Best Practices in the Use of Vena Cava Filters to Prevent Pulmonary Emboli in Trauma Patients
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Problem:
The development of a deep venous thrombosis (DVT) and subsequent pulmonary embolism (PE) can have catastrophic implications including death. This project describes the unique characteristics of trauma patients and how the injuries they suffer may set up a cascade of events that leads to a fatal PE.

Evidence:
Fifteen databases were queried. The search resulted in 55 papers of which 12 were subsequently selected for analysis. This included one meta-analysis, two Level 3, five Level 4, and four Level 5 studies.

Strategy:
This project identified certain patient characteristics by utilizing a Risk Assessment Tool. There are unique characteristics and injury patterns in trauma patients that may make chemoprophylaxis for DVT contraindicated. The question is can we identify these patient characteristics early, and prophylactically place a VCF thereby reducing the incidence of fatal PEs.

Practice Change:
This project seeks to determine best practices in the decision to consider the placement of a VCF early in the hospital course. The incidence of PE's among the adult trauma patient population at one Level 1 Trauma Center will be monitored for a two-year period and an analysis will be completed at that time to evaluate the effectiveness of this early and potentially life-saving intervention.

Evaluation:
The intervention is the early placement of a VCF in adult trauma patients that have a contraindication to chemoprophylaxis. The outcome will be the absence of a fatal PE or the development of a symptomatic non-fatal PE. The indicators utilized will be from the trauma registry databank and will be measured every six months.

Results:
Analysis is ongoing however to date there have been no fatal PE's reported on patients where an IVC filter was placed within 72 hours of admission.

Recommendations:
Continue to follow the standard practice guideline for early placement of IVC filters in high risk adult trauma patients.

Lessons Learned:
Mortality can be decreased by the review and implementation of new and innovative ideas in trauma care.

Bibliography:


