To worry or not to worry with a ruptured inferior vena cava post IVC filter removal

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Christopher L Stout – No relevant conflicts in this presentation

I have the following potential conflicts of interest to report:

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

- I do not have any potential conflict of interest
Background

IVC Filters can lead to complications

1. Acute DVT $\rightarrow$ phlegmasia
   1. Limb loss
   2. Death
2. Chronic venous hypertension
   1. Leg pain / swelling
   2. Ulceration
3. Perforation
   1. Aorta, duodenum, spine, etc
   2. Pain and other symptoms
4. Fracture / embolization

Removal of IVC filters

1. Success rate over 95%
2. Complication rate < 5%
   1. Rupture and death rare
   2. Degree of Inflammation in tissues around cava
61 y.o. male: **Venous Ulcers** and chronic IVC occlusion from filter placed > 10 years ago. COPD on oxygen. No prior surgeries.

Filter embedded right renal vein  
Multiple Tine perforations
IVC Filter, Acute and Chronic Thrombus. Filter adhesed to right iliac vein wall.
Prior to Removal

Penumbra CAT 8 or Cat D
Crossed IVC and left iliac vein occlusions

Complex Filter Retrieval Techniques
Ruptured IVC but hemodynamic stable.
Inflated 16 mm balloon. Selected both renal veins
Stable-Angioplasty and Stentin
Post Stenting
Rupture Not as evident
Post procedure day #1: Hgb dropped minimally

1 Month Post procedure: Patent Iliac and IVC Duplex
Conclusion

To worry or not to worry with a ruptured inferior vena cava post IVC filter removal – Cannot answer?

1. Dreaded but Rare Complication with few reports
2. Self expanding stenting to level of renal vein can facilitate retroperitoneal hematoma formation and cessation of bleeding
3. Intravascular ultrasound helps delineate anatomy during rupture
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