

**Transient Monocular Blindness
due to vasospasm
Video-reconstruction of the retinal
vasculature during an attack**

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History

1. 25 year old builder, 3 day Hx of L TMB
2. First attack on top of scaffolding: 13:30
3. Gradual onset over 1 minute
Darkening of lower nasal VF
18:00 complete L blindness for about 3 minutes
4. 1. day: 5-7 attacks (complete L blindness)
2. day: 10-15 attacks (complete L blindness)
3. day: over 20 attacks (complete L blindness)
5. Unable to work / loss of money

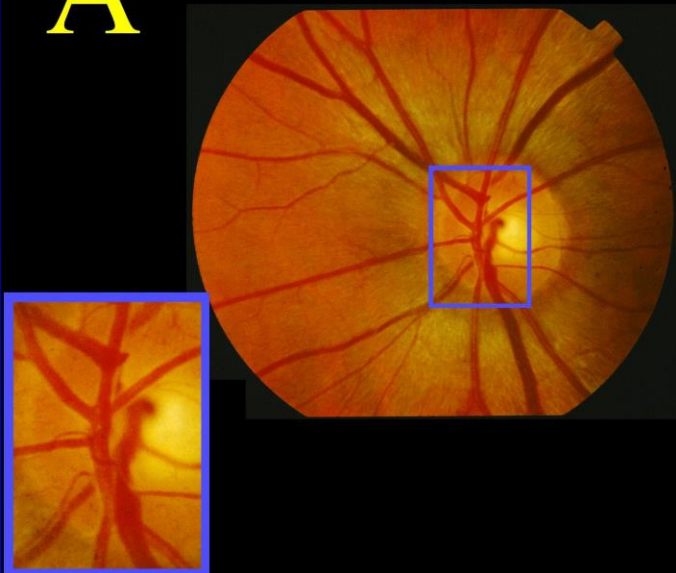
Personal and Family History

- Smoker (20/d)
- Alcohol occasional
- 3/52 before onset of TMB 25th birthday party:
 - Weed
 - Ecstasy
 - Cocaine
- No FHx of migraine

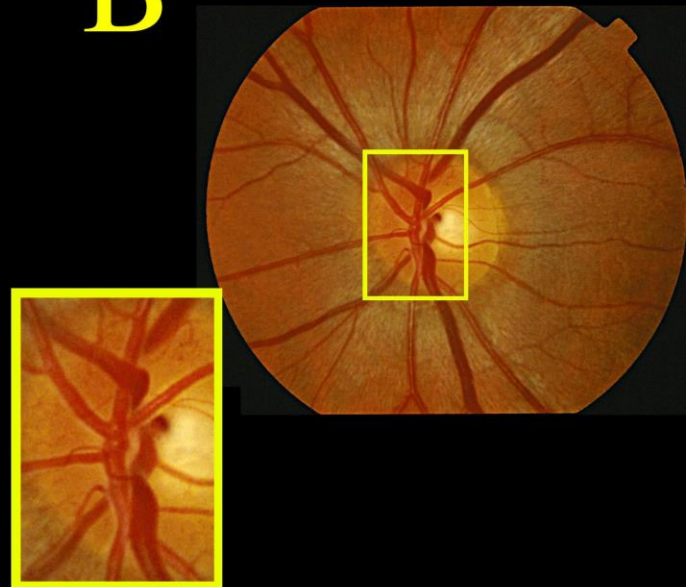
Examination

- General examination normal
- R 6/5, N4.5, 17/17
L 6/5, N4.5, 17/17
- Pupils isocor
- No RAPD
- VF: normal
- Disc: normal
- During attack:
- LOV starts in L lower nasal VF
- Progression: approx $5-7^{\circ}$ / sec
- For about 2 minutes complete L blindness
 - no direct pupil reflex
 - normal indirect pupil reflex
- Duration 2 minutes
- Recovery 1 minute

