Keye Wong, M.D.
Sarasota, FL

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34 y/o female

- 4/19/19 – Sudden painless loss of Va OD seen in ER
- Va CF OD; 20/25 OS

2

34 y/o female

- FHx: Grandfather developed DVT after surgery
- Meds:
  - Pravastatin 80 mg daily
  - Clomid 50 mg (last cycle in February)

3

34 y/o female

- 4/19/19
  - CRAO diagnosed in ER
  - IV Solumedrol administered
  - Diamox 500 mg
  - Heparin anti-coagulation initiated
  - Brimonidine 0.15 % OD TID initiated

4

Brown GC et al. Retinal arterial obstruction in children and young adults. Ophthalmology 88:18-25 (1981)

- 28 eyes in 27 patients < 30 y/o (8% x 12 years)
  - CRAO (9); BRAO (13); Cilioretinal artery occlusion (5)
  - Coagulation abnormalities (8); Migraine (8);High IOP/Buried optic nerve drusen (6); Contraceptives/pregnancy (5); Cardiac valvular disease (2)

5

Greven CM et al.
Retinal artery occlusions in young adults.
Am J Ophthalmol 120:776-783 (1995).

- 27 eyes in 21 patients < 40 y/o
  - CRAO (5); BRAO (15); Cilioretinal artery occlusion (1)
  - Hypercoagulable/emboli risk factors (19); Emboli (7); Cardiac valvular disease (4)

6

Ratra D & Dhupper M. Retinal arterial occlusions in the young: Systemic associations in Indian population.
Indian J Ophthalmol 60: 95-100 (2012).

- 35 eyes in 32 patients < 40 y/o
  - CRAO (28); BRAO (3); Cilioretinal artery occlusion (2)
  - Hypercoagulable/emboli risk factors (21); Cardiac valvular disease (6); HTN (2); Vasculitis (3)

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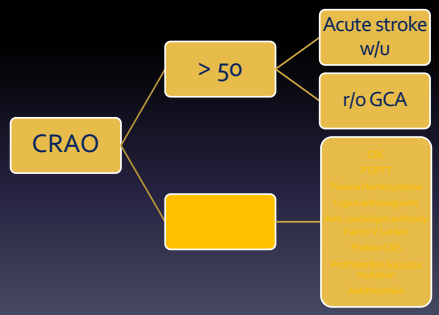
CRAO Evaluation
AAO Focal Points



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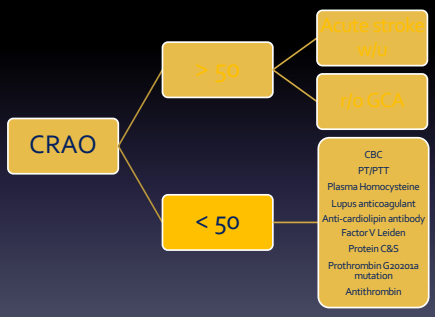
CRAO Evaluation
AAO Focal Points



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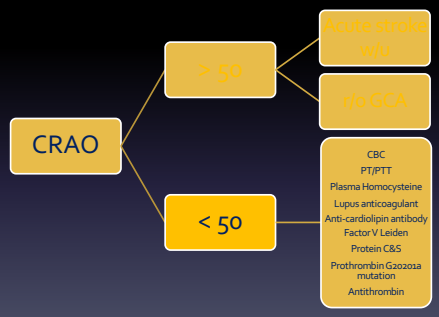
No "hypercoagulability" lab panel



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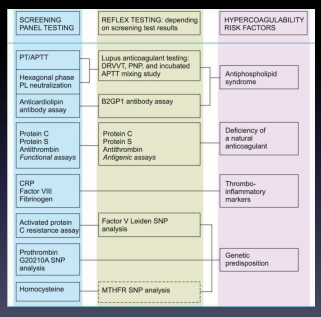
Nakashima MO & Rogers HJ. Hypercoagulable states: an algorithmic approach to laboratory testing and update on monitoring of direct anticoagulants. Blood Res. 49:85-94 (2014)



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Nakashima MO & Rogers HJ. Hypercoagulable states: an algorithmic approach to laboratory testing and update on monitoring of direct anticoagulants. Blood Res. 49:85-94 (2014)

- Prevalence
  - Antiphospholipid syndrome (3-5% of general population) > Factor V Leiden mutation (3-8% with European ancestry) > Prothrombin gene G20210A mutations (2-4% with European ancestry) > Hyperhomocystenemia > antithrombin/Protein C/Protein S deficiencies

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34 y/o female

- 4/19/19: Admitted x 5 d
  - Cardiologist: Negative TEE; Negative carotid ultrasound
  - Neurologist: Negative MRI/stroke w/u
  - Hematologist: Factor V Leiden

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Factor V Leiden (1994)

- Protein C does not adequately bind to (inactivate) Factor V Leiden
- Autosomal dominant with incomplete penetrance
- "Excessive clotting usually restricted to veins"
- Venous thrombosis risk is increased 4- to 8-fold in FVL heterozygotes and 80-fold in homozygotes
- Female FVL heterozygotes using oral contraceptives appear to have a 30- to 60-fold increased risk of thrombosis

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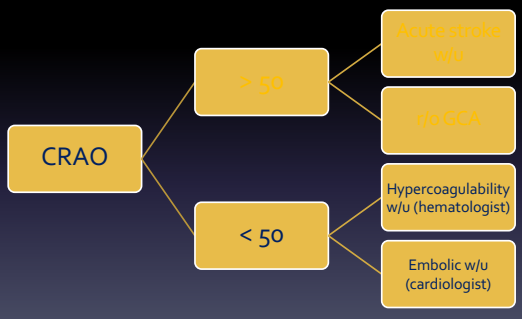
CRAO Evaluation



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