

TITLE: Does Surgical Approach Effect Length of Hospital Stay in Patients with Femoral Neck Fractures Treated with Hemiarthroplasty?

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Background: Femoral neck fractures are a commonly encountered injury, with increasing incidence due to the aging population. Elderly patients presenting with an acute displaced femoral neck fracture are commonly treated with hemiarthroplasty. A variety of surgical approaches have been described, however, there is a paucity of literature correlating surgical approach with length of hospital stay. This retrospective cohort study is intended to test if surgical approach (anterior, lateral, and posterior) is correlated with length of hospital stay in patients that are treated with hemiarthroplasty for a displaced femoral neck fracture.

Methods: This retrospective, observational cohort study was carried out on 121 patients who underwent hip hemiarthroplasty as treatment for an acute femoral neck fracture from January 1, 2016 to December 31, 2017 at a single institution. The operative report was utilized to identify the surgical approach used (anterior, lateral, or posterior) The length of hospital stay following the operation was recorded, along with the patients' age, sex, and American Society of Anesthesiologists (ASA) score. This data was analyzed for significant differences between the three surgical approach groups.

Results: There was no significant difference between the three surgical approach cohorts in regard to age, sex, or ASA score. The anterior approach group had an average length of stay of 2.88 days following hemiarthroplasty, which was significantly less than the lateral and posterior groups which were 4.28 and 4.77 days, respectively.

Conclusion: Utilizing a direct anterior approach may decrease length of hospital stay following hemiarthroplasty as treatment of an acute femoral neck fracture.

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Table 2. Comparison of Patient Demographics Between Surgical Approach Groups

	N	Age (years)	Female (%)	ASA Score
Anterior	17	79.24	76.5	3.12
Lateral	60	80.77	66.7	3.33
Posterior	44	83.75	65.9	3.32
Total		81.64	67.8	3.3
P value		0.149*	0.707**	0.388***

*ANOVA test, **X² test, ***Kruskal-Wallis test

Table 3. Comparison of Surgical Approach and LOS

Approach	LOS (days)
Anterior	2.88
Lateral	4.28
Posterior	4.77
Total	4.26
P value	0.036*

*ANOVA test