Indications for IVC Filters- Are They Being Observed?

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Pulmonary Embolism

- Approximately 900,000 PE occur annually
- 200,000-300,000 deaths per year
- Mortality rate of approximately 30%, untreated
- Anticoagulation remains the cornerstone of treatment
- Not all patients can be safely anticoagulated
- IVC filters have been the mainstay of treatment in this significant group of patients

Indications for IVC Filter Placement

- Broadly classified into 3 categories
  - Absolute (classic) indications
  - Relative (accepted) indications
  - Extended (prophylaxis) indications
- Quality of data to support use decreases from absolute to extended indications
  - Associated controversy increases

Indications for IVC Filter Placement: DVT or PE, and...

Absolute (“Classic”) Indications:

- Failure of anticoagulation
- Significant bleeding complication related to anticoagulation
- Contraindications to anticoagulation
  - CNS hemorrhage/Mets
  - Overt GI bleeding
  - Massive hemoptysis
  - Thrombocytopenia <20K
  - Solid organ trauma
Indications for IVC Filter Placement: DVT or PE, and…

Accepted “Relative” Indications:
- Massive PE with residual DVT in patient at risk for further PE
- Poor cardiopulmonary reserve:
  - Severe pulmonary hypertension
  - Right heart failure
- Free floating iliocaval thrombus*
- Patients with ataxia or significant fall risk

“Extended” Indications: (Prophylactic filters)
- Trauma patients without DVT/PE
  - Closed head injury
  - Spinal cord injury
  - Long bone or pelvic fracture
- Preoperative patients with multiple risk factors for DVT/PE
- High-risk immobilized patients

Current Trends in IVC Filter Placement

- In 2006, 50% of all IVC filters were placed prophylactically
- Estimated that in 2012, 75% of all IVC filters would be placed in patients without underlying VTE

“Appropriateness of Indication”

1 out of 8 patients has IVC Filter placed for acute DVT
Panel of experts using guidelines assessed appropriateness indication for filter placement
- 51% appropriate
- 26% inappropriate
- 23% panel was divided

Spencer et al, Arch Intern Med 2013;173(16):1456

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Conclusions

- Classic and relative indications for IVC filter placement are supported by what data that exists.
- The use of IVC filters for prophylactic prevention of PE is markedly increasing.
  - There are little data to support prophylactic use of IVC filters.
  - What data there are is controversial.
- A significant number of IVC filters in the US are placed inappropriately.

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