

## Paper #36

## First Time Dislocation following Total Hip Arthroplasty: What is the Risk of Subsequent Dislocation and Revision?

**Notes** 

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**Introduction:** The natural history of a first time dislocation following primary THA and the risk for subsequent dislocation and revision is ill-defined. The purpose of the present study is to evaluate the natural history of the first time dislocation following initial reduction in the Emergency Department (ED).

**Methods:** A national patient record database was queried for patients who underwent closed reduction following primary THA in the ED using CPT codes. Subsequent reductions were then assessed for the ipsilateral limb. These patients were separated into three groups based on the number of closed reductions in the ED. The revision rate within 2 years of reduction was calculated for each group and compared.

**Results:** 1,072 patients were included in the study. 643 patients underwent 1 closed reduction, and 240 (37.3%) of these patients required revision THA within 2 years; 233 patients underwent 2 closed reductions, with 126 (54.1%) requiring revision THA within 2 years; finally, 196 patients underwent 3 or more closed reductions, with 64.8% of these patients requiring revision THA within 2 years of reduction. Compared to 1 episode of instability, patients who experienced 2 closed reductions were significantly more likely to require revision THA (O.R. 2.0, 95% CI 1.5-2.7, p < 0.0001). Patients who underwent 3 or more closed reductions required revision THA at a significantly higher rate than both the 2 closed reduction (O.R.1.6, 95% CI 1.1-2.3, p = 0.032) and 1 closed reduction (O.R. 2.7, 95% CI 1.9-3.7, p < 0.0001) groups.

**Conclusions:** More than a third of all patients who are closed reduced for a prosthetic dislocation in the ED will go on to require revision surgery within 2 years, while more than two thirds of patients who experience 3 or more instability episodes will undergo revision THA within 2 years.