


Authors' reply:

Sir,

We appreciate the comments of Gie and Ling and note with satisfaction that they agree with our results and interpretations. They confirm that the matt stem was introduced on the initiative of the manufacturer and not as a result of careful consideration of the quality of the arthroplasty. They emphasise the serious consequences of using an oversized stem and a defective cement technique; we suggested these as possible contributors to the unsatisfactory results.

Gie and Ling conclude that the Exeter concept does not apply to the matt-surfaced stem, that is to the prosthesis which was available when our patients were operated on, and they present evidence that the matt surface was responsible for its unexpected and unwanted behaviour. This is plausible, but other possible factors need consideration. For example, the metal centraliser used during that period also had the potential of preventing the stem from subsiding in the cement mantle and thus from behaving in accordance with the Exeter concept.

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MRI OF AVASCULAR NECROSIS

Sir,

I read with interest the article in your May 1993 issue by Fordyce and Solomon entitled 'Early detection of avascular necrosis of the femoral head by MRI' (1993; 75-B:365-7) which reported that some patients showed spontaneous resolution. This has been described in a larger series of patients by Kopecky et al (1991); they detected evidence of AVN in 25 hips of 14 patients and seven hips had shown spontaneous resolution by 16 months.

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SURVIVAL ANALYSIS

Sir,

We read with interest the article in the September 1993 issue by Murray et al entitled 'Survival analysis of joint replacements' (1993; 75-B:697-704). The authors clearly identify the pitfalls of this type of analysis and make recommendations as to how they may be avoided. What disheartened us was their oversight in not including our study on 'Survivorship of cemented knee replacements' which was published in the Journal of Bone and Joint Surgery in 1989. We reported 1430 primary total knee replacements over a 15-year period and came to conclusions which were similar to those of Murray et al.
We applaud their recommendation for the combined use of lifetables and survival curves, but we disagree with the recommendation that the development of mild pain be used as an indicator of failure. This is too subjective. Many definitions of failure have been suggested but we believe that failure should be either revision or recommended revision. The time of recommending revision should be the end point, especially when there was significant delay in performing the revision. We also consider that arthroplasties lost to follow-up should be considered as failures to provide an additional ‘worse case scenario’ in future survivorship analyses.

Finally, each implant of bilateral arthroplasties should be entered independently into the survivorship analysis. Life tables and survival curves should include the number of arthroplasties at risk in any year and not the number of patients.

We commend the authors on their review; they have made this form of review more understandable.

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Authors’ reply:

Sir,

We reviewed 35 papers, selected to emphasise the problems of survival analysis and to make recommendations as to how they could be avoided. A more complete review of survival analyses would not have appreciably improved our paper and inclusion of the important analysis of knee replacements by Scuderi et al (1989) would have made no difference to our conclusions.

The choice of definition of failure is difficult. As we explained, we believe that more than one definition of failure should be used. Revision will identify bad prostheses, but an end point that is more likely to occur, like moderate or mild pain, will help to separate the very good prostheses from the good ones (unpublished data). Dr Scuderi recommends the use of revision or recommended revision only. This is not ideal, some surgeons revise a loose prosthesis for evidence of progressive bone erosion and minimal pain, others will revise only if there is severe pain.

We believe that it is important to use a subjective end point. To the patient subjective symptoms and particularly pain, are the most important factors. The original decision for joint replacement is usually based on pain, and we feel therefore that various grades of pain should also be the criteria for failure. Ideally, the assessment of pain should be by a standard patient-based questionnaire, and the surgeon should not be directly involved with the collection of data.

There is continued debate as to whether bilateral arthroplasties should be treated as one or two cases. Traditionally, they have been considered to be independent events, but a recent editorial in the Journal argued that they are not independent and should be considered as one case (Morris 1993). Until a consensus is reached it seems reasonable to consider such cases in either way, but it is essential to make clear which approach is being used.

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