Paper #32

Outcomes of Modular Dual Mobility Acetabular Components in Revision Total Hip Arthroplasty

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Notes

Introduction: Patients undergoing revision total hip arthroplasty (THA) are at increased risk for complications. Dual mobility implants provide an alternative to larger head sizes and constrained liners. Most modern dual mobility designs utilize a monoblock acetabular component that limits fixation options and cup control. Modular dual mobility (MDM) implants, with separate acetabular cup and metal liner, were created to account for this. We reviewed our institution's outcomes in high-risk patients undergoing revision to MDM implants for recurrent dislocation, infection, and metal-on-metal (MoM) reaction.

Methods: Seventy revisions were performed in 69 patients (22 males and 47 females) with average follow up of 2 years. Average age was 58.4 years and BMI was 29.6 kg/m2. Revision was performed in 24 patients for instability, 19 for metallosis, 11 for infection, and 16 for aseptic loosening, malposition, or fracture.

Results: Overall survival of the MDM implants was 92.9%. There were complications in 12 revisions (17.1%), including 2 dislocations (2.9%) and 8 infections (11.4%) with 9 subsequent surgeries (12.8%). There were no intra-prosthetic dislocations (IPD). One patient developed recurrent metallosis after revision from MoM implant requiring revision. Complication rate was 3.8x greater in patients who underwent revision for infection versus not, with 80% of these complications being recurrent infection. Sex, age, BMI, history of diabetes or tobacco did not correlate with rate of complications.

Conclusions: We found good overall survival and dislocation rate in high-risk patients revised to MDM implants at 2-year average follow-up, comparable to previously reported rates of other dual mobility implants. IPD is a concern in dual mobility implants, though we had none in our series. Metallosis is also a concern in MDM implants and may have led to a complication in one patient. Rates of complication, specifically infection, were higher in patients revised for infection. Care should be taken when considering re-implantation in these patients.