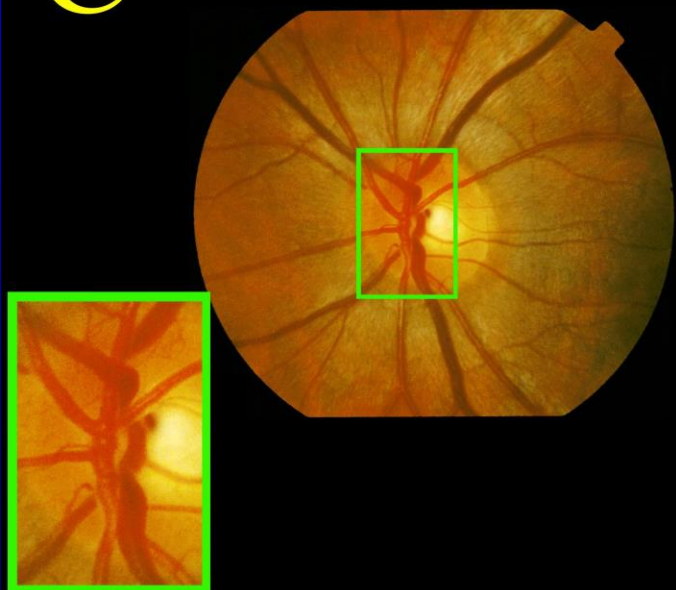
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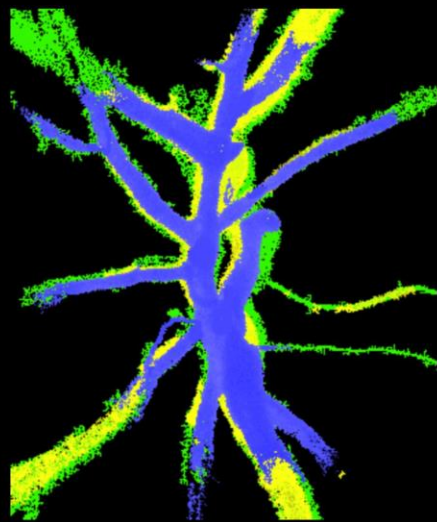
