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Dual Mobility Bearing Articulations Result in Lower Rates of Dislocation After Revision Total Hip Arthroplasty.

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Dual Mobility Bearing Articulations Result in Lower Rates of Dislocation After Revision Total Hip Arthroplasty.

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Introduction: The purpose of our study is to directly compare the rates of instability after revision total hip arthroplasty (THA) between a modular dual mobility (DM) and a conventional polyethylene single-bearing surface.

Methods: We retrospectively reviewed a consecutive series of patients who underwent revision THA from 2012 to 2016 at a single institution with a minimum of 2 years of follow-up. Rates of re-revision, dislocation, complications, and short-form (SF-12) scores were compared between the DM and single-bearing groups. To control for confounding variables, a multivariate logistic regression analysis was performed.

Results: Of the 267 revision THA patients, 94 patients had a DM bearing articulation (36%), whereas 173 patients (64%) had a conventional single-bearing with a mean follow-up of 37.8 months (range 24 to 73 months). The DM group was more likely to undergo revision THA for instability compared with the single-bearing group (8.5% versus 1.2%, $P \leq 0.005$) but had reduced incidence of postoperative dislocations (2.1% versus 8.7%, $P = 0.067$) and no difference in the rates of re-revisions (9.6% versus 11.6%, $P = 0.770$). When controlling for confounding variables, patients who received a

DM liner had lower rates of dislocation postoperatively than those of single-bearing (odds ratio 0.12, P = 0.019).

Discussion: Even with a selection bias of surgeons using DM for patients at high risk of instability, patients undergoing revision THA with a DM bearing have reduced rates of dislocation at the intermediate-term follow-up. Further study is needed to identify any potential longer-term complications which may result from a modular DM bearing.