

# Editorial

## Total hip arthroplasty — Articles published in the Journal 1999–2001

**Peter KY Chiu**

Member of the Editorial Board

I read with great interest the articles related to total hip arthroplasty published in the *Journal of Orthopaedic Surgery* in the past three years. I understand that most surgeons read many other journals, and that numerous papers have been published on this topic. The papers published by institutions outside the Asia Pacific region are undoubtedly very helpful, but I feel that publications from colleagues in the Asia region, such as those published in the *Journal of Orthopaedic Surgery* are also invaluable. It tells us the major issues that surgeons in this region face.

Polyethylene wear and osteolysis are the biggest concern in total hip arthroplasty. There is no doubt these are also important issues in this region. In the editorial in the December 1999 issue, Professor Geoffrey Horne wrote on evidence-based hip replacement surgery. He named three particular areas that we need to look at: the device, the interface, and the bearing. Horne discussed important issues with regard to polyethylene: fabrication and processing, cross-linking, and the importance of carefully introducing new materials.

The importance of reporting clinical studies of sufficient follow-up cannot be over-emphasized. The work by Hsieh et al. (2000) from Chang Gung Memorial Hospital, Taoyuan, Taiwan was a good example. They reported their 8-year experience with 166 porous-coated total hip replacements. The average age of the patients was 50 years old, and the diagnosis was avascular necrosis in 30% of the patients. The clinical results were very satisfactory, but the authors found osteolytic lesions in about 20% of the femoral stems and these occurred early at an average of less than 4 years after the surgery. They postulated that being younger and

thus more active could be the reason for the relatively high incidence of osteolysis. This point is important – we must not accept everything reported on Western patients, since ethnic differences in many aspects may exist.

Apart from clinical studies, researchers all over the world are actively conducting experiments on the pathogenesis, prevention and intervention of the osteolytic process. It is very encouraging to see basic scientific work from within the Asia Pacific region. Wang et al. (2001) from Wellington, New Zealand did something novel and different. They did not investigate the effect of the polyethylene particles, but the effects of leachable eluates from polyethylene bar stock on fibroblast proliferation. The latter was measured using <sup>3</sup>H-thymidine incorporation by human fibroblast cell line. They showed that the chemical eluates inhibited fibroblastic activity at high concentrations. Interested readers may consider reading the review article by Zhu et al. (2001) that provides an overview to this problem.

There are several papers on difficult conditions in total hip arthroplasty. Two of these articles are on the complications and their management. Ashton et al. (2000) from Concord, Australia studied the prevention of heterotopic ossification in high-risk patients. They concluded that single fraction radiotherapy of 600cGy, given alone, and administered within 7 days, were as effective as the usually recommended measures of higher radiation doses, given together with a post-operative course of indomethacin, and administered within 3 days of total hip arthroplasty. Wang and Wang (2000) from Chang Gung Memorial Hospital, Kaoshiung, Taiwan reported on the use of cortical strut

allograft as an adjunct support after internal fixation or revision arthroplasty for periprosthetic femoral fractures. All fractures united after an average of 16 weeks, and there was excellent incorporation of the graft to the host bone in almost every case.

Furthermore there are two articles on special hip diseases. Vaidya and Aroojis (2000) from Mumbai, India reported on the management of chronically neglected polyarthritic patients. Carefully planned, multiple total joint replacements have been performed, and the authors discussed the technical difficulties and problems encountered. In his review article, Professor Peter Choong (2000) from Melbourne, Australia gave an excellent account of reconstructive surgery after resecting tumours around the hip. The clear

presentation helps the readers to understand the key issues in managing this very challenging condition.

In this issue and perhaps the one that follows, we will see several more articles on total hip arthroplasty — the incidence of deep vein thrombosis in Asian patients, total hip arthroplasty for arthrodesed hips, and others. It is clear that surgeons in the Asia-Pacific region are very active and can produce scientific papers of the highest quality. It is certain that many Asia-Pacific surgeons will have much experience to share — lessons or messages that are unique to the patients in our region, and that direct inference from Western literature may not be appropriate.

With the Journal now accepted into MEDLINE, I would like to encourage you to send your original articles to the *Journal of Orthopaedic Surgery*.