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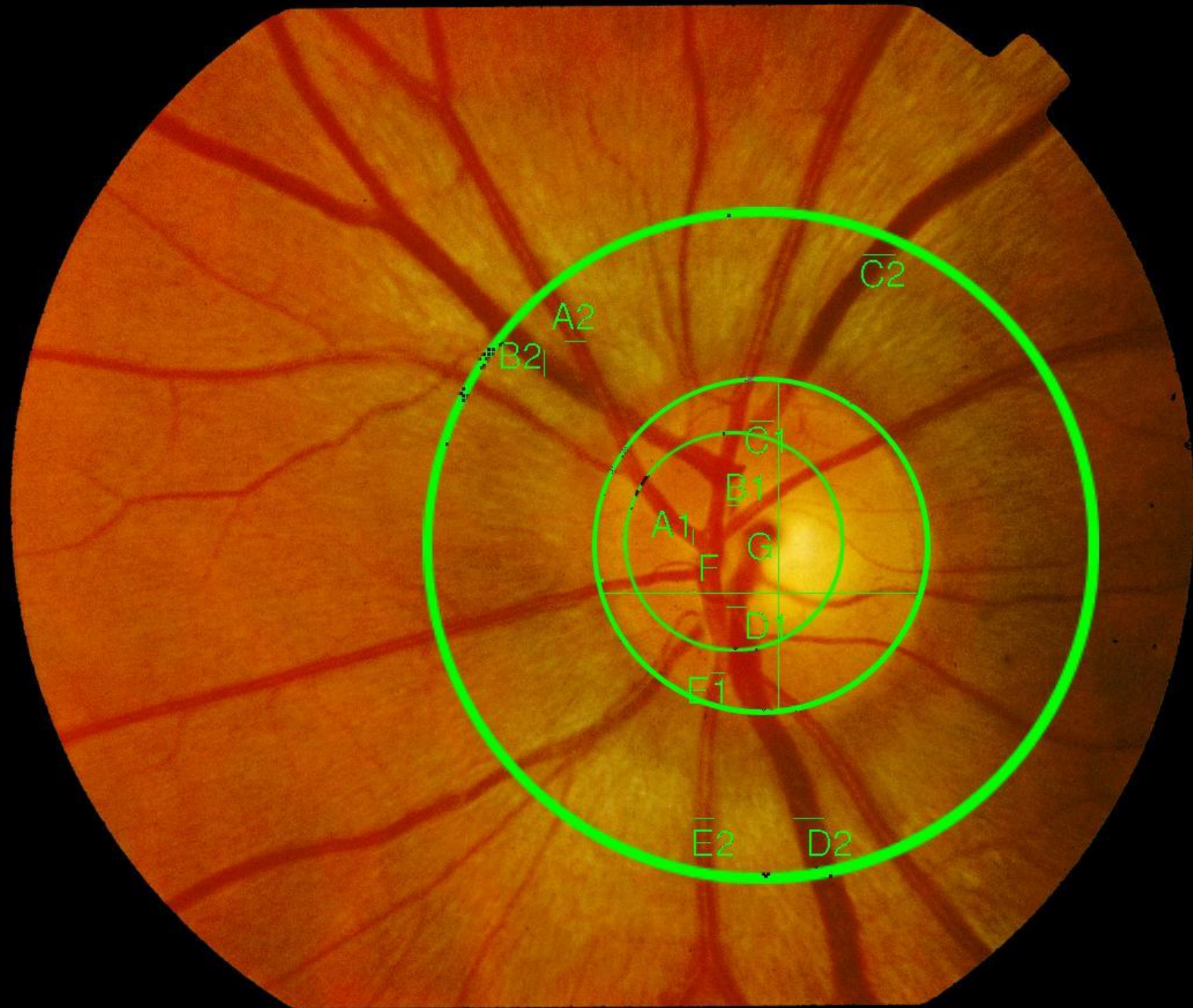
