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Venous Thromboembolism Prophylaxis in Trauma Patients. Review of the Literature, Revision and Implementation of New Evidence-based VTE Prophylaxis Guidelines.

Dariam Cardentey Oliva MS USF MCOM- LVHN Campus, daria.cardenteyoliva@lvhn.org

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Venous Thromboembolism Prophylaxis in Trauma Patients. Review of the Literature, Revision and Implementation of New Evidence-based VTE Prophylaxis Guidelines.

Dariam Cardentey Oliva

Lehigh Valley Health Network, Allentown, PA

Introduction

Despite advances in the management of major trauma patients, deep vein thrombosis/venous thromboembolism (DVT/VTE) continues to prolong hospitalization, increase treatment costs, and contribute to morbidity and mortality. The DVT prophylaxis of trauma patients is a complex problem since many are very high risk for DVT, have a high bleeding risk, and have multiple dressings and orthopedic fixation devices precluding the use of DVT prophylactic agents. VTE in trauma patients is a widely recognized problem. Trauma patients are a higher risks for VTE than the rest of the population. How soon to implement VTE prophylaxis, which agents to use, and for how long are some of the many questions highly debated in this patient population. Also, the complexity of current guidelines and protocols make it very difficult to implement and follow. Most evidencebased protocols that exist require to follow some sort of embolic scoring system, account for multiple risk factors, and assigning a numeric value to each to obtain a final score, which dictates the appropriate DVT prophylaxis.

Problem Statement

Current guidelines, and most of the literature, rely in complex algorithms, which can be very difficult to follow in a busy trauma center. Our main focus is to create and implement an evidence-based protocol for DVT/VTE prophylaxis which is simple and easy to follow, and study the effects of a simpler protocol on the rates of compliance with DVT/VTE prophylaxis.

Methods

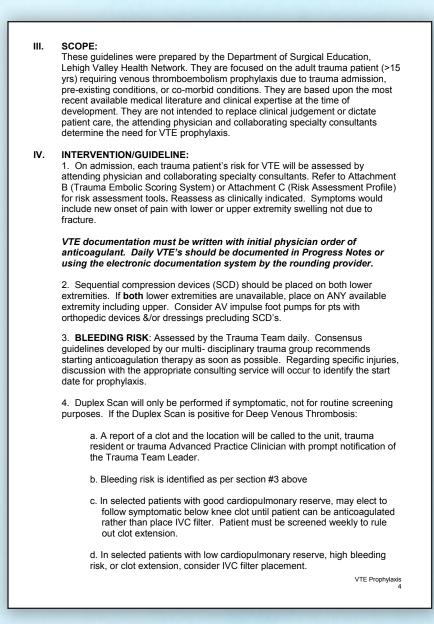
This was a mixed study. We conducted a literature review of PubMed, Cochrane, various journals including the Journal of Trauma and Acute Care Surgery, Journal of Neurosurgery and Spine. We included papers within the last 10 years, utilizing the following key words alone and in combination: DVT, thromboembolism, prophylaxis, and trauma.

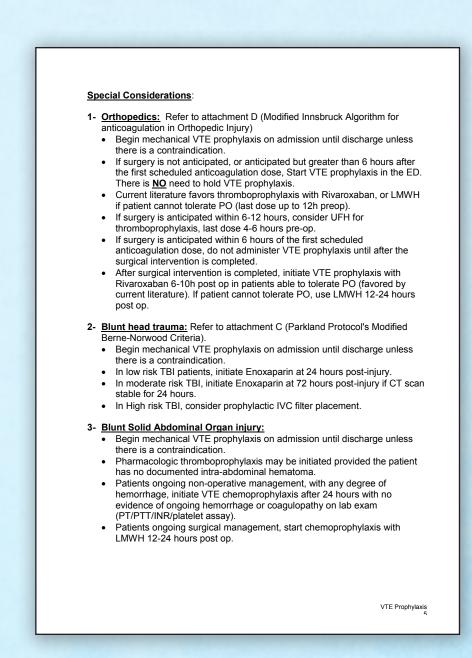
New protocol was created, which underwent multiple departmental revisions, and is pending final approval. After final approval is obtained, it will be piloted in patients with blunt trauma, with or without solid organ injuries. We will exclude any patient with orthopedic injuries and head trauma.

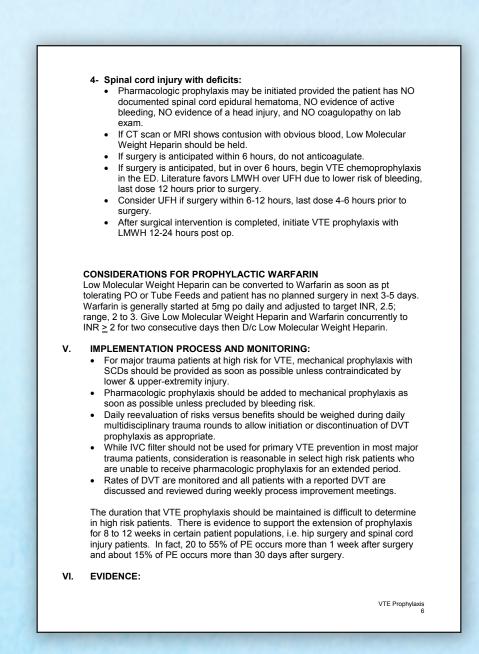
A retrospective chart review will be conducted using the Electronic Health System. Data points will be collected on patients with blunt trauma, with or without solid organ injury, and will include: time to start of DVT prophylaxis, type of prophylactic agent used, and anticoagulation plan at discharge.

