

**Outcomes Following Direct Anterior versus Alternative Approaches for Hemiarthroplasty in Geriatric Femoral Neck Fractures**

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**Purpose:** There is currently no consensus regarding the optimal approach for hemiarthroplasty (HA) in the treatment of geriatric femoral neck fractures. The direct anterior approach (DAA) has gained attention as a muscle-sparing alternative to more traditional approaches, with significant improvements in early patient mobilization following total hip arthroplasty. However, the literature exploring the advantages of the DAA in HA is limited and with mixed results. This study sought to examine postoperative outcomes following HA via DAA or alternative approaches (AAs), such as anterolateral or posterolateral, for traumatic geriatric femoral neck fractures.

**Methods:** We retrospectively reviewed geriatric patients with traumatic femoral neck fractures undergoing HA between September 2018 and December 2021. HA was performed through either DAA or AA. Approach was determined at the time of surgery by the treating physician. Postoperative change in hemoglobin, blood transfusion, ambulation distance, ambulatory status at discharge, discharge disposition, and length of hospitalization were recorded. Additionally, 30-day readmission, reoperation within 1 year, 30-day mortality, 90-day mortality, and 1-year mortality were recorded.

**Results:** 139 patients were included in the review, 36 who underwent DAA HA and 103 who underwent AAs for HA. There was no difference in patient demographics or comorbidities between the 2 groups. Those undergoing DAA ambulated farther on postoperative day (POD) 1, POD 2, and POD 3. DAA recipients were more likely to be ambulatory at discharge (72% vs 43%, P = 0.002) than those undergoing AAs. Patients undergoing DAA were also more likely to discharge home (36% vs 15%, P = 0.005) and have shorter hospitalizations postoperatively (3.9 ± 1.6 days vs 5.0 ± 3.1 days, P = 0.01). There were no significant differences between approaches when considering 30-day readmission rate, rate of reoperation at 1 year, 30-day mortality, 90-day mortality, or 1-year mortality.

**Conclusion:** Patients undergoing DAA hemiarthroplasty ambulate farther, have shorter hospitalizations, and are more likely to discharge home than those undergoing hemiarthroplasty via alternative approaches. Rates of 30-day readmission, reoperation rate within 1 year, 30-day mortality, 90-day mortality, and mortality at 1 year postoperatively were not different between the 2 groups. When compared to AA, DAA hemiarthroplasty provides an early benefit for geriatric patients undergoing HA for traumatic femoral neck fractures.

	Direct Anterior (n = 36)	Alternative Approaches (n = 103)	P-value
POD 1 Δ Hgb*	1.6 ± 1.2	1.6 ± 1.2	0.91
POD 3 Δ Hgb*	2.7 ± 2.3	2.2 ± 1.4	0.16
Perioperative Transfusion			
POD 0	6 (17%)	4 (4%)	<b>0.01</b>
POD 1	1 (3%)	3 (3%)	0.97
POD 2	3 (8%)	9 (9%)	0.95
During	10 (28%)	20 (19%)	0.28
Hospitalization			
POD 1 Ambulation*	32.4 ± 48.9	11.3 ± 29.4	<b>0.002</b>
POD 2 Ambulation*	63.1 ± 89.9	23.2 ± 40.5	<b>0.001</b>
POD 3 Ambulation*	77.5 ± 97.9	28.1 ± 50.9	<b>0.005</b>
Ambulatory on Discharge	26 (72%)	44 (43%)	<b>0.002</b>
Discharge Home	13 (36%)	15 (15%)	<b>0.005</b>
Postoperative Hospitalization (days)*	3.9 ± 1.6	5.0 ± 3.1	<b>0.01</b>
30 Day Readmission	4 (11%)	13 (13%)	0.81
Reoperation Required	0	6 (6%)	0.34
Mortality			
30 Day	1 (3%)	5 (5%)	0.60
90 Day	5 (14%)	12 (12%)	0.71
1 Year	8 (22%)	21 (20%)	0.79

\* - values are presented as mean with standard deviation. p ≤ 0.05 considered statistically significant.

POSTER ABSTRACTS

The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or medical device they wish to use in clinical practice.