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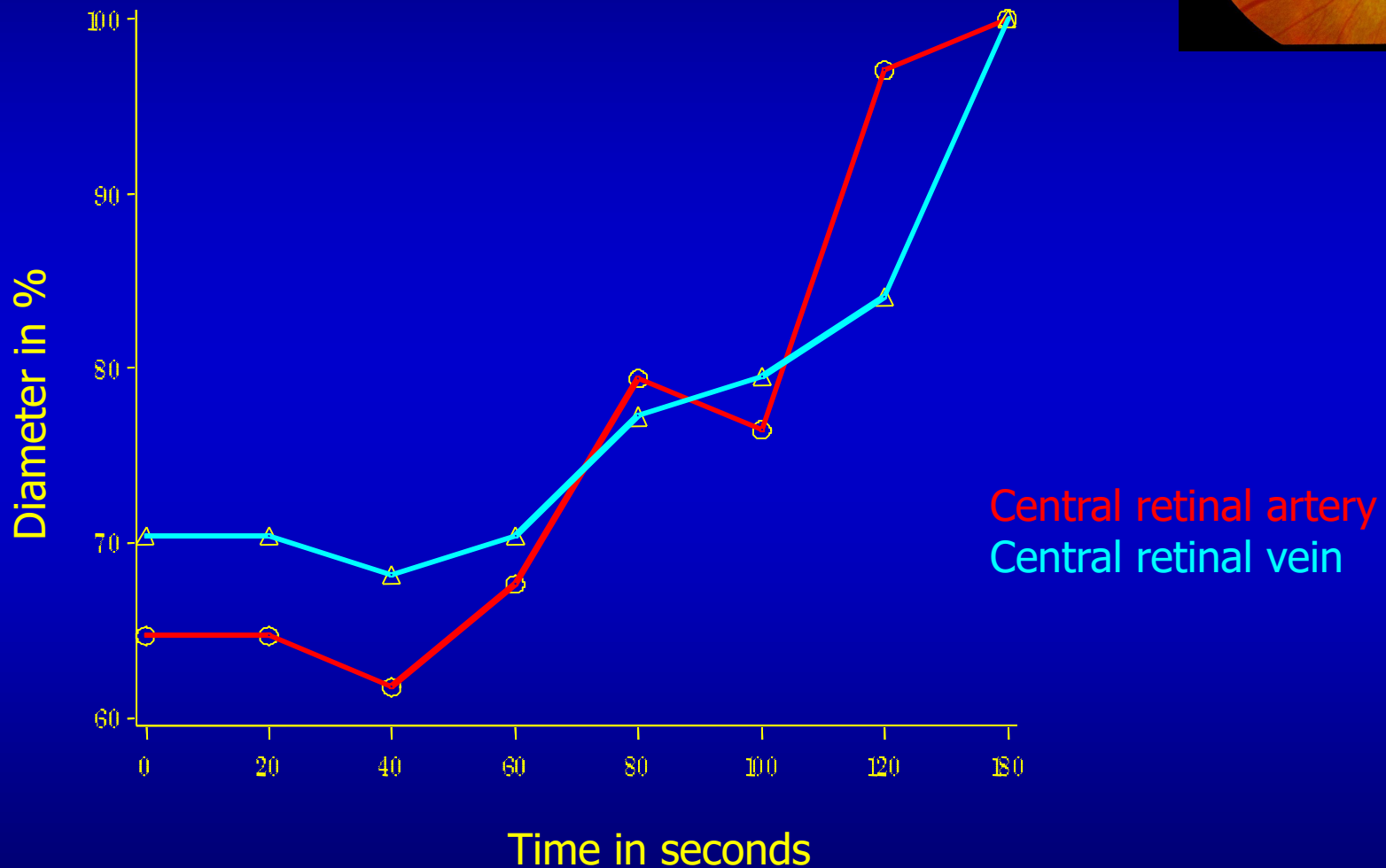
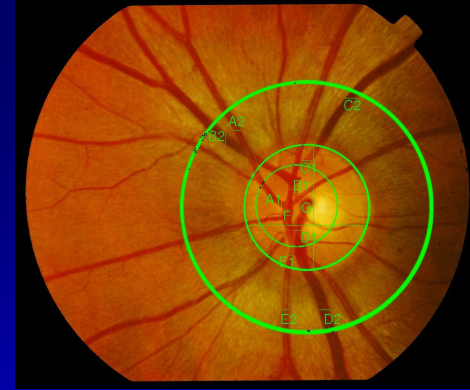