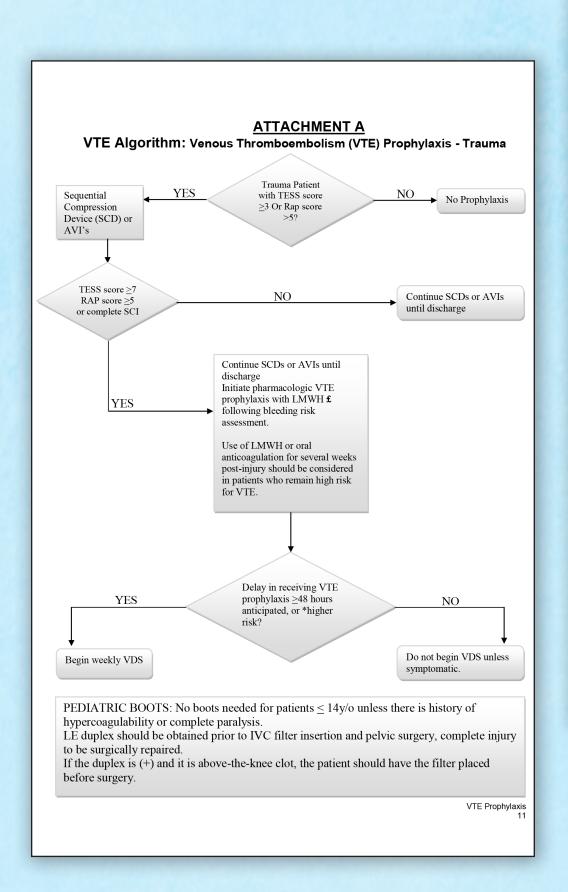
Results

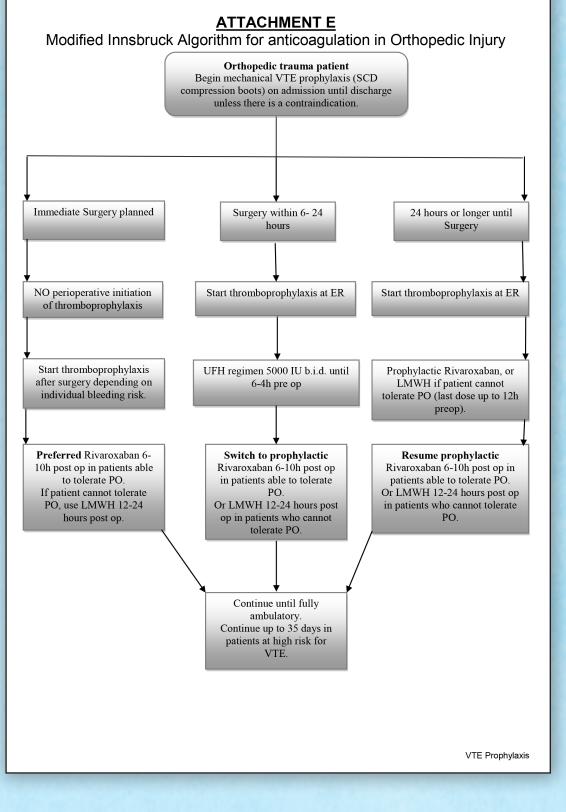
The new protocol was finished and presented to multiple departmental reviews, and currently awaits formal review and approval. Pre-implementation data has been collected and is ready for analysis, awaiting postimplementation data.

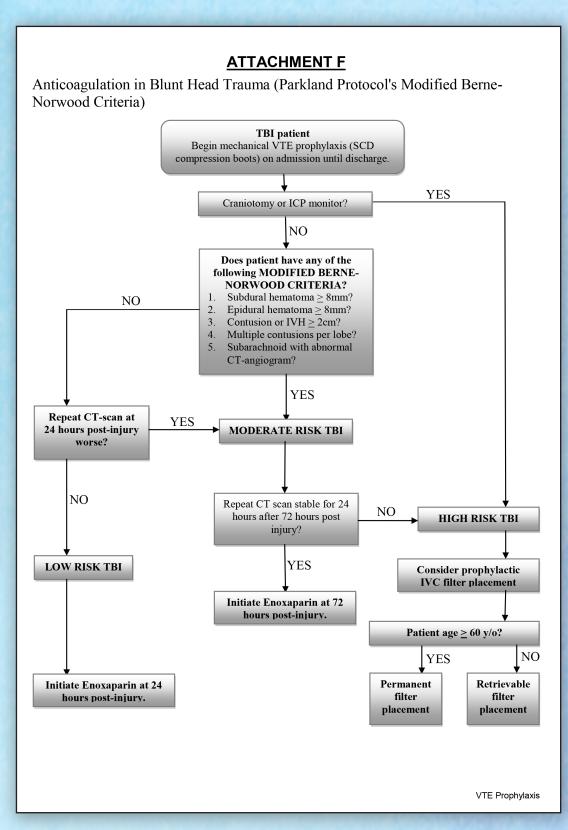












Conclusion & Future

Due to lack of results to discuss, this section is limited to our expectations of the protocol. With this guideline, we anticipate earlier start, and higher rates of compliance with DVT/VTE prophylaxis guidelines in trauma patients. Also, this protocol emphasizes the importance of extending DVT/VTE prophylaxis 8-12 weeks after discharge in certain patient populations. We anticipate this protocol will change the way we manage DVT/VTE prophylaxis after discharge from the hospital.

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