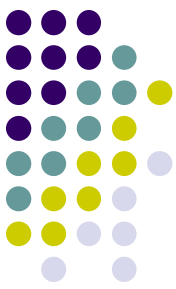


Before you begin: This is a big topic, and big topics beget big slide-sets.
There are natural breaks at slides 226ish and 303ish; I placed *break time!*
slides at those points to mark them

Q

Ocular Ischemic Syndrome

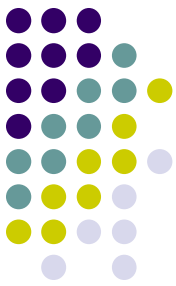
In a nutshell, what is OIS?



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A constellation of signs and symptoms owing to chronic ocular

one word

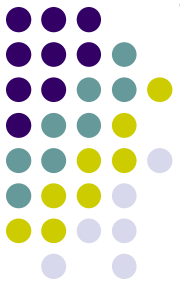


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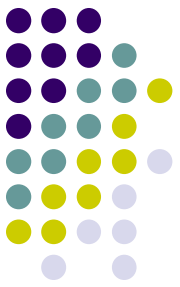
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Q

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5



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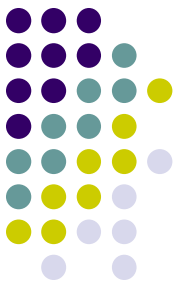
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6



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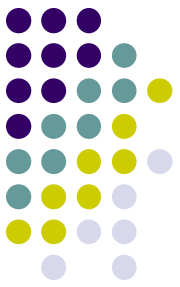
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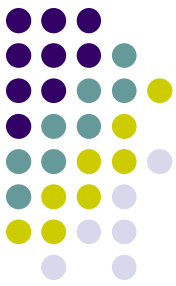
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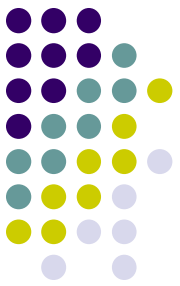
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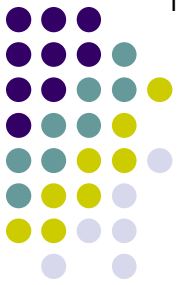
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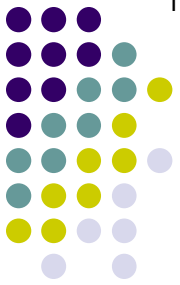
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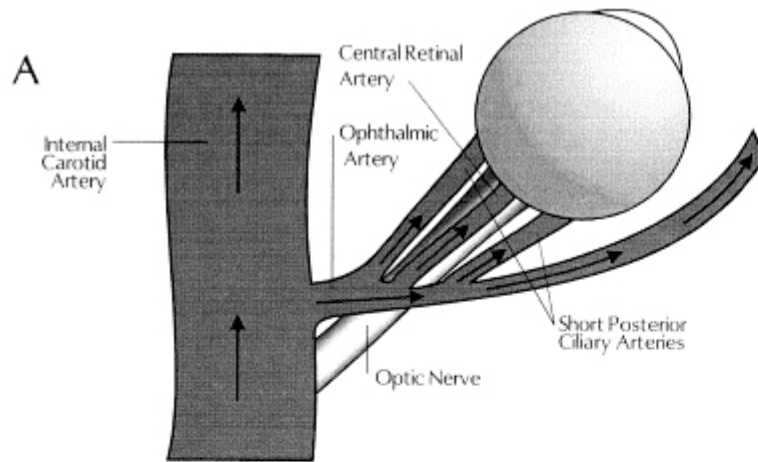
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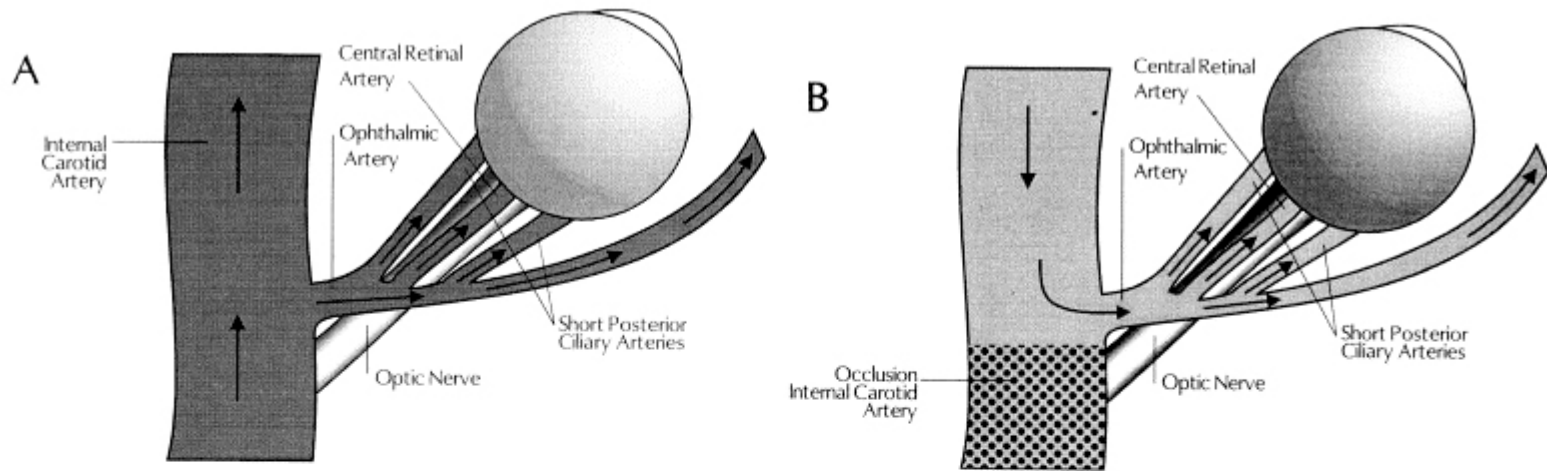
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Ocular Ischemic Syndrome



