Lower Revision Risk for Total Hip Arthroplasty Compared with Unipolar and Bipolar Hemiarthroplasty for Hip Fracture, but only Among Patients Aged 60-79 or ASA I/II

Practice patterns vary widely for use of total hip arthroplasty (THA) and unipolar or bipolar hemiarthroplasty for femoral neck fractures in older patients. This study investigates patient characteristics and preferable treatment due to a lower risk of all-cause revision.

> While prior research has sought to determine which procedure – THA or hemiarthroplasty – is "better" for older patients with femoral neck fractures, our study was designed to identify the specific patients for whom each procedure would be preferred.
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Study Details

In a study published in *The Journal of Bone and Joint Surgery*, Kaiser Permanente Orthopaedic Surgeons and Medical Device Surveillance & Assessment Researchers identified 14,277 patients with THAs, unipolar or bipolar hemiarthroplasties, performed between 2009 and 2021. Patient subgroups were defined by age (60 to 79 versus ≥80 years) and American Society of Anesthesiologists (ASA) classification (I or II versus III); patients with an ASA classification of IV or higher were excluded.

- THA had a lower revision risk than both unipolar and bipolar hemiarthroplasty among patients aged 60-79 and with ASA I or II.
- There was no difference in revision risk between THA and either hemiarthroplasty procedure among patients aged ≥80 years or with ASA classification of III.
- There was a survivorship advantage for bipolar compared to unipolar hemiarthroplasty procedures among patients aged 60-79 and with ASA I or II.
- There were no differences between the two hemiarthroplasty procedures among patients aged ≥80 years or with ASA classification of III.

Practice Considerations

- While choice between THA and hemiarthroplasty is individualized for each patient, results suggest that THA may be beneficial for patients who are aged 60-79 and ASA I or II.
- THA may not confer any benefit over hemiarthroplasty for patients who are aged ≥80 years or have an ASA of III.
- Minimal cost difference and findings of lower revision rate support use of bipolar devices for a clinical choice of hemiarthroplasty procedure.

Link to Full Publication

Okike K, Prentice HA, Chan PH, Fasig BH, Paxton EW, Bernstein J, Ahn J, Chen F (2023). **Unipolar Hemiarthroplasty, Bipolar Hemiarthroplasty, or Total Hip Arthroplasty for Hip Fracture in Older Individuals** *J Bone Joint Surg Am*, 1062 (120-128): .