
e-mail: h.handoll@ed.ac.uk
Fax: +44-131-2426467

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