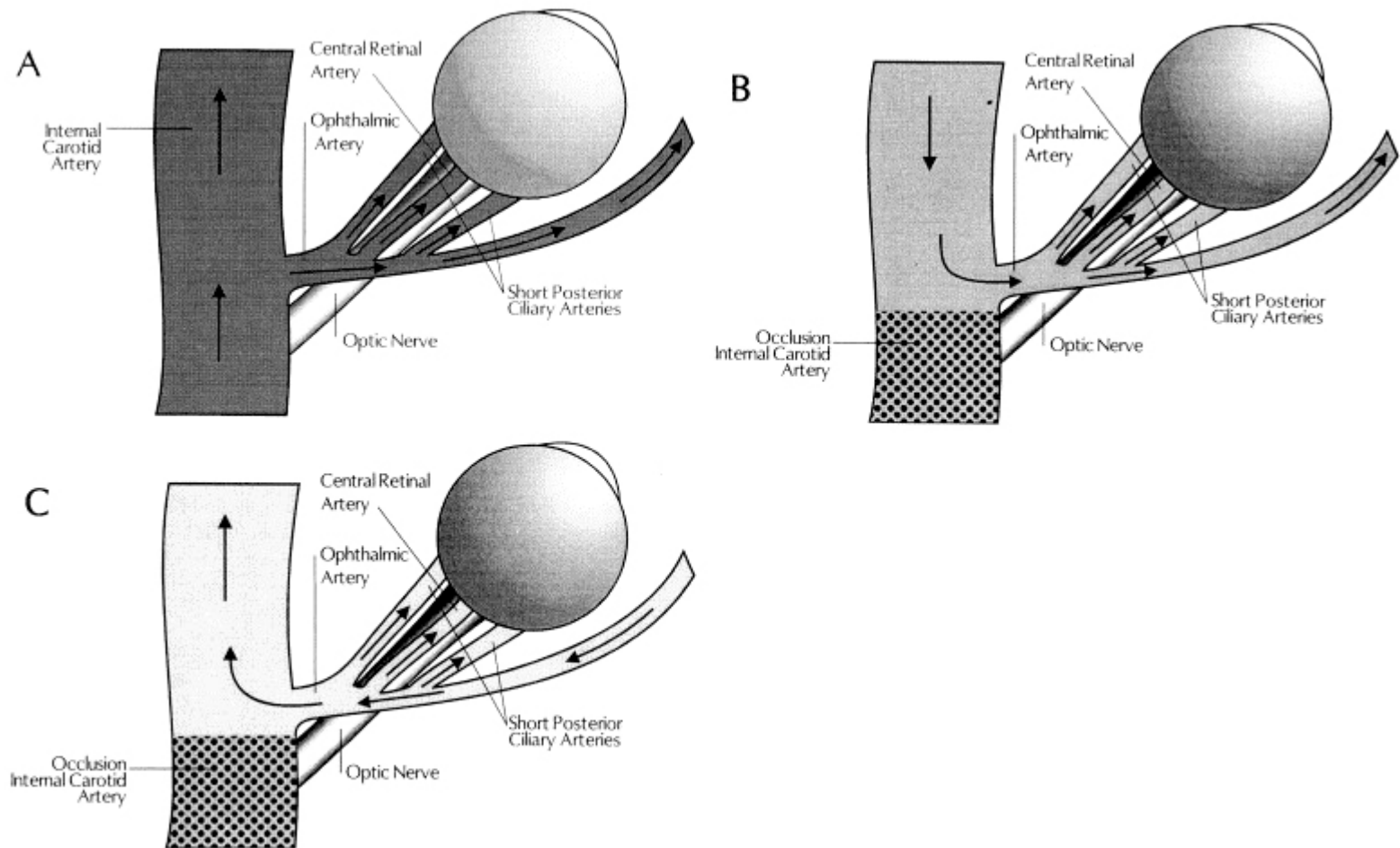
Blood flow in the ophthalmic artery and its branches. (A) Normal unobstructed flow.

Ocular Ischemic Syndrome

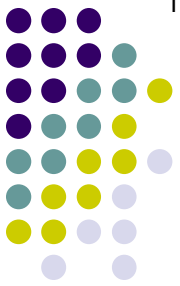


Blood flow in the ophthalmic artery and its branches. (A) Normal unobstructed flow. (B) In a patient with ICA occlusion and collateral circulation via the circle of Willis.

Ocular Ischemic Syndrome



Blood flow in the ophthalmic artery and its branches. (A) Normal unobstructed flow. (B) In a patient with ICA occlusion and collateral circulation via the circle of Willis. (C) In a patient with ICA occlusion and collaterals via the ophthalmic artery.



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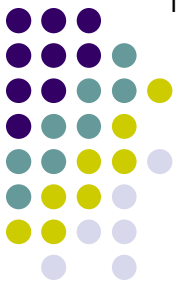
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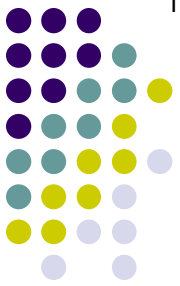
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Giant cell arteritis (GCA). Always bear GCA in mind when you evaluate an OIS pt!



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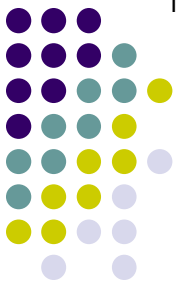
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internal carotid artery



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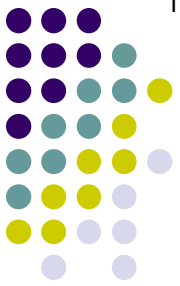
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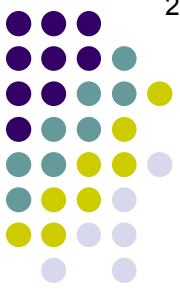
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Ocular Ischemic Syndrome



High-grade stenosis of the internal carotid artery origin (arrow) in two pts





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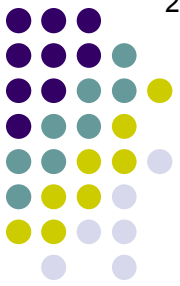
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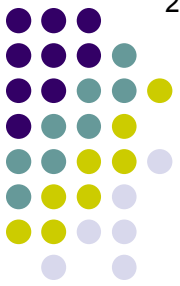
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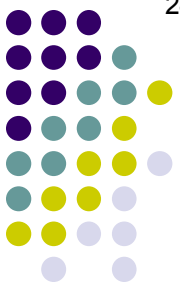
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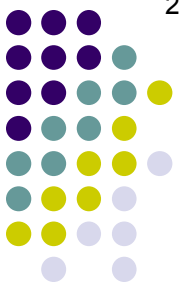
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Atherosclerosis is an affliction of vasculopathies—is vasculopathy a risk factor for OIS?

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Q

Ocular Ischemic Syndrome



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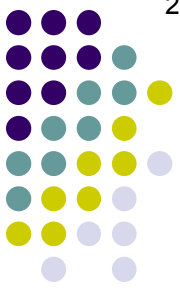
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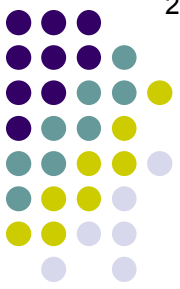
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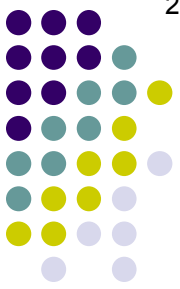
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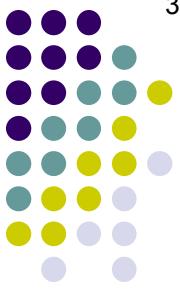
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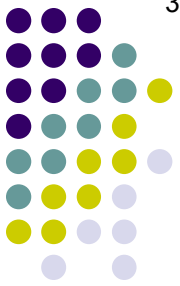
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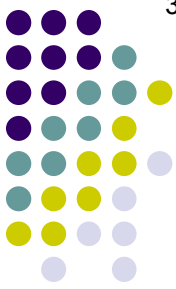
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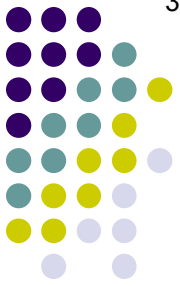
Ocular Ischemic Syndrome

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Does it present unilaterally, or bilaterally?





