

Combined Retrohepatic IVC Filter Placement and EKOS Thrombolysis for Treatment of Deep Vein Thrombosis of Lt leg Extending to Suprarenal IVC

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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

Disclosure

- **2.6% to 4.0% of patients with lower extremity DVT have IVC thrombosis^[1-3]**
- **Suprarenal IVC filter is occasionally necessary while thrombus extending to suprarenal IVC
(8.3%,30/361^[4],1.3%,70/4027^[5],7.6%,148/1932^[6])**

Background

- **62 y/o male with shead trauma with SAH 1.5 months ago in semi-coma status s/p VP shunt developed severe tense calf swelling for 1 month**

Case Report



- **Compression ultrasound test (+)**
- **Hyperechogenic clots in the Lt femoral vein and popliteal vein**
- **Normal serum level of protein C, protein S, anti- thrombin III**
- **D-dimer >10000ng/dl**

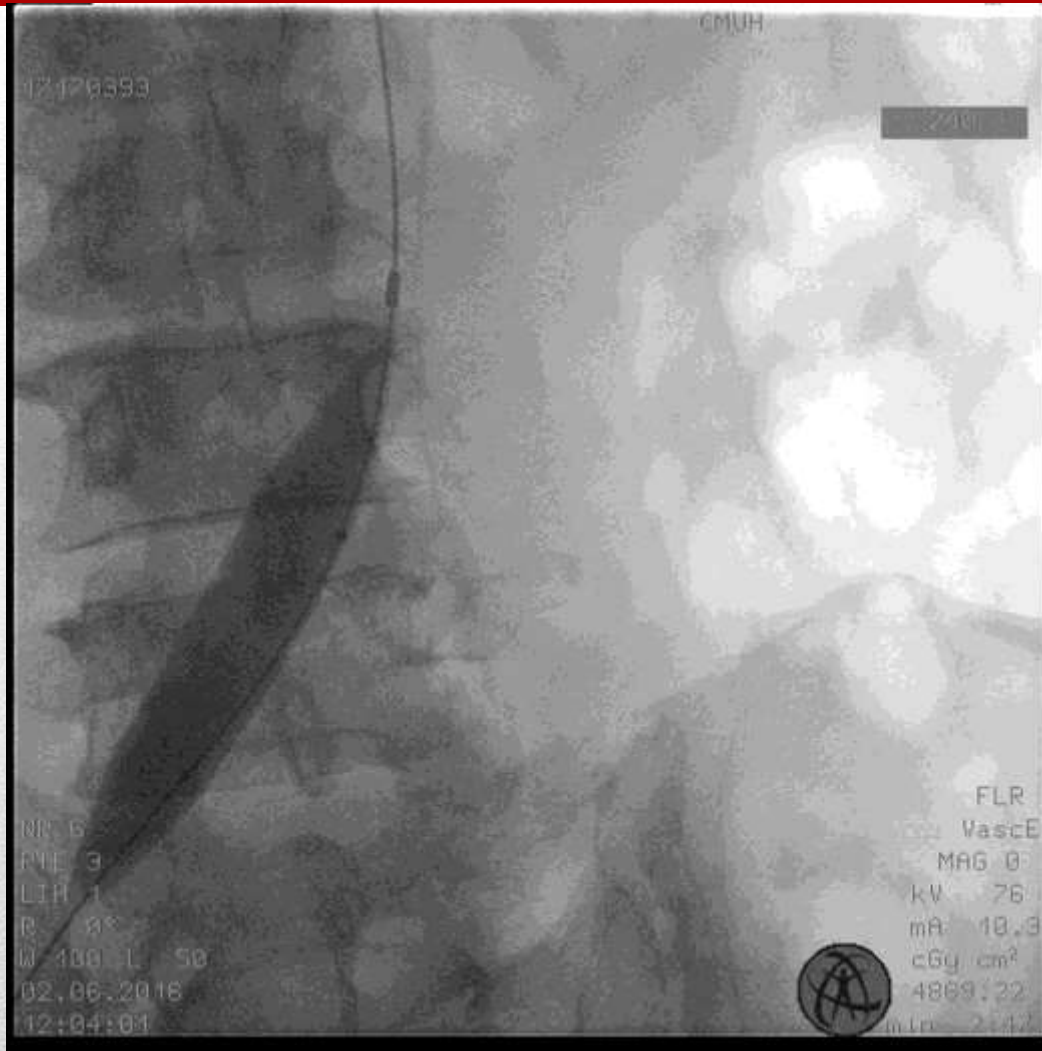
Sonography & Lab.



Venography via Rt fem.v.



IVC Filter (Denali, Bard, Tempe, AZ)



Angioplasty via pop.v.



