

Shen Research Day Abstract

TITLE

Examining the Relationship Between Missed Doses of VTE Prophylaxis and VTE Events in The Trauma Population

AUTHORS

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INTRODUCTION

Venous thromboembolism (VTE) events are costly and can be fatal, but steps can be taken to reduce the risk of an event. Risk factors for developing a deep vein thrombosis or pulmonary embolus have previously been examined, however, missed VTE doses have not been well-studied. The goal of the current study is to examine the relationship between missed doses of VTE prophylaxis and VTE events in the trauma population.

METHODS

Adult patients (≥ 18 years of age) admitted to the University of Virginia Acute Care and Trauma Surgery Service (1/1/2018-10/13/2020) who underwent a procedure were included in the dataset. Demographic and comorbidity variables were abstracted. VTE rates, VTE prophylaxis dosing, and medication utilization were obtained from the electronic health record. Reasons for missing VTE doses were abstracted from manual review of the health record and coded. Chi square was used to compare proportions.

RESULTS

1,144 trauma service patients underwent a procedure during the study period. Of the included patients, 32 (2.79%) had a documented VTE event. VTE events were significantly higher in those who missed a dose of VTE prophylaxis compared to those who did not (6.6% vs 0.5%, $P < 0.0001$, respectively). See Table. The first missed dose occurred a median of 3 days after surgery.

CONCLUSIONS

Missed doses of VTE prophylaxis impact VTE events. A better understanding why prophylactic VTE doses are missed may provide opportunities to improve clinical outcomes.

Table. Adult Trauma patients with and without missed doses of VTE prophylaxis (2018-2020)

	Missed VTE prophylaxis doses N=420	No Missed VTE prophylaxis doses N=724	<i>P</i> value
Gender, male n (%)	257 (61)	396 (55)	
Age, mean, years	52	53	
Race, white	329 (78)	602 (83)	
Emergency	360 (86)	577 (80)	
Heparin, missed prophylaxis	166 (40)	-	
Enoxaparin, missed prophylaxis	249 (59)	-	
LOS, mean, days	15.3	7	
DVT/PE	28 (6.6)	4 (0.5)	<0.0001

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