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Unilaterally (in about % of cases)

A

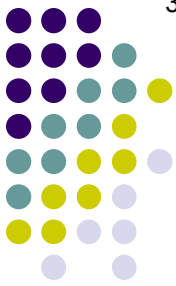
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Q

Ocular Ischemic Syndrome

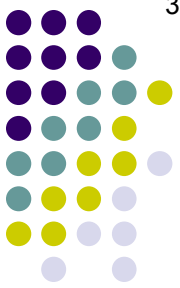
In a nutshell, what is OIS?

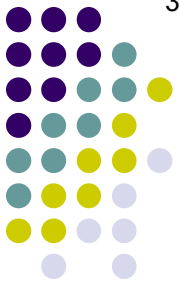
A constellation of signs and symptoms owing to chronic ocular hypoperfusion

Does it present unilaterally, or bilaterally?

Unilaterally (in about 80% of cases)

Is there a gender predilection?





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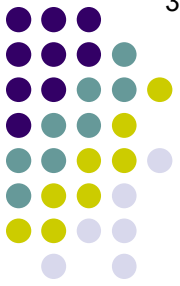
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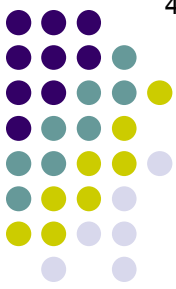
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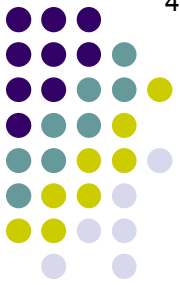
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Is there a gender predilection?

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Is there a relationship with age?





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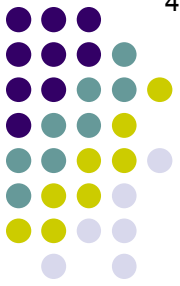
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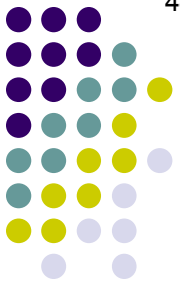
Is there a relationship with age?

Yes, OIS is a dz of older individuals—average age is about #; and it's rare before #

A

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44



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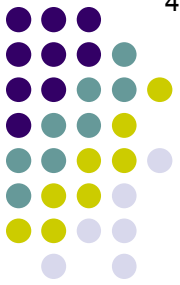
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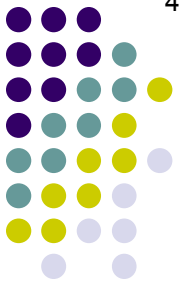
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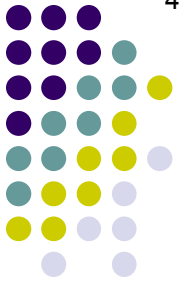
Estimates vary, but fair to say it's

common v
uncommon

A

Ocular Ischemic Syndrome

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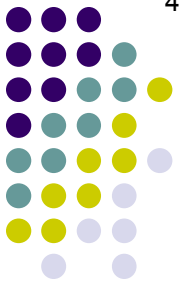
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How common is it?

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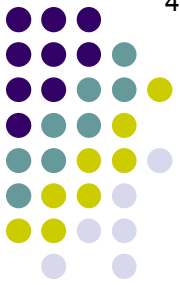
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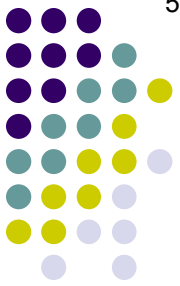
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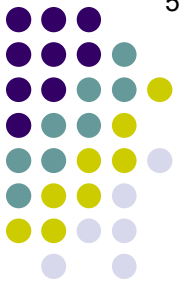
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Ocular Ischemic Syndrome

51



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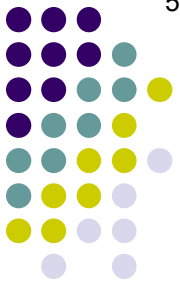
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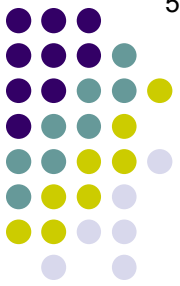
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--?
--?
--?
--?

Symptoms

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How common is it?

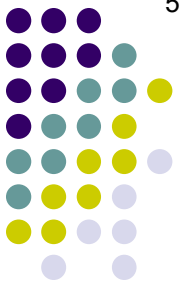
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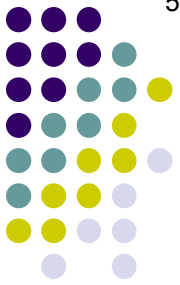
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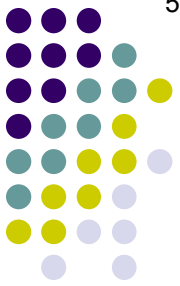
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- Pain
- Prolonged photostress recovery time

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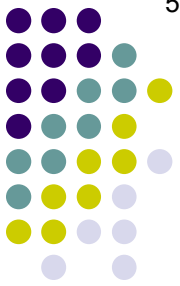
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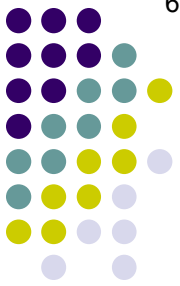
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The hemorrhages typically have a particular...

Size: [Small? Medium? Large?]

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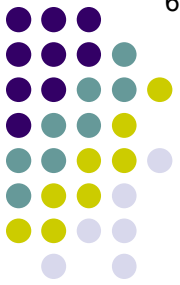
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Size: Medium to large

Configuration (shape): Dot/blot (DBH)

Yes, OIS is a dz of older individuals—average age is about 65 ; and it's rare before 55

How common is it?

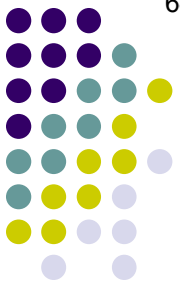
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Configuration (shape): Dot/blot (DBH)

Location: [Posterior pole? Periphery?]

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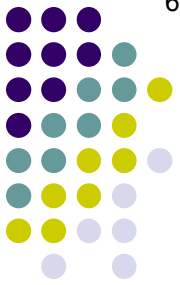
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Size: Medium to large

Configuration (shape): Dot/blot (DBH)

Location: The mid v
far periphery

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Size: Medium to large

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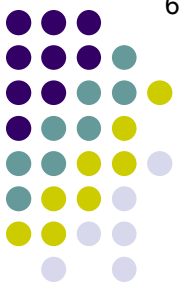
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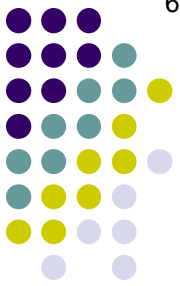
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Indeed it does—the 5-year mortality rate of OIS is 40%!

Ocular Ischemic Syndrome



Intraretinal hemorrhages in OIS: Midperipheral, medium-large, dot-blot



Ocular Ischemic Syndrome

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The hemorrhages typically have a particular...

