Neurological Presentation Of IVC Occlusion During Pregnancy With No Visible Changes Of Venous Hypertension

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Nothing to Disclose

I have no relevant financial relationship(s) with any proprietary entity producing health care goods or services related to the content of my talk

Unusual Swelling Pattern in Pregnancy

- 33 year old white female P2G1
- Edema beginning 24 weeks gestation in thighs only; no prior history
- Gestational diabetes
- No miscarriages, no DVT, no trauma, no injury
- Increasing pain, hyperesthesia and pitting edema bilateral lower extremity
- Duplex vein scans x 3 negative over 8 weeks
- Progressively worsening pain and numbness
- Maternal grandmother DVT
- PMH: low grade fibromyxoid sarcoma of sinuses
  - treated surgically in 2000 and 2012 with resection and XRT
  - Brain MRI and follow-up scans all negative
- None smoker
- Fleeting rashes various locations during pregnancy
- C-section 2012
- 25 pound weight gain

Physical exam: Ht 5' 1" Wt 145 BMI 27
- Afebrile
- No chest pain SOB
- Tachycardiac 110-130
- Pitting edema scapula tips to knees
- Pregnant uterus 34 weeks gestation non tender
- Pulses palpable
- Slight livido reticularis waist to knees with hypersensitivity to light touch
- No edema in feet, negative Stemmer’s sign
- WBC: normal for pregnancy
- T prot 6.4
- Albumin 2.7
- BUN 10
- Creatinine 0.56

Warning: Not for diagnostic use
**Treatment**

- Heparinized
- Retrievable IVC filter
  - Suprarenal
- Uncomplicated delivery (c-section)
- IVUS normal
- PE no visible veins
- ASA 81 mg

**IVC Filter Suprarenal**

- Women child bearing have potential embolic sources higher than renal veins
- Keep gravid uterus from contact with filter

**Hypercoagulation Profile**

- Prothrombin 20210 A negative
- Homocysteine normal
- Fibrinolytic profile
  - ↓tPA activity
  - nl tPA antigen
  - ↑PAI-1 activity
  - nl Anti plasmin
  - ↑Plasminogen
  - nl Factor XII activity
- Factor V Leiden Heterozygote
Spinal Dural Arteriovenous Fistulas (SDAVFs)

- Underdiagnosed
- Progressive weakness LE
- 1% are younger than 30
- Sacral lesions 4% of patients
- Arteriovenous shunts located in intervertebral foramen within dura
- Progressive weakness aggravated by exercise
- Gait disturbance
- Sensory symptoms (pain, paresthesia, diffuse or patchy sensory loss and hyperesthesias)
- Sphincter/bladder disturbances
- Mono or poly – radiculopathy
- Symptoms progressive – disability ensures over 6 months to 2 years


Vascular Anatomy

- Large amount venous collaterals para spinous plexus
- Spinal cord venous hypertension
- Small low-flow arteriovenous shunts b/w radiculomeningeal artery and a radiculomедullary vein usually in intervertebral foramen within dura
- Found at almost every spinal level
- High venous pressure, decreased venous drainage spinal cord parenchyma
- Valveless venous system, increased venous pressure, decreased tissue perfusion, edema, hypoxia of the spinal cord and disruption of blood cord barrier


Take Home Message

- Think of the anatomy
- Can cause irreversible necrotizing myelopathy of spinal cord
- Reversible changes of pregnancy in venous system
- Bed rest may relieve pressure temporarily
- Consider diagnosis in patients with progressive positional symptoms