Monobloc Dual Mobility versus Large Femoral Heads: A Comparative Study on 1,940 Consecutive Primary Arthroplasties

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INTRODUCTION: The benefit of dual mobility cup (DMC) for primary total hip arthroplasties (THA) is still controversial. This study aimed to compare 1) the complications rate, 2) the revisions rate, and 3) the survival rate after DMC compared to large femoral heads (32 or 36mm) (LFH) in primary total hip arthroplasties.

METHODS:

Between 2010 and 2019, 2,075 primary THA were included. The inclusion criteria were all elective primary THA performed using a cementless DMC or LFH. Indications for DMC were patients older than 70 years old or with a high risk of dislocation. Every other patient received a LFH (32 or 36). A total of 1,940 primary THA were analyzed: 1,149 DMC (59.2%), and 791 LFH (40.8%). The mean age was 73 ±9.2 years old in the DMC group and 57 ±12 in the LFH group. The complications and the revisions have been assessed retrospectively.

RESULTS: The mean follow up was 41.9 months ±14 [12-134]. There were significantly fewer dislocations in the DMC group (n=2; 0.17%) compared to LFH groups (n=8; 1%) (p=0.019). The overall complication rate in DMC (n=59; 5.1%) and SMC (n=53; 6.7%) were not statistically different (p=0.21). No specific complication was attributed to the DMC. In the DMC group, 18 THA (1.6%) were revised versus 15 THA in the SMC group (1.9%) (p= 0.71). There was no statistical difference for any cause of revisions in both groups. The cup aseptic revision-free survival rates at 5 years were 98% in the DMC group and 97.3% in the SMC group (p=0.78).

DISCUSSION AND CONCLUSION: The DMC had a lower risk of dislocation in a high-risk population than the SMC in a low-risk population at the mid-term follow up. There was no significant risk of specific complications or revisions for monobloc DMC in a large cohort. DMC can be safely used in a selected high-risk population.