

Association of Surgical Approach and Early Dislocation Rate Following Revision Total Hip Arthroplasty

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INTRODUCTION: Instability following revision total hip arthroplasty (rTHA) is among the most common indications for re-revision, however the association between approach and instability following rTHA has been incompletely characterized. The purpose of this study was to directly compare dislocation rates following rTHA performed with either direct anterior (DA) or posterolateral (PL) approach when considering indication for revision.

METHODS: Patients undergoing single-stage rTHA at a single institution between 2014 and 2023 were identified. Indication for rTHA, surgical approach, and 90-day dislocation rates were collected. Dislocation rates were compared between DA and PL rTHA. Patients were grouped based on indication for rTHA, and sub-group analysis was performed to compare dislocation rates between DA and PL rTHA.

RESULTS: 862 patients undergoing rTHA were identified, with 397 DA and 465 PL. There were a total of 21 90-day dislocations in the DA group (5.3%) and 19 in the PL group (4.1%), which was not a statistically significant difference ($p = 0.4243$). The highest dislocation rate was among patients undergoing rTHA for instability, with 16 dislocations out of 88 patients (18.2%). There was no significant difference in dislocation rates between patients undergoing DA versus PL rTHA for: instability (17% vs. 17%, $p = 1.000$); aseptic loosening (5.3% vs. 4.3%, $p = 0.8152$); periprosthetic fracture (0% vs. 1.2%, $p = 1.000$); and periprosthetic joint infection (16.7% vs. 5.8%, $p = 0.6094$).

DISCUSSION AND CONCLUSION: Rates of dislocation following rTHA are higher than in the primary setting. There was no association between approach and 90-day dislocation rates when controlling for indication for rTHA.