

Is Deep Venous Thrombosis and Pulmonary Embolism Prophylaxis Needed at all in Patients Undergoing a Cervical Spinal Operation

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Introduction

Deep venous thrombosis (DVT) and pulmonary embolism (PE) are major concerns for all post-operative patients who have minimal ambulatory capacity and extended periods of immobility. Given that patients who undergo cervical spine surgery are particularly prone to immobility, having appropriate protocols and understanding prophylaxis as it relates to each patient is essential to avoid these post-operative complications.

Methods

We undertook a retrospective, IRB approved analysis of patients who underwent either an anterior cervical discectomy and fusion (ACDF) or a posterior cervical discectomy and fusion (PCDF) at the University of Toledo, Medical Center.

Results

89 patients were analyzed: 38 underwent ACDF (Group A) and 51 underwent PCDF (Group B), respectively. Group A and B had an average length of stay of 2.97 and 6.12, respectively. In terms of DVT prophylaxis, 3 patients (7.89%) received 5,000 units of SubQ heparin for DVT prophylaxis. For group B, 4 patients (7.84%) received 5,000 units of SubQ heparin and 16 patients (31.4%) received an alternative anti-platelet/anti-coagulate, such as Aspirin, Plavix, Lovenox, or Xarelto, for DVT prophylaxis. When the total number of DVT and PE were examined, it was determined that no patients in group A suffered from either a DVT or a subsequent PE. Within group B, 2 patients where noted to develop a DVT and none developed a PE. For the patients in group B who developed a DVT, one was not being treated with any medical DVT prophylaxis, and the other was being treated with Xarelto.

Conclusions

This demonstrates that while DVT prophylaxis is central to prevention of PE and other vascular related complications of spine surgery, strict adherences to uniform regiments may not be necessary for prevention of this post-operative complication. Rather, early ambulation and non-

Learning Objectives

- Prophylaxis prevention of DVT formation is reasonable in the post-operative setting for patients undergoing a cervical spinal fusion
- EPC cuffs, sub-q heparin, and ambulation stand as successful prophylactic treatments of DVT
- Given the low rate of DVT and PE in cervical fusion patients, EPC cuffs and ambulation may be sufficient for prevention of DVT without use of sub-q heparin

References

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