Size: Medium to large

Location: Mid-periphery (5 BH)

Location: The mid-periphery?

Yes, OIS is a dz of older individuals, typically occurring after age 65; and it's rare before 55

How common is OIS?
Note: Inconsistencies exist among the BCSC books regarding the location of retinal hemorrhages in OIS:

Estimates range from 1% to 10% in patients with systemic hypertension and diabetic retinopathy.
--Location per the *Neuro* book: "Midperipheral"

What is the treatment?

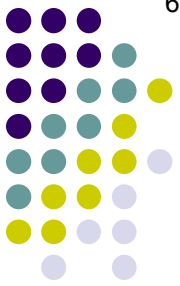
This is uncertain.
will be identified.

Does OIS have a poor prognosis?

Indeed it does—the 5-year mortality rate of OIS is 40%!

sign

No question—proceed at your own pace



Ocular Ischemic Syndrome

In a nutshell, what is OIS?

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The hemorrhages typically have a particular...

Size: Medium to large

Location: Mid-periphery (5 BH)

Location: *The mid-periphery?*

Yes, OIS is a dz of older individuals, typically occurring after age 65; and it's rare before 55

How common is OIS?
Note: Inconsistencies exist among the *BCSC* books regarding the location of retinal hemorrhages in OIS:

- Location per the *Neuro* book: "Midperipheral"
- Per the *Retina* book: "More often located in the midperipheral retina"

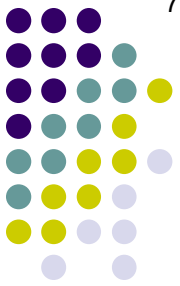
What is the treatment?

This is unclear. Treatment is typically supportive. The prognosis will be identical to the underlying condition.

Does OIS have a high mortality rate?

Indeed it does—the 5-year mortality rate of OIS is 40%!

No question—proceed at your own pace



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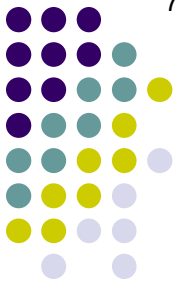
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Size: Medium to large

Location: Mid-periphery (50-60°) (DBH)

Location: The mid-periphery?

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How common is OIS?
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- Per the *Uveitis* book: "The midperiphery and far periphery"

What is the prognosis?
This is uncertain. Estimates of visual outcome vary. Some studies suggest that vision will be identical to the fellow eye, while others suggest that vision will be significantly worse. FWIW, EyeWiki indicates they're mid-peripheral. I was 'raised' to believe they're mid-peripheral myself, so that's how I roll. Caveat emptor.

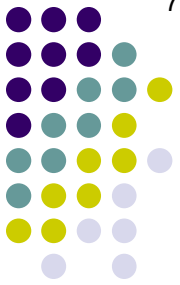
Does OIS have any systemic associations?
(FYI, this is not the last such inconsistency we will encounter re OIS.)

What is the mortality rate?
Indeed it does—the 5-year mortality rate of OIS is 40%!

No question—proceed at your own pace

Q

Ocular Ischemic Syndrome



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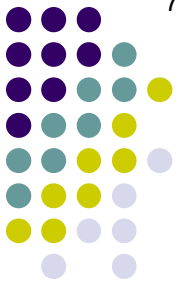
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Size: Medium to large

Configuration (shape): **Dot/blot (DBH)**

Location: The mid-periphery

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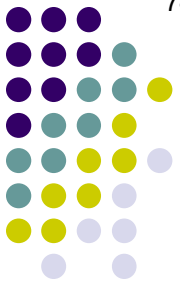
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Elongated and streaky



