The Fate of the Patient with Early Dislocation Following Contemporary Primary Total Hip Arthroplasty

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Recurrent instability remains a leading indication for revision following primary THA. However, data regarding revision-free survivorship following an early dislocation event is dated and limited in scope. Whether this existing data applies in contemporary practice with broad use of large femoral heads is unknown. Therefore, we assessed revision free survivorship following early dislocation in a contemporary group of patients following primary THA.

METHODS: A large national database was used to identify patients undergoing primary THA from 2009 to 2022. Patients were divided into two cohorts: those experiencing one or more dislocation events within 90 days and those who did not. Two-year cumulative incidence of aseptic revision, septic revision, and recurrent dislocation after 90 days were determined. Landmark survivorship analysis was utilized given the potential for immortal time bias. Revision-free survivorship was then calculated and compared between cohorts.

RESULTS: We identified 1,942 patients with early dislocation and 360,493 controls. Two-year survivorship free of aseptic revision or recurrent dislocation was 98.7%, 76%, and 49% for those with 0, 1, or 2+ dislocation events within the first 90 postoperative days, respectively (P<0.001). After adjusting for confounders, early dislocation significantly increased hazards for all-cause revision (HR: 22.6, 95% confidence interval (CI):20.23-25.2, *P*<0.001), revision for dislocation (HR: 98.4, CI:83.5-116.0, *P*<0.001), and aseptic revision for other causes (HR: 9.8, CI:84-11.4, *P*<0.001).

DISCUSSION AND CONCLUSION: Patients with early dislocation are at increased risk of aseptic revision and recurrent dislocation within 2 years of primary THA. Over three-fourths of patients with only one dislocation in the first 90-days did not proceed to recurrent instability or revision at 2-years. To the contrary, the majority of those who had more than 1 dislocation did. This data provides useful clinical data that should assist in decision making and help guide patient counseling following early hip dislocation.

