

Does use of the Anterior Approach for Hip Hemiarthroplasty Improve Patient Outcome? An RCT

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INTRODUCTION: Use of the anterior (AA) compared to the lateral approach (LA) in THA is associated with reduced pain and improved mobility early post-operatively. Whether hip fracture patients can have same benefits is unknown. The primary aim of this randomized-controlled-trial (RCT) was to determine whether hemiarthroplasty through AA is associated with superior outcomes compared to LA.

METHODS: A multi-surgeon, single academic center registered RCT was performed. Cognitively-intact hip fracture patients were invited to participate. Enrolled patients (n=90) were randomized to either AA or LA hemiarthroplasty by fellowship-trained arthroplasty surgeons competent with both approaches. Research personnel blinded to grouping collected data of interest at 2-, 6-, 12-, 26-, and 52-weeks. Age, BMI, pre-operative mobility, ASA grade, anesthetic, and time from admission to surgery were similar between groups (p>0.05). Primary endpoint was patient-reported outcomes using the Visual-Analogue Score, Barthel-20 and EQ-5D. Secondary outcomes included surgical time, transfusion, serious adverse events, hip-related complications, acute- and rehabilitation- length-of-stay (LOS), and radiographic stem alignment and mantle quality.

RESULTS: VAS- (AA 15±20 vs. LA 15±21), EQ-5D- (69±2 vs. 70±2), Total Health- (59±28 vs. 70±17), and Barthel-20- (16±5 vs. 17±4) Scores were not different at 6 weeks or any other interval (p>0.05). Mean AA surgical time was 8min longer (96±19 vs. 88±15 min; p<0.05) while blood loss was not different. Serious adverse events (34.1% vs. 31.1%) and hip-related complications (7.3% vs 4.4%) did not differ (p>0.05). Acute (11±11 vs. 8±4) and rehabilitation (33±19 vs. 28±27) LOS were not different. Hip reconstruction parameters were similar between groups.

DISCUSSION AND CONCLUSION:

Previously reported benefits of AA-THA do not seem to translate to elderly hip fracture patients undergoing hemiarthroplasty, whose outcomes were not significantly influenced by this muscle-sparing technique. Widespread AA adoption for this cohort is likely to lead to learning-curve associated issues without proven benefit and is thus not recommended.