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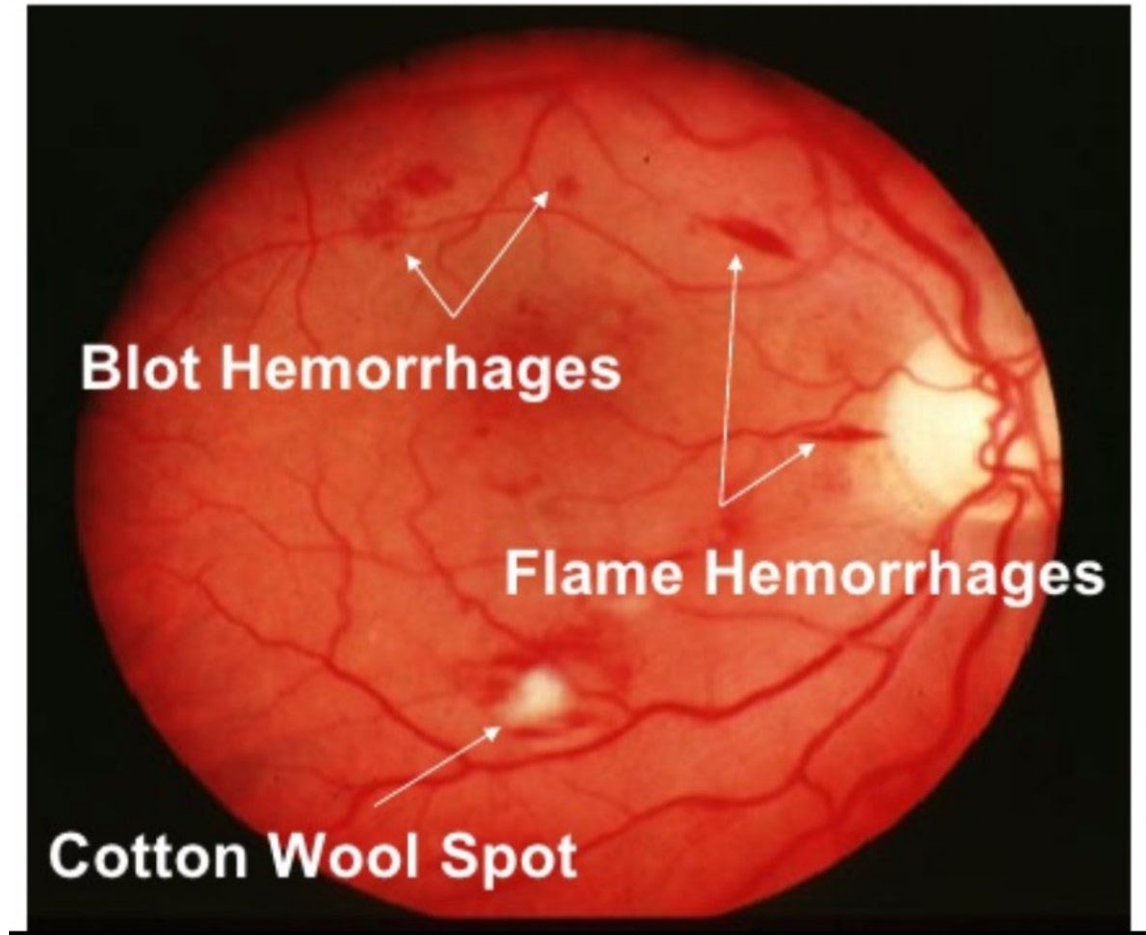
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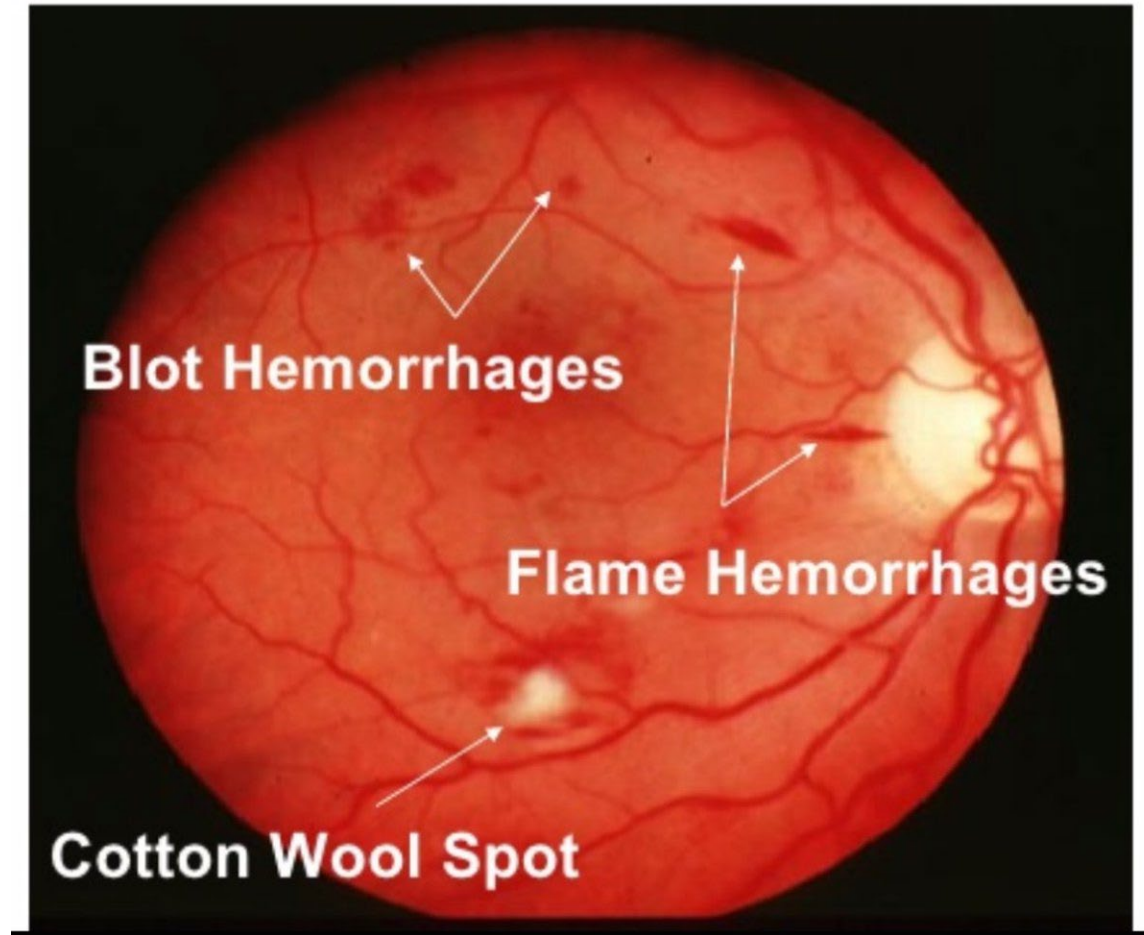
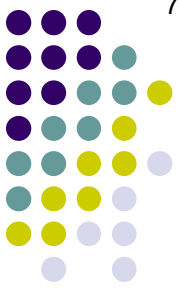
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They are known as 'flame hemorrhages' (FH)

Ocular Ischemic Syndrome

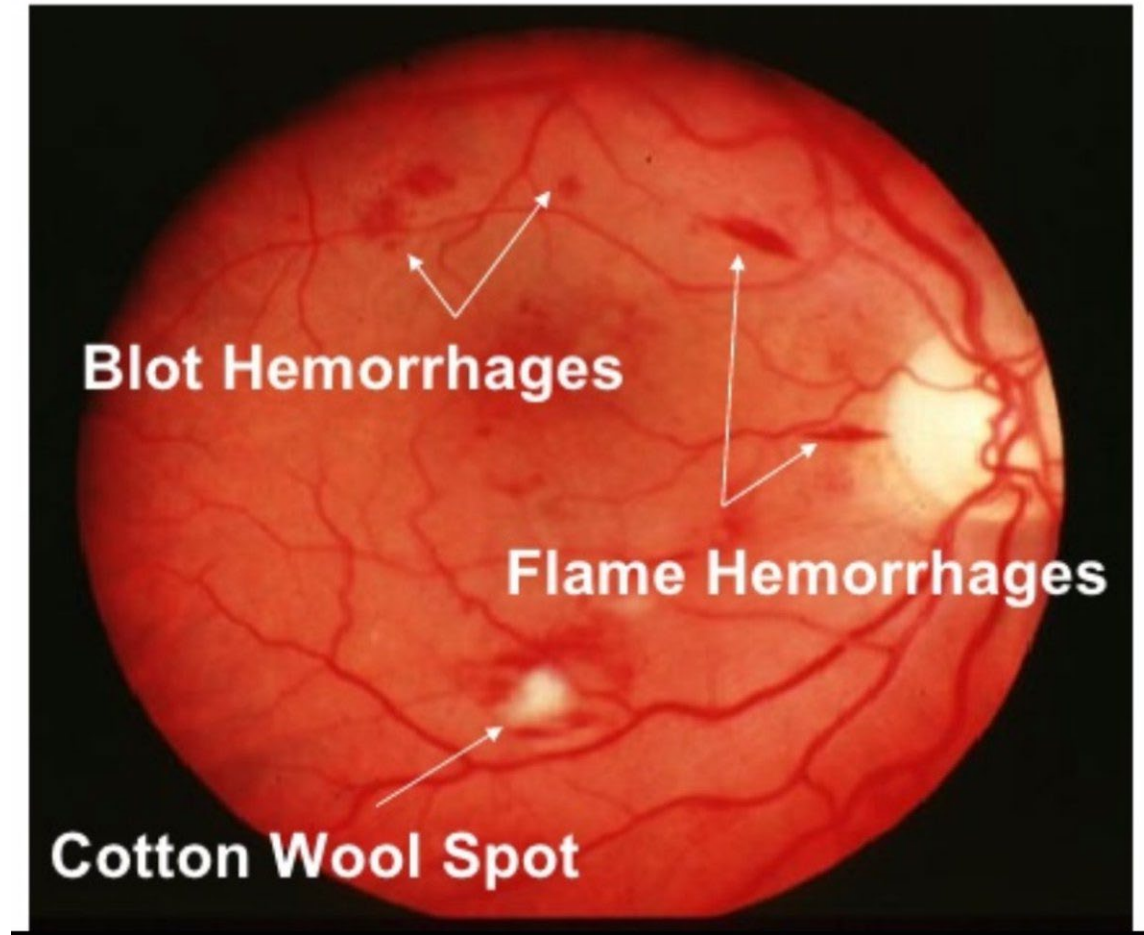
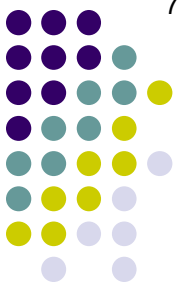


Flame vs DB hemorrhages (and a CWS for lulz)



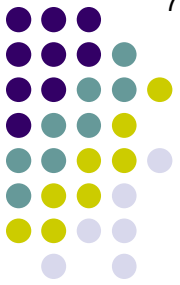
Flame vs DB hemorrhages (and a **CWS** for lulz)

Are CWS expected in OIS?



