

Δ Early Discharge Following Hip Fracture Surgery Is Associated with Decreased Hypercoagulability and Venous Thromboembolism Risk

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Purpose: Prolonged bedrest in hospitalized patients is a risk factor for venous thromboembolism (VTE), especially in high-risk patients with hip fracture. Thromboelastography (TEG) is a whole blood test with evidence that an elevated maximal amplitude (MA), a measure of clot strength, is predictive of VTE in trauma patients. This study compared MA from TEG analysis between hip fracture patients who were discharged from hospital early to hip fracture patients with reduced mobility.

Methods: Serial TEG analysis was performed in hip fracture patients every 24 hours from admission until postoperative day (POD) 5, then at 2 and 6 weeks. Hypercoagulability was defined by MA >65. Patients were divided into an early (within 5 days) and late (after 5 days) discharge group, inpatient at 2 weeks group, and discharge to musculoskeletal (MSK) rehabilitation (MSK rehab), and long-term care (LTC) groups. Two-sample t test was used to analyze differences in MA between the early discharge and less mobile groups.

Results: 121 patients with a median age of 81.0 years were included. Patients in the early discharge group (n = 15) were younger (median age 64.0 years) and more likely to ambulate without gait aids preinjury (86.7%) compared to patients in the late discharge group (n = 105), inpatients at 2 weeks (n = 48), discharged to MSK rehab (n = 30), and LTC (n = 20). At 2 weeks postoperative, the early discharge group was significantly less hypercoagulable (MA = 68.9, standard deviation 3.0) compared to patients in the other four groups (Fig. 1). At 6 weeks postoperative, the early discharge group was the only group to demonstrate a trend toward mean MA below the MA >65 hypercoagulable threshold (MA = 64.4, P = 0.45).

Conclusion: Results from this study suggest that patients with hip fracture who are able to mobilize independently immediately after surgery are less hypercoagulable and have a shorter duration of hypercoagulable state compared to patients who are less mobile after hip fracture surgery.

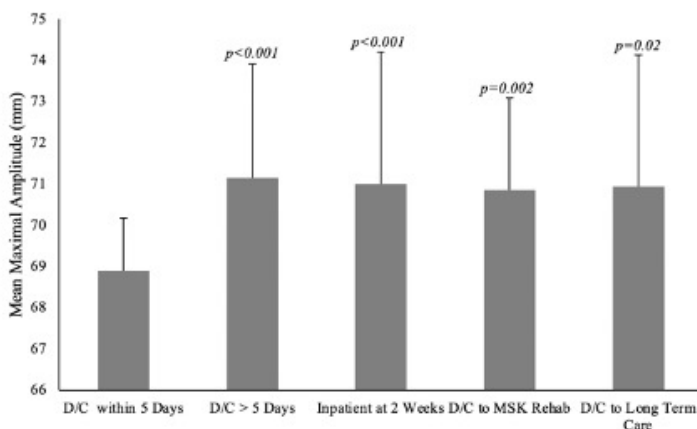


Figure 1. Mean MA and standard deviation of patients with hip fracture in the “early discharge group” and less mobile groups. Two-sample t-test was used to analyze for significant differences in MA between the early discharge group and other four groups.

Δ OTA Grant

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