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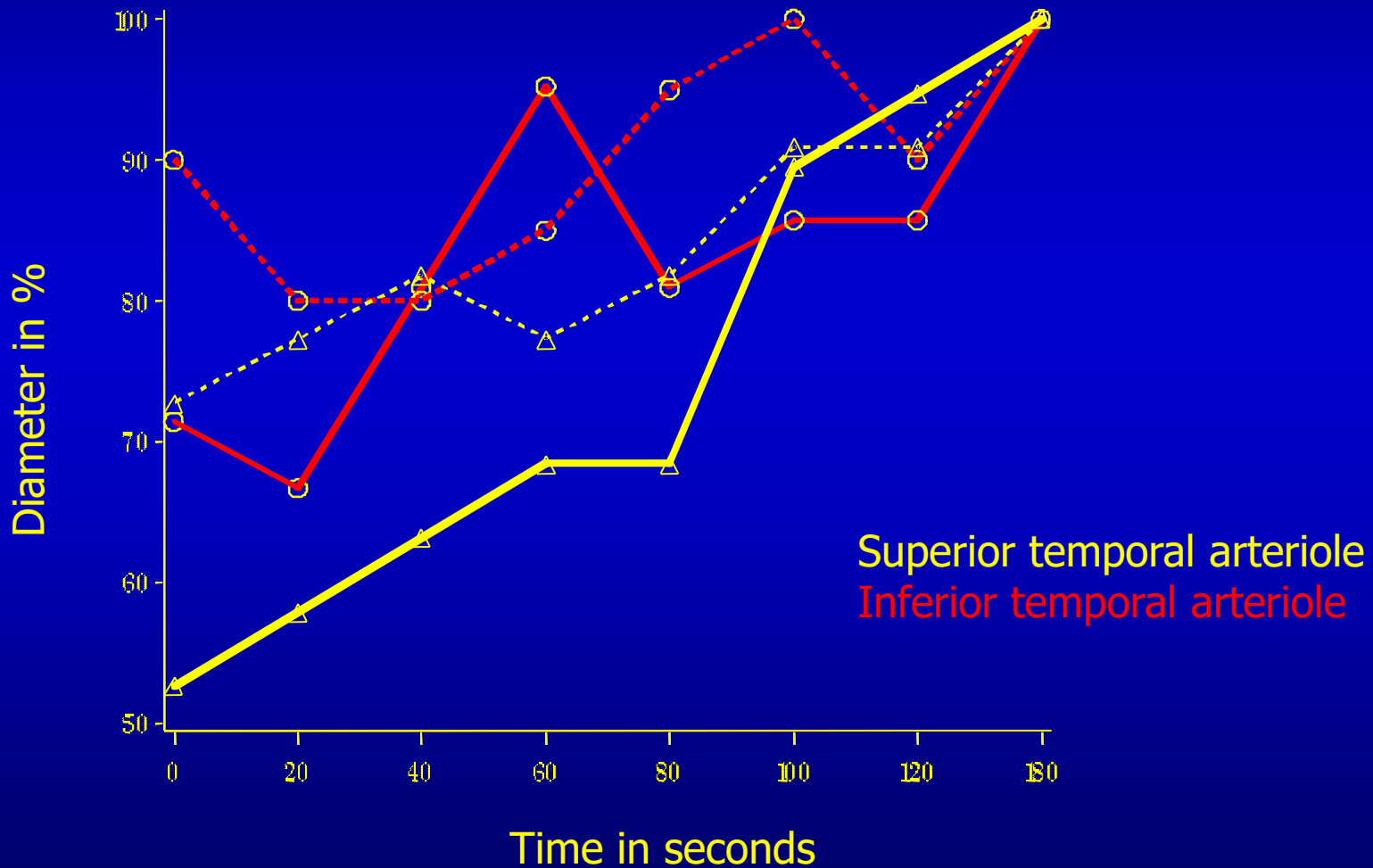
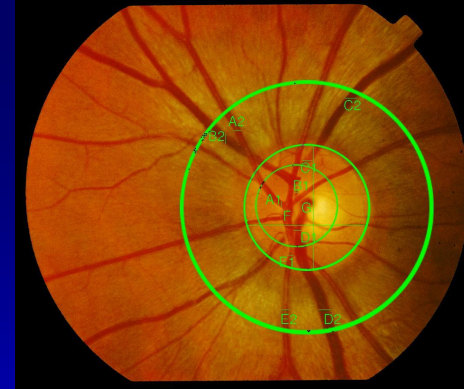