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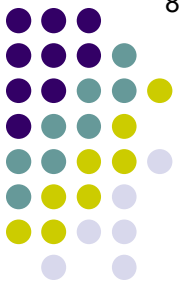
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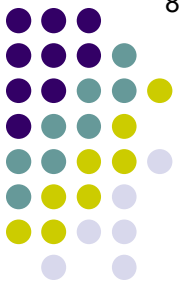
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It's a function of the **two words** in which the blood is located



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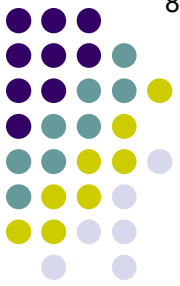
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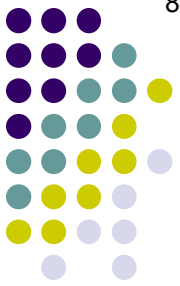
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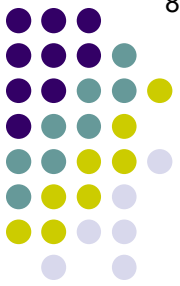
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Recall that NFL fibers are running parallel to the retina's surface toward the ONH. Heme in the NFL tends to settle between fibers, giving NFL hemorrhages their elongated and streaky appearance.



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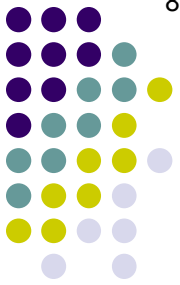
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Ocular Ischemic Syndrome

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What are the signs/symptoms of OIS?

Signs:

- Intraretinal hemorrhages
- NVI/NVA

Symptoms:

- Decreased vision
- Pain

Note: NVI is the sign referred to earlier as portending a poor visual prognosis.

65 ; and it's rare before 55

How common is it?

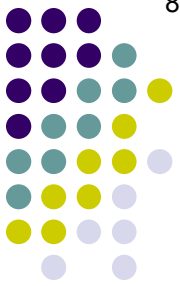
Estimates vary, but fair to say it's an uncommon condition—vastly less common than diabetic retinopathy and/or CRVO, certainly

What is the long-term visual prognosis for eyes with OIS?

This is uncertain, but it is often poor. One sign in particular portends poor vision (this sign will be identified shortly).

Does OIS carry implications for the general health of the afflicted individual?

Indeed it does—the 5-year mortality rate of OIS is 40%!



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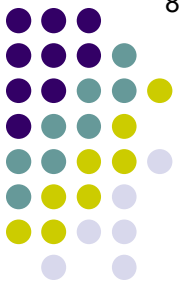
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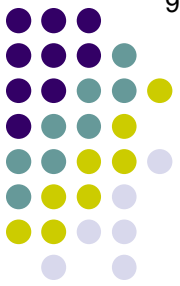
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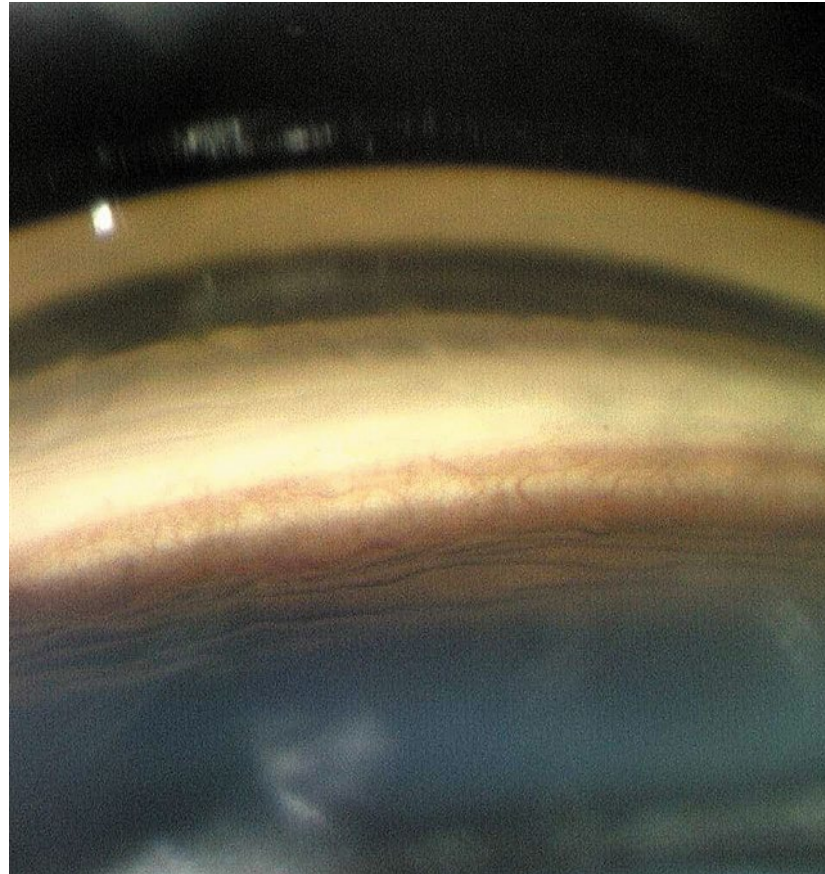
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Ocular Ischemic Syndrome

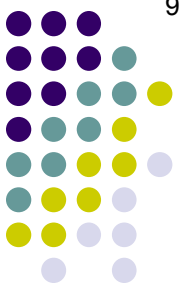


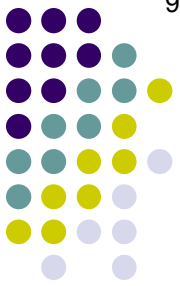
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Ocular Ischemic Syndrome



NVA





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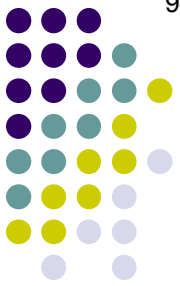
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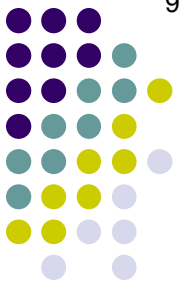
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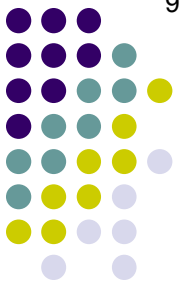
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When you hear 'NVI/NVA,' one condition should come to mind first—what is it?

