Femoral neck fractures following Birmingham hip resurfacing

Sir,

I read with interest the article in the April 2005 issue by Shimmin and Back entitled 'Femoral neck fractures following Birmingham hip resurfacing'.¹ This pan-Australian study shows a statistically significant female preponderance, but as with their earlier prospective study² it provides no age-specific data.

Hip resurfacing with a metal-on-metal bearing can provide a solution in the medium term for the younger, more active patient with osteoarthritis³ but these boundaries are far from clear. The terms 'younger' and 'more active' are both relative and subjective. Indeed, the perception of the patient may be very different from that of the surgeon. Should there be a chronological limit beyond which patients are considered unsuitable for a resurfacing procedure? The National Institute for Clinical Excellence⁴ has suggested 65 years, while the practice of the Melbourne Orthopaedic Group² has been to consider men younger than 75 years of age and women younger than 60 years. They consider patients beyond these limits on an individual basis, but advise any patient with quantitative evidence of low bone density to undergo a conventional replacement. The evidence in fact suggests that osteopenia may not be so much of a concern as bone mineral density is preserved in Gruen⁵ zone 1 and increases in zone 7 after Birmingham hip resurfacing.⁶

Age-related loss of bone stock may influence outcome following Birmingham hip resurfacing but the paper of Shimmin and Back¹ misses the opportunity to inform of the relationship between age at operation and the likelihood of subsequent femoral neck fracture.

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Author's reply:

Sir,

We thank Mr Irvine for his interest in our article. We agree that age-specific data in relation to fracture would be of interest. However, there are a number of problems in producing these statistics. First, there is already significant bias in the age selection of patients for this procedure. We did not study a wide distribution of ages and therefore it would be wrong to draw conclusions regarding suitability for hip resurfacing for the range of ages from these data.

Secondly, we were unable to collect complete data on ages for all 3429 procedures performed in Australia. Without these data we are unable to state whether a particular age range is more prone to fracture. We performed a smaller study focusing on one state in Australia where age statistics were complete. However, the number of fractures was too few for us to reach any useful statistical conclusions. Considering the small number of fractures encountered, we must be careful not to extrapolate too many conclusions from the data.

Our opinion is that there should be no specific age limit for the procedure. In our prospective study, we did not impose a lower age limit; over a certain age we considered all cases on individual merit, basing our criteria on the expectations of the patient, their occupation, bone density and levels of physical activity. There is no doubt that there comes a time when resurfacing does not offer any advantages over a standard total hip replacement (i.e. less than a 15-year life expectancy), and may have other disadvantages. Based on our research we do not feel that we are in a position to draw firm conclusions regarding hip resurfacing based purely on age-specific data.

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A postal survey of current thromboprophylactic practices of consultant orthopaedic surgeons in the treatment of fracture of the hip

Sir,

I read with interest the article by Watts and Brenkel¹ in the March 2005 issue entitled 'A postal survey of current thromboprophylactic practices of consultant orthopaedic surgeons in the treatment of fracture of the hip'.

Thromboembolism remains a major cause of morbidity and mortality in hospital patients.² The ideal chemical thromboprophylactic agent has yet to be invented and all the agents currently used have their own peculiar limitations. A side effect of increased bleeding will cause problems not only for the surgeon, but also for

anaesthetists who are increasingly using spinal anaesthesia in older patients with hip fracture.

Fondaparinux is recommended by the American College of Chest Physicians³ as a suitable thromboprophylactic agent, but Watts and Brenkel's¹ survey shows that it is rarely used in the United Kingdom. They speculate that this may be because fondaparinux is a relatively new agent which has only just received its licence for chemical thromboprophylaxis.

Another possible reason for the poor uptake of fondaparinux might be related to its long half-life. In the United Kingdom, there can be long pre-operative delays for hip fracture patients. Fondaparinux, given in the pre-operative period, might contraindicate spinal anaesthesia due to the risk of spinal haematoma. This could be overcome by using a different agent pre-operatively, but this would complicate any thromboprophylactic policy.

The worst-case scenario would be the use of a chemical thromboprophylactic agent which would further delay surgery in an already vulnerable group of patients.

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Author's reply:

Sir,

We like to thank Dr Heyburn for his interest in our article and agree with him that the problem with fondaparinux is that it has a long half-life. It should be administered six hours post-operatively. Although it can be given pre-operatively, this is not practical because of its long half-life. It is easier to use fondaparinux in an elective situation.

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