EKOS Implant (50cm, BTG, Bothell, WA)



Heparin 250-750U/hr

APTT 1.5X-2.0X

Urokinase 50KU/hr

Fibrinogen >200mg/dl qd


N/S cooling 40cc/hr

Medications & Lab.

↑
Proximal



Venography 2days Later


Proximal



Venography 4 days Later



CT Venography 2 mo. Later



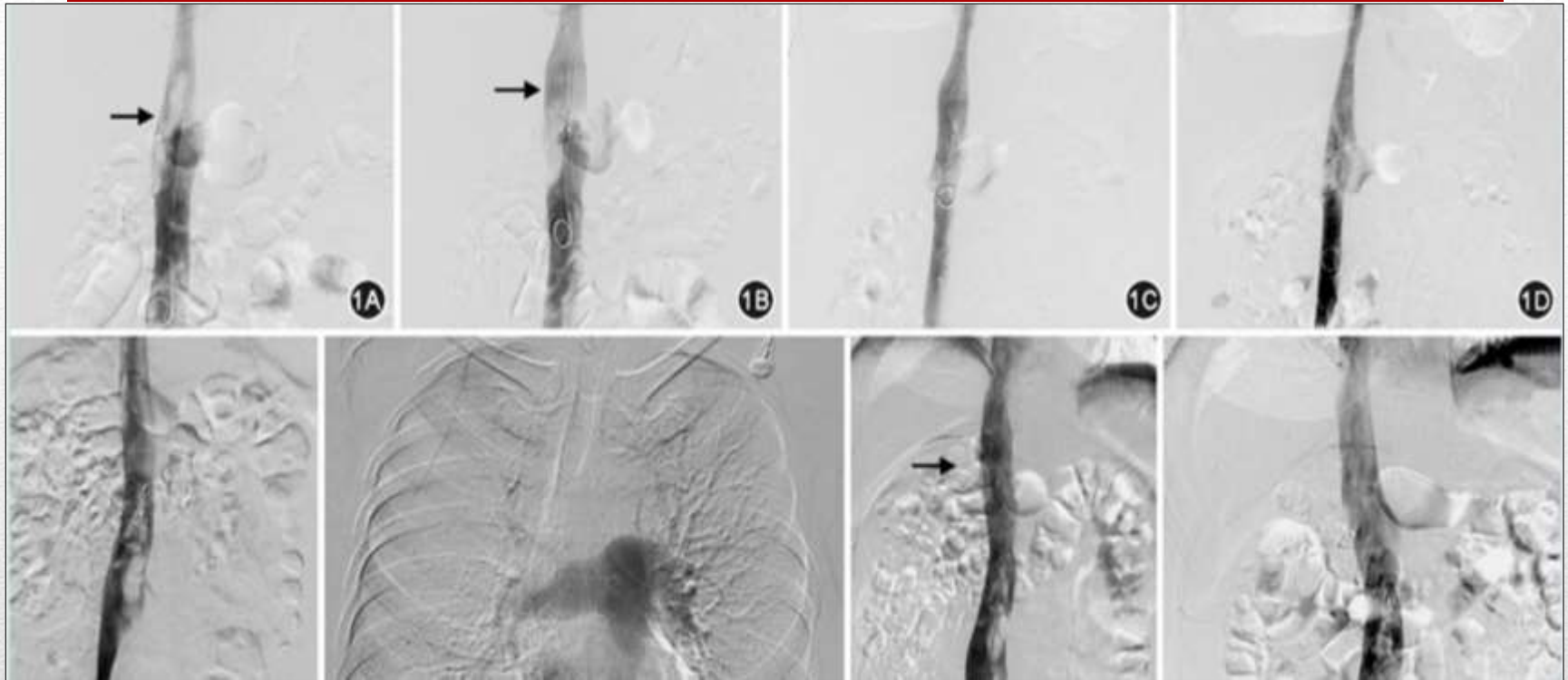
IVC Filter Retrieval

- **De Novo Floating IVC thrombus associated with subacute lower extremity DVT in bed-ridden patients without malignancy/renal vein thrombosis/congenital IVC anomalies/external compression/previous venous surgery or catheter implantation could happen**

Summary

- **Early retrievable suprarenal IVC filter should be implanted to prevent fatal pulmonary emboli in such cases but filter-related complications^{[7][8][9]}are our concerns**

Summary



The preferred location of suprarenal IVC filter has ever been advocated at retro-hepatic level below the isthmus(<28mm)^[10]

Summary

- **Ultrasound accelerated CDT (EKOS) with lower dose, longer duration of (50KU/hr x48-96hrs vs 80-140KU/hr x24hrs) urokinase administration^{[11][12][13]} is effective and safe in this head trauma patient with SAH 1.5 months ago and big burden of thrombi for one month**

Summary

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