Management of 21 year old female with extensive bilateral phlegmasia cerulea dolens and ileocaval thrombosis

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Disclosure

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✓ I do not have any potential conflict of interest
Introduction

- Deep vein thrombosis (DVT) and pulmonary embolism (PE) constitute a leading cause of mortality and morbidity.

- VTE can have serious chronic sequelae in the form of postthrombotic syndrome (PTS) which can significantly compromise quality of life.

Shi et al. Etiology and treatment of acute inferior vena cava thrombosis Thrombosis Research 149 (2017) 9–16
Case presentation

- 21 year old female
- She was on estrogen pills for irregular menstruation for 2 months
- Presented with bilateral LL phlegmasia cerulea dolens and severe bilateral LL pain of 1 day duration
Examination

- Bilateral extensive DVT phlegamsia cerulae dolens with cyanosis and bullaes with no gangrene

- Pulses could not be appreciated from severe oedema

- No manifestations of pulmonary embolism
Investigations

- Hb 9 and creatinine 1

- Duplex: Extensive thrombosis in both LL veins and extends to IVC and both renal veins could not be seen
What can we do?

- Young age
- Extensive DVT (PCD)
- Persistent pain despite anticoagulation for 2 days

Decision was taken to do catheter directed thrombolysis through bilateral popliteal access
Due to high thrombus load and IVC extension, a suprarenal IVC filter (Retrievable IVC Filter, C.R. Bard) was inserted through RT IJV.
- Prone position
- Duplex guided access to both popliteal arteries with 6 french sheath
- Unifuse 50 cm thrombolytic catheter were put opposite each other in the IVC
- Starting thrombolysis at eplase 0.75 mg per hour in each side

Both catheters tips in IVC
After 24 hours venogram

- Venography after 24 hours >>> incomplete lysis of the thrombus

- Continue for another 24 hours with same dose
After 48 hours of thrombolysis:

- IVC and LT SVF were still narrow.
- Venography showed patent Rt iliac veins and Rt SVF.
- Stenosis was detected in LT proximal CIV.
Kissing Balloon dilatation ad stenting were decided

- 14x120 on the left and 14x100 on the right kissing stents (E.luminex, Bard) were put in both CIV

- Another stent 24 x45 in IVC and kissing balloon dilatation (Wallstents Boston Scientific)
Completion venogram

Completion angiogramme >>> good flow in both iliac and IVC

Postoperative: Il oedema was improved in 24 hours and pain improved markedly with persistent back pain for 2 days
Follow up

- CTV 6 months later shows patent stents with good flow inside.
- Factor V heterogeneous gene was detected and long term Anticoagulant was decided.
Discussion
Management of Iliofemoral DVT

- Anticoagulation
- Endovascular treatment
- CDT
- Pharmacomechanical thrombolysis
Despite adequate anticoagulation, untreated iliac vein obstruction will prevent vessel recanalization in 70%-80% of patients and up to 40% of patients will have continued clot propagation.

Further, long-term follow-up of patients with iliofemoral DVT and untreated obstruction have demonstrated that up to 50% develop venous claudication, 86% develop venous stasis ulcers, and all develop chronic leg edema.
According to the most recent SVS guidelines, percutaneous catheter-directed thrombolysis should be initiated as the first line of therapy.

SVS recommend early thrombus removal strategies as the treatment of choice in patients with limb threatening venous ischemia due to iliofemoral deep venous thrombosis with or without associated femoropopliteal venous thrombosis (phlegmasia cerulea dolens) (Grade 1A).

Conclusion

Endovascular thrombolysis has a very good outcome in Phlegmasia cerulea dolens but underlying may Thurner should be always suspected and special dedicated venous stents with various sizes should be available.
Thank you
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