#1029 - Free Papers

Title: Long Term Results Following Large Diameter Metal –on-Metal Total Hip Arthroplasty – Increasing Failure Rates After 6 Years

Orthopaedics / Pelvis, Hip & Femur / Joint Replacement - Primary

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Introduction
High failure rates have been noted following large diameter metal on metal total hip replacement (MoM THR). The long-term results of Birmingham Hip Resurfacing (BHR) cup and a large modular metal head (MMT) on an uncemented Freeman femoral stem have never been reported.
Objectives
The aim of our study was to report long term survivorship of one of the largest series of MoM THR. The study also attempts to identify the potential risk factors that could be associated with the failure of these implants with particular reference to adverse local tissue reaction (ALTR).
Methods
A total of 205 large diameter MoM THRs were performed in 190 patients by a single surgeon at our institute during October 2002 – November 2004. The data was collected prospectively and included demographics and implant details. The blood metal ion levels, clinical outcome and radiological outcomes were analysed in detail with particular reference to ALTR.
Results
At a mean follow up of 10.5 years, a total of 42 hips (out of 205) were revised for reasons related to ALTR. The survival of the implant with ALTR as the cause of revision was 93% at 6 years and 71 % at 10 years. The analysis showed no statistically significant association to age, gender, side, BMI or component size or position ($P<0.05$). Blood metal ions showed a poor discriminant ability to separate failed from well-functioning MoM hip replacements.
Conclusions
The failure of large diameter MoM THR increases after 6 years. There were no identifiable risk factors that predicted failure in this group of patients. Continued surveillance of these implants is required as the failure rates increase with time. Further research on biological inflammatory markers is required to identify the patients at risk of developing ALTR, rather than relying on the surrogate markers of metal wear.