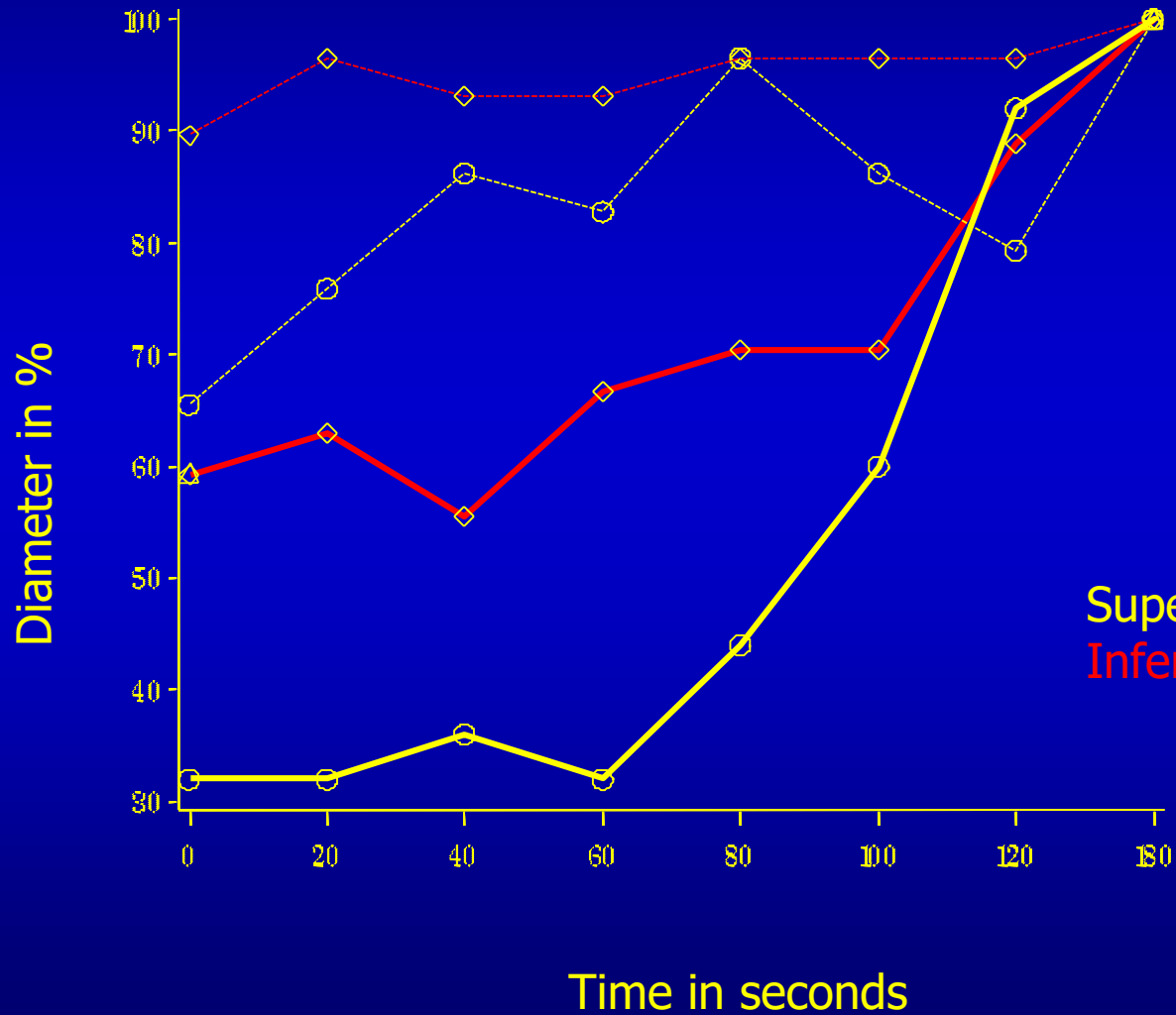
Central retinal artery & vein



Arterioles



Veinules



Permanent versus transient LOV

Embolic

- Von Graefe (Arch Opth 1859)
- Gowers (Lancet 1875)

Vasospasm

- Lundie (Ophth Rev 1906)
- Harbridge (Ophthalmology 1906)
- Bruner (Am J Ophth 1921)
- Traquair (Trans Ophth Soc UK 1948)
- Fisher (Arch Ophth 1952)

Pathogenesis

Platelet-Fibrin theory

- Fisher
Neurology 1959
- Ross
Lancet 1961

Retinal Vasospasm

- Burger *et al.*
NEJM 1991
- Winterkorn *et al.*
NEJM 1993
- Teman *et al.*
NEJM 1995

Patient Management

Aetiology

- Embolic
- Hypercoaguability
- Vasculitis
- Papilloedema
- Carotid stenosis
- Postural hypotension
- Vasospasm

Treatment

- Aspirin
- Anticoagulation
- Steroids
- Carotid endarterectomy
- Salt intake
- Ca-channel blockers
 - Nifedipine (40-80 mg/d)

Conclusion

- 25 year old patient with TMB
- Retinal vasculature
 - primary site: arterioles inside the disc
 - venule diameter reduced due to low blood supply
- Vasospasm as differential diagnosis in TMB
 - no observation of emboli
 - no response to Rx with Aspirin/ anticoagulation
- Patient management: Nifedipine