

Orthopaedic Trauma Patient Compliance with DVT Prophylaxis Post-Discharge from the Hospital

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Purpose: Deep-vein thrombosis (DVT) prophylaxis is commonly utilized to prevent venous thromboembolism (VTE) following orthopaedic injury. However, little is known regarding the adherence to chemoprophylaxis regimens in the trauma population. An understanding of the patterns of adherence and risk factors for nonadherence would be beneficial to identify methods to improve compliance with these medications. The goal of this study was to determine the pattern of compliance as well as identify risk factors for noncompliance in a trauma population. We hypothesized that compliance would deteriorate over time and that patients with hip fractures would have higher compliance compared to other injuries.

Methods: An IRB-approved prospective study to determine patient compliance with DVT prophylaxis protocol was conducted. Adult patients ≥ 18 years of age admitted with fractures requiring DVT prophylaxis (enoxaparin) per institutional protocol during a 3-month period were included. After enrollment, patients were contacted within 96 hours post discharge, at 2 weeks, and at therapy conclusion. Patient compliance was assessed using the Morisky 8-item Medication Adherence Questionnaire and were categorized into low, moderate, and high compliance based on score. Repeated-measures analysis of variance was used to compare adherence scores over time for the subset of patients who completed all questionnaires.

Results: 84 patients were enrolled. Average age was 57 years (95% CI [confidence interval] 53.14-61.70), and 56% were female. 93% completed at least 1 survey with 86%, 87%, and 70% completion at the respective time points. At the first time point, 67% reported high compliance, 30% moderate, and 3% low compliance. At 2 weeks, 56% of participants had high compliance, 30% moderate, and 14% low compliance. At the final time point, 53%, 36%, and 11% reported high, moderate, and low compliance, respectively. Compliance significantly dropped from each time point ($P = 0.001$). Age, fracture type (hip fracture/other), and discharge disposition did not predict compliance ($P > 0.05$).

Conclusion: Adherence to DVT prophylaxis medication significantly decays over time. Age, injury, and discharge to rehabilitation do not appear to affect compliance to medication. Nearly half of patients 2 weeks and beyond initiation of therapy are not taking their medication as prescribed. Screening tools should be developed and utilized prior to discharge to identify patients at risk for noncompliance or alternative therapies should be considered.