One Dislocation is Often Just the Beginning: 10-Year Outcomes after Initial THA Dislocations

Bailey Reid Macinnis, Sapheya Elhadi, Michael J Taunton, Rafael Jose Sierra, Cody Wyles, Matthew Philip Abdel, Charles Patrick Hannon

INTRODUCTION:

Dislocation remains one of the most common complications following primary total hip arthroplasty (THA) and a leading cause of early aseptic revision. While risk factors such as patient characteristics, surgical technique, and implant selection are well described, the natural history following a first-time dislocation is less understood. This study aimed to evaluate the incidence of recurrent dislocation and identify patient and surgical factors associated with recurrent dislocations and eventual revision.

METHODS:

Using our institutional total joint registry, we identified all patients who experienced a dislocation following primary THA from 1998-2022. The cohort included 648 patients, with 75% undergoing THA through a posterior approach, 21% anterolateral, and 4% direct anterior. Neutral liners were used in 74%, elevated/lipped in 25% and dual mobility in 2%. The femoral head was ≥36mm in 44% of cases. Mean age was 63 years, mean BMI was 30 kg/m², and 61% were female. Cox models were used to identify predictors of recurrent dislocation and revision. Mean follow-up was 6 years.

RESULTS:

Survivorship free of a second dislocation was 54% at 1 year, 38% at 5 years, and 31% at 10 years following the first dislocation. Non-osteoarthritis (OA) indication for THA (HR=1.5; $p<0.01$), female sex (HR=1.4; $p<0.01$), and neurologic disease (HR=1.3; $p=0.03$) were independent predictors of recurrence. A total of 291 patients underwent revision, 255 for dislocation. Survivorship free of any revision after a first-time dislocation was 67% at 1 year, 53% at 5 years, and 46% at 10 years. Survivorship free of revision for dislocation was 69% at 1 year, 57% at 5 years, and 51% at 10 years.

DISCUSSION AND CONCLUSION:

Nearly half of primary THA patients that dislocate experienced a second dislocation within a year and undergo a revision within 5 years. Non-OA diagnosis, female sex, and neurologic conditions were significant predictors of recurrence.