

ANSWERING REVIEWERS

ESPS Manuscript NO: 24491

Dear Editor and Reviewers,

Thank you for your expert opinion and your precious time.

The utilization of venacaval filters for DVT varies widely and has been recently evaluated in a study in 263 hospitals. Approximately 15 % of the patients with venous thromboembolism received filter placement with a wide range between 0 to 39 %. The characteristics associated with the wide variability in filter placement were acute bleeding at the time of admission, major operation after admission, presence of metastatic cancer, more severe illness, small hospital, and rural location.

Various complications have been dealt with venacaval filter placements. A review of data from the United States Food and Drug Administration Manufacturer and User Facility Device Experience (MAUDE) from January 2009-December 2012 revealed 1,606 reported AEs involving 1,057 IVC filters were identified. Of reported AEs, 1,394 (86.8%) involved retrievable inferior vena cava filters (rIVCFs), and 212 (13.2%) involved permanent inferior vena cava filters (pIVCFs) ($P < .0001$). Reported AEs included fracture, migration, limb embolization, tilt, IVC penetration, venous thromboembolism and pulmonary embolism, IVC thrombus, and malfunctions during placement.

Inferior vena cava (IVC) filters mechanically provide protection from lower extremity deep vein thrombosis (DVT) migration to the lungs however does not protect against thrombosis at or below the filter. Knowledge on management of IVC filter thrombosis is limited to experience with small group of patients. Various techniques have been utilised with endovascular treatment being more successful. Other techniques such as Catheter-directed thrombolysis, power pulse spray, various mechanical devices, judicious use of tPA or stent placement have also been used in case by case basis.