

Clinical And Radiological Outcome Of A Cementless, Titanium-Coated, Polyethylene Monoblock Cup: Minimum 5-Year Results

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

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Introduction

The RM (Mathys) pressfit cup is a cementless, titanium-coated elastic monoblock polyethylene cup which has been implanted in a dedicated elective orthopaedic unit for over 10 years as a less expensive option for older, lower function patients.

Objectives

This study reviewed the clinical and radiological results of those patients with greater than five years follow up with particular emphasis on assessing the long term stability of the cup.

Methods

The New Zealand Joint Registry was used to access all patients, including those revised, with a RM cup inserted between 2002 and 2010 in one centre. The clinical notes were analysed for basic demographics, revision rates, pre-operative and post-operative (6 month and 1 and 5 years) clinical hip scores. (Oxford Hip Score (OHS) and western Ontario and McMaster universities Osteoarthritis Index (WOMAC))

Radiographs for those with an implant with > 5 years follow up were reviewed by an independent observer, who had not been involved with the index procedure, comparing the immediate postoperative and 5 year radiographs for acetabular inclination, version, migration and periacetabular osteolysis.

Results

There were 1085 RM cups inserted between 2002 and 2010 of which 458 were followed for at least five years. The average age was 71 years. Hip revision with exchange of at least one component was required in 13(1.2%), none of which were for acetabular loosening (Dislocation n=6, periprosthetic femur fracture n=6, femoral subsidence n=1). Preoperative mean OHS and WOMAC scores were 16.75 and 43.5, which were significantly ($p<0.001$) improved at follow up to 40.77 and 79 respectively. Radiological analysis showed no significant change in acetabular inclination (0.11 degree, $p=0.97$) or version (0.58 degree, $p=0.85$) and no evidence of periacetabular lysis or cup migration.

Conclusions

The RM pressfit cup has been widely used in our centre as a cost effective implant in the older patient. There have been no recorded revisions for acetabular problems and radiographic analysis has shown the implant to be stable after 5 years. These results offer

reassurance to surgeons using the RM cup especially in an older cohort where bone density is often reduced.