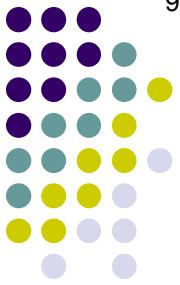
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Does OIS carry implications for the general health of the afflicted individual?

Indeed it does—the 5-year mortality rate of OIS is 40%!



In a nutshell, what is OIS?

A constellation of **signs and symptoms** owing to chronic ocular hypoperfusion

What are the signs/symptoms of OIS?

Signs:

- Intraretinal hemorrhages
- NVI/NVA**

Symptoms:

- Decreased vision
- Pain

What do NVI and NVA stand for in this context?

Neovascularization of the iris (NVI) and the angle (NVA)

Are NVI/NVA common in OIS?

Yes—roughly 2/3 of pts will manifest one or both

When you hear 'NVI/NVA,' one condition should come to mind first—what is it?

Diabetes. Diabetic retinopathy is by far the most common cause of NVI/NVA.

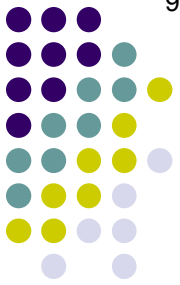
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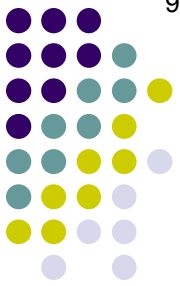
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Q

Ocular Ischemic Syndrome



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NVI/NVA often leads to what dreaded ocular condition?

Signs:

- Intraretinal hemorrhages
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What do NVI & NVA stand for?
Neovascularization

Are NVI/NVA common?
Yes—roughly 10% of patients

When you hear of a patient with OIS, what other conditions should you think of?
Diabetes. Dialysis.

Other than DE, what is the most common cause of NVI/NVA? (Remember, OIS is an uncommon condition.)

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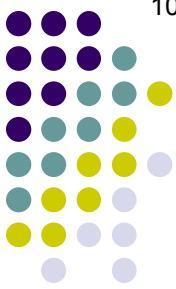
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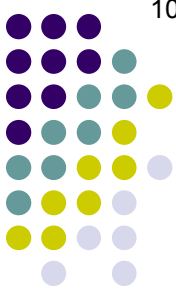
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Why is NVG “dreaded”?

Because it is difficult to control, and carries a high risk of loss of vision or even the eye

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Neovascularization

Are NVI/NVA common?
Yes—roughly 1% of the population

When you hear of someone with OIS, what other conditions should you think of?
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Other than DE, what is the most common cause of NVI/NVA? (Remember, OIS is an uncommon condition.)

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Yes—roughly 1 in 1000

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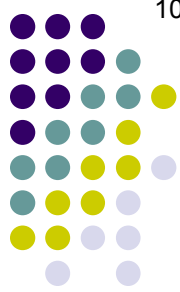
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Yes—roughly

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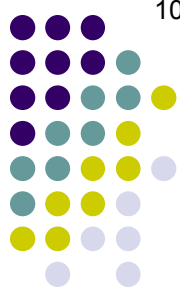
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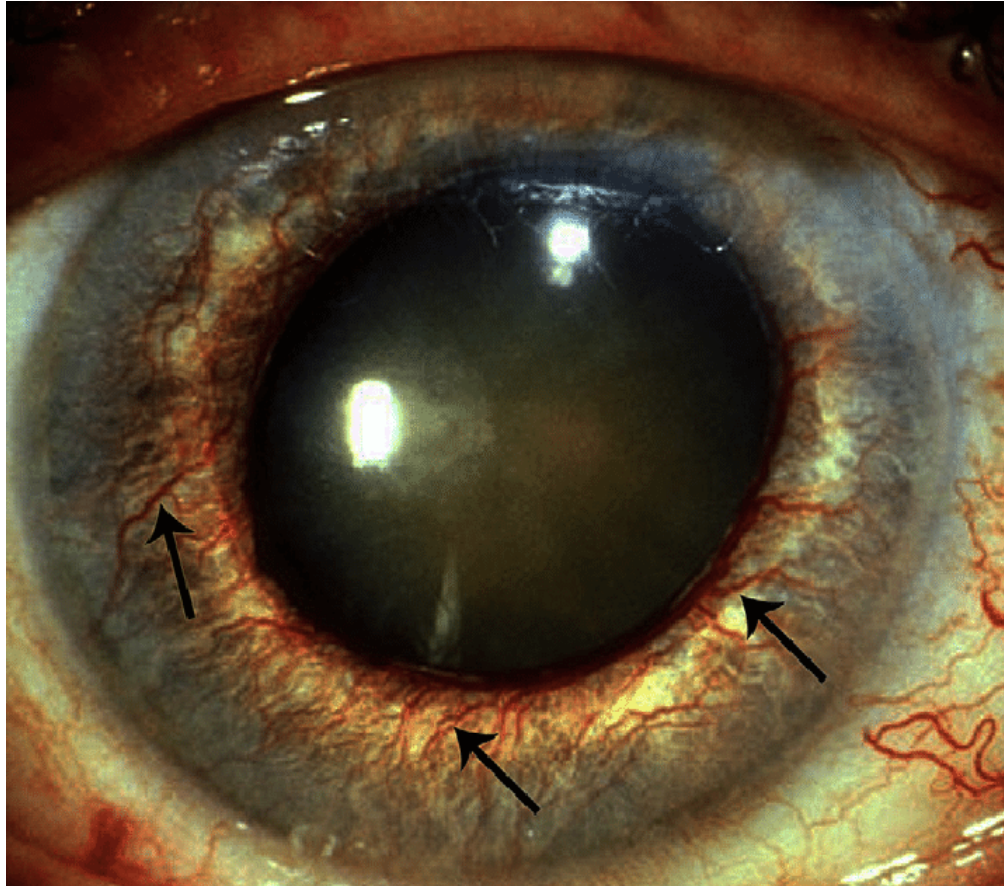
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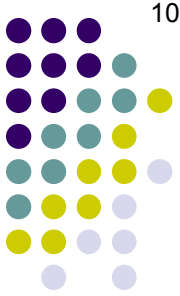
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Ocular Ischemic Syndrome



Closed angle in NVG



Q

Ocular Ischemic Syndrome



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Given this description, into what general class of glaucoma does NVG fall?

It is a form of **secondary angle-closure glaucoma** (and an important one at that)

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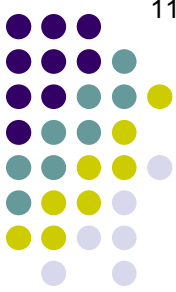
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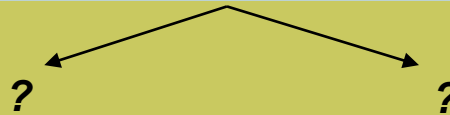
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We divide the 2ndry angle-closure glaucomas into two groups—what are they?

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Without pupillary block

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For (lots) more on secondary angle-closure glaucoma, see slide-set G16

Are NVI/NVA & What do

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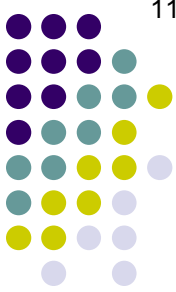
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What one word describes the underlying cause of most cases of NVG?

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Are NVI/NVA conditions?
Yes—roughly

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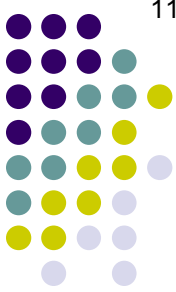
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Are NVI/NVA caused by systemic disease?

Yes—roughly 50%

What one word describes the underlying cause of most cases of NVG?

'Ischemia'

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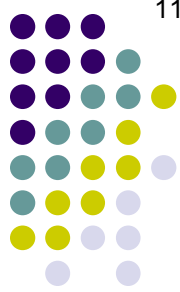
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Q/A

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Are NVI/NVA & Yes—roughly

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When you hear Diabetes. Dialysis

How does ischemia lead to NVI and NVA?

In a desperate attempt to acquire the oxygen they're lacking, ischemic cells release the signaling molecule **abb.**, a potent inducer of new blood vessel formation.

Other than DE NVI/NVA? (Remember, OIS is an uncommon condition.)

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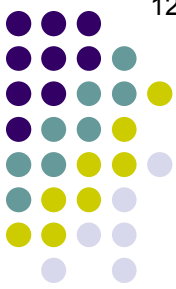
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How does NVA lead to NVG?

The NVA vessels don't ride solo; rather, they are accompanied by contractile elements (eg, fibroblasts). Along with the neo vessels, these elements cross from the peripheral iris to the peripheral cornea. Once established, contractile elements gonna contract, and when they do, they pull the iris up against the angle, closing it.

Are NVI/NVA

Yes—roughly

What one word describes the underlying cause of most cases of NVG?

'Ischemia'

When you hear

Diabetes. Dial

How does ischemia lead to NVI and NVA?

In a desperate attempt to acquire the oxygen they're lacking, ischemic cells release the signaling molecule **VEGF**, a potent inducer of new blood vessel formation.

Other than DE

NVI/NVA? (Remember, OIS is an uncommon condition.)

CRVO is mos def next on the list. The list after that is more difficult to order, with entities like uveitis, tumors, CRAO, sickle-cell, etc.

vision (this sign

Does OIS carry implications for the general health of the afflicted individual?

Indeed it does—the 5-year mortality rate of OIS is 40%!



In a nutshell, what is OIS?

A constellation of **signs and symptoms** resulting from chronic ocular hypoperfusion

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--Intraretinal hemorrhages

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Are NVI/NVA caused by ischemia?

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What one word describes the underlying cause of most cases of NVG?

When you hear 'ischemia', what do you think of?

Diabetes. Dialysis.

How does ischemia lead to NVI and NVA?

In a desperate attempt to acquire the oxygen they're lacking, ischemic cells release the signaling molecule **VEGF**, a potent inducer of new blood vessel formation. VEGF induces the NVI/NVA process.

Other than DE, what is the most common cause of NVI/NVA? (Remember, OIS is an uncommon condition.)

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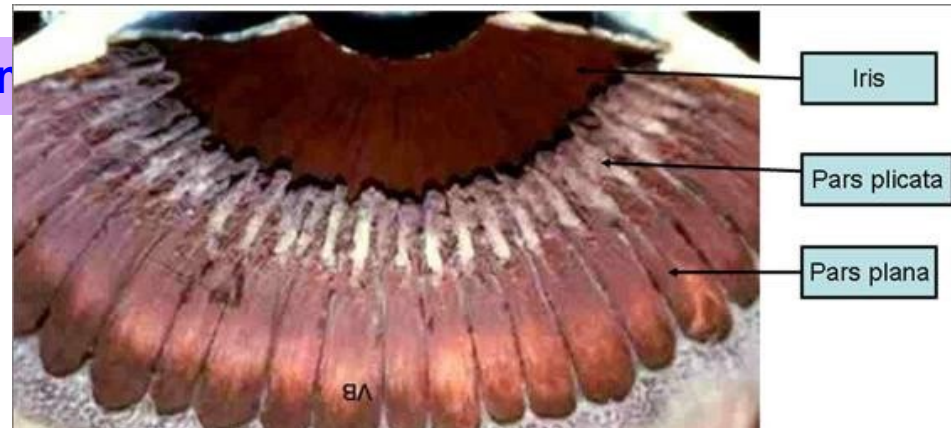
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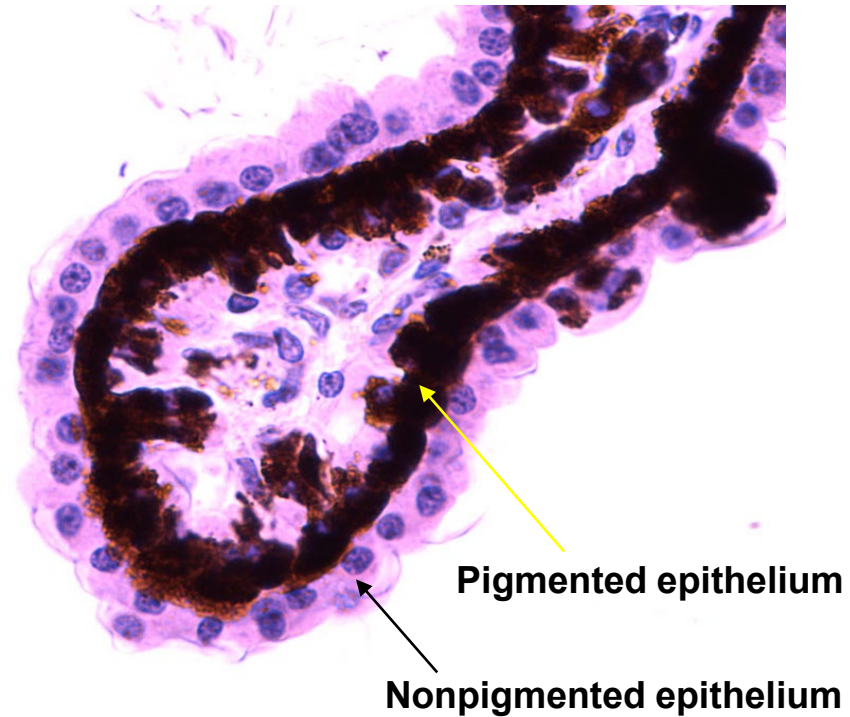
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Ocular Ischem

“Aqueous is formed in the nonpigmented epithelium of the pars plicata portion of the ciliary body”



Low mag shot of the pars plicata



High mag shot of the pars plicata

Q

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How should NVI/NVA in OIS be managed?

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PRP successfully induces regression of anterior-segment neo in a majority of cases. Intravitreal anti-VEGF tx can be considered as well.

Have a plan in place to intervene acutely if the above scenario comes to pass!

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- Retinal vascular

Symptoms:

Decreased vision

Will all OIS pts manifest cell and flare?

Yes, OIS is a diagnosis of exclusion. OIS is rare before 55

How common is OIS?

Estimates vary, but fair to say it's an uncommon condition—vastly less common than diabetic retinopathy and/or CRVO, certