#1631 - Posters

Outcomes Of The Cementless Robert Mathys Pressfit Cup In Revision Total Hip Arthroplasty

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

Joseph Baines, Roberto Jose Alho

Golden Jubilee National Hospital, Glasgow, United Kingdom

Keywords: Outcomes, Cementless Cup, Revision Total Hip Arthroplasty

Introduction
The RM Pressfit cup is a monblock, all polyethylene cementless cup commonly used in primary total hip arthroplasty; however there are no known contraindications for its use in revision total hip arthroplasty (THA) [2, 3]. Ilhe et al has shown long-term survival rates of 91% at 20 years [1] in primary THA with the similar design, the RM Classic cup [1]. Currently there are no reports in the literature of its use in revision hip arthroplasty. The RM Pressfit cup has been used since January 2010 for revision THA in our institution.

Objectives
To assess the indications and clinical outcomes in patients who underwent revision THA with the RM Pressfit cup under the care of a single surgeon.

Methods
This was a single surgeon retrospective cohort study. All revision THA patients who had an RM Pressfit cup implanted from January 2010 to January 2014 with a minimum follow-up period of three months were included. Data were collected from hospital clinical notes and electronic records. Pre-operative acetabular defects were group using the Paprosky classification into “<2” and “>=2”. Indications were grouped into aseptic and septic cases. Radiographs taken on day two, at three months and one year post operatively were reviewed. Outcomes were measured using the Oxford Hip Score (OHS, 0-48). Data analysis was conducted using Microsoft Excel.

Results
48 patients (53 hips) were included in this study, 23 were male and 25 female, with a mean age of 70 years (44 – 91 years), and mean follow-up period of 21 months (3 - 49 months). Mean pre-operative Oxford Hip Score was 24 (4 - 48). Infection and aseptic loosening were the commonest indications for surgery. Fifteen hips were revised for infection (septic group) and 38 hips for aseptic loosening (aseptic group). At the first post-operative follow up (three months) OHS was 37 (14-47), and at one year post-operatively OHS was 41 (27 - 48). The mean improvement of 17 in OHS over the first year is in keeping with the National Joint Registry (NJR) expected mean one year improvement in OHS of 18, for primary THA [4].

The majority of cases, 45 (85%), had no post-operative complications. Failure of fixation occurred once (3%) in the aseptic group requiring further revision. Five (33%) of the 15 hips in the septic group required further surgery due to persistent infection. The overall complication rate was 3% in the aseptic group and 40% in the septic group. There were no infections in the aseptic group, and no dislocations in any of the 53 hips.

The aseptic group demonstrated better outcomes, with an improvement in OHS of 18.3 over one year compared to 14.3 in septic group. This was not statistically significant due to the small number of patients in each cohort (p=0.152). The group with acetabular defects Paprosky type >=2 had a lower pre-op OHS (21.7) when compared with defects Paprosky type <2. There was no difference in outcome between both Paprosky defect type groups at the first year of follow-up (p=0.350).

Conclusions

The RM Pressfit was not conceived for acetabular revision [2]. However, in this study the RM Pressfit demonstrates medium term results comparable to those shown by more complex and expensive modular cementless cups. We report satisfactory short and medium term survival, improvements in OHS and osseointergration at three months and one year post-operatively. The aseptic group demonstrated better short to medium term follow-up than the septic group. Paprosky defect grade <2 and >=2 demonstrated similar improvements in outcome scores over the short to medium term follow-up. There were no dislocations in the whole cohort or infections in the aseptic group. There was only one (3%) failure of osseo-integration in the aseptic group.

Therefore, the use of the RM press-fit cup in revision hip surgery appears to be safe in the short and medium term. However, further follow-up is required to assess the long term survival of the RM Pressfit cup in revision THA.