



DVT Screening in Lower Extremity Burns: Does delayed presentation increase your risk?

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Introduction

Burn patients are at an increased risk for developing deep vein thromboses (DVT), with rates ranging from 0.25-6% [1,2]. Identified risk factors include large burn size, use of central lines, increasing age, male sex, active smoker or alcohol use, prior history of DVT, increased blood transfusions and surgeries [2,3].

In early 2017 two patients were admitted to our burn unit >48 hours after their injury occurred. Several days after their admission they were found to have a DVT. It was unclear whether the patients already had a DVT at the time of admission or had developed them after their admission.

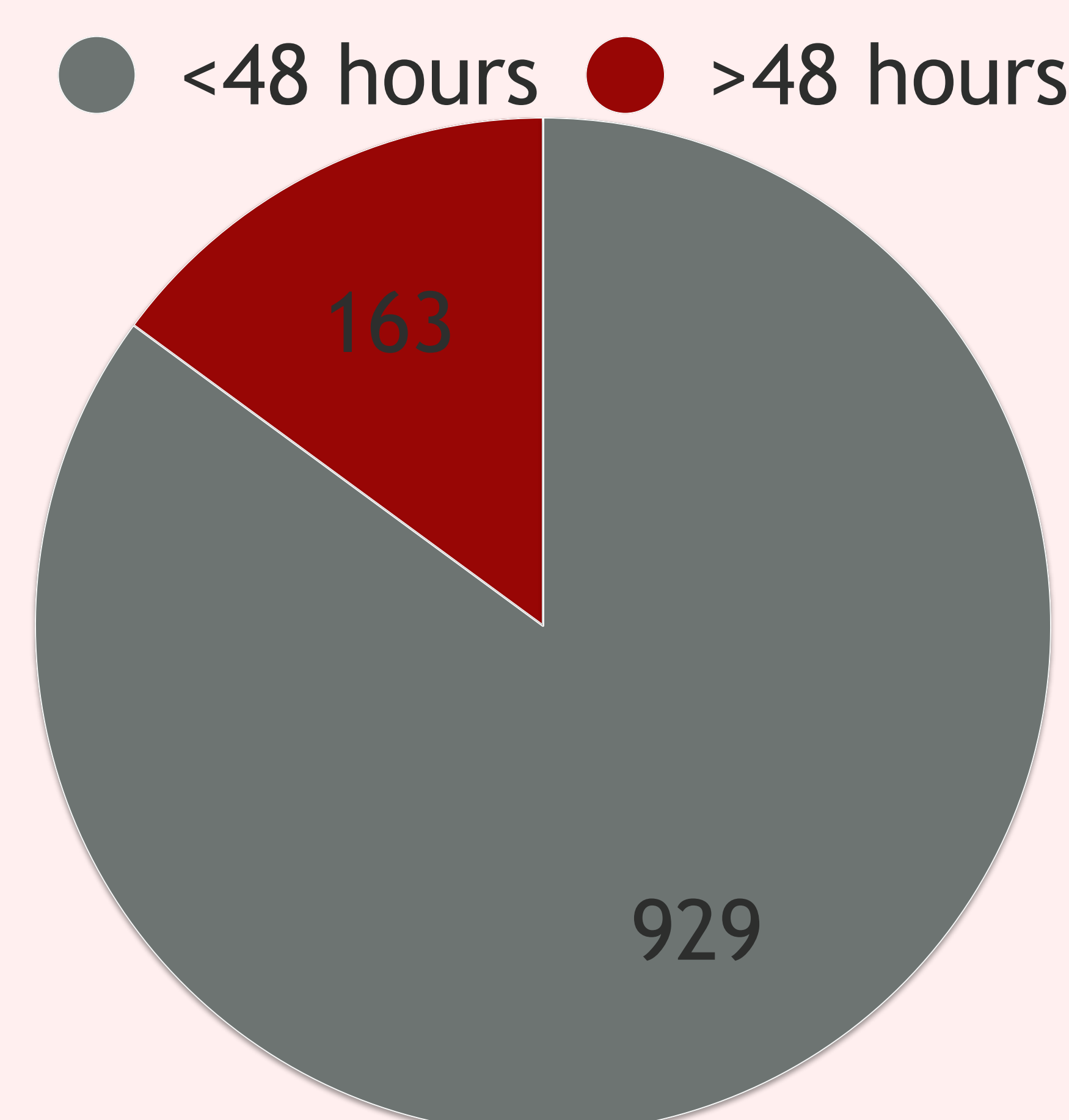
To date, no study has looked specifically at burn location or time to presentation to a burn center as possible risk factors. We hypothesize that lower extremity burns with delayed presentation to a burn center are at increased risk for DVT formation.

Methods

A DVT screening protocol was developed and implemented for adult burn patients admitted to our burn unit starting in May 2017. Patients who presented with lower extremity burns >48 hours from their injury time underwent screening ultrasounds at admission to evaluate for DVT in the affected extremity. Data was collected from May 2017 through December 10, 2019 for all lower extremity patients. Screened patients were identified by reviewing the burn registry for patients admitted >2 days from their injury date and then reviewing the electronic medical record for screening US. DVT rates were compared between screened patients and the overall rate for all admissions during the study period. P was determined between categorical groups using Fischer's exact test.

Results

There were 1092 adult patients admitted to the burn unit during the study period. 163 patients were admitted >48 hours after their lower extremity burn injury (fig. 1).



	Adult admissions (n=1007)	Delayed lower extremity burns (n=85)	
DVT	5 (0.5%)	0	p=1
No DVT	1002 (99.5%)	85	

Table 1. DVT rates between adult admissions and delayed admissions

fig 1. Lower extremity burns admissions

There were a total of 116 lower extremities examined in 85 patients, giving an overall compliance rate with the DVT screening protocol of 52% (85/163). There were 6 DVT's diagnosed among all admitted patients during the study period (2 lower extremity, 4 upper extremity), giving an overall rate of 0.5% for our unit. No DVT's were identified in the study group (table 1).

Conclusion

Patients with lower extremity burns and delayed presentation to a burn center do not appear to have an increased DVT rate. Our overall DVT rate for the unit was within the normal range seen in other studies. Compliance with our screening protocol was relatively poor, which may be due to short hospital stays for many patients and unavailability of ultrasound on weekends for non-emergent studies. Patients with lower extremity burns should receive routine screening and DVT prophylaxis similar to other burn patients.

References, Funding and Disclosure

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