Thromboembolic Events In Elective vs Non-Elective Foot & Ankle Surgery
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Introduction/Purpose: The occurrence of venous thromboembolisms (VTE) in the management of foot and ankle conditions can lead to serious and sometimes fatal complications. The reported incidence range of symptomatic deep venous thrombosis (DVT) following various foot and ankle procedures is wide, ranging from 0.01% to 23.4%. The incidence of asymptomatic DVT is likely higher and has been reported to be up to 34% in patients with Achilles ruptures. In line with the wide variability in incidence data, there remains a lack of consensus in determining the necessity to implement DVT prophylaxis after foot and ankle surgery. The purpose of this study was to examine the National Surgical Quality Improvement Program (NSQIP) database to assess the 30-day risk of VTE in foot and ankle surgery.

Methods: The ACS-NSQIP database for the years 2011-2014 was queried for patients undergoing elective versus non-elective foot and ankle surgery with a total of 72 Current Procedural Terminology (CPT) codes included. Those undergoing procedures for an infectious process or oncologic procedures were excluded. A total of 18,632 cases were included for analysis in our study with 11,744 being elective and 6,888 non-elective surgeries. A univariate analysis of thromboembolic parameters included in the database was conducted to measure the difference between the two cohorts.

Results: There were a total of 6,888 non-elective (36.97%) and 11,744 elective surgeries (63.03%). The incidence of DVT was 32 (0.33%) for elective and 39 (0.46%) for non-elective surgery with no statistical significance (P=0.37). The incidence of pulmonary embolisms (PE) was 24 (0.35%) for the non-elective and 20 (0.17%) for the elective group with the non-elective group having a statistically significant increase (P = 0.0156). The incidence of cerebral vascular accidents (CVA) was 8 (0.06%) for males and 1 (0.009%) for females with males having a statistically significant higher incidence of CVA (P = 0.0318). Patients under age 65 had a statistically higher risk (P = 0.0194) of a CVA occurrence with an odds ratio of 0.132 times greater than those over the age of 65.

Conclusion: Non-elective Foot & Ankle surgery is an independent risk factor for pulmonary embolism. Males under the age of 65 years old are more likely to experience CVAs with residual deficits. However, the overall incidence of PE and CVA are exceedingly low in our study with an incidence of under half a percent. The incidence of DVT was also low, under 0.5% for the non-elective group and 0.33% for the elective group. Therefore, surgeons should weigh the risks and benefits of anticoagulation, especially in elective foot and ankle surgery, prior to the initiation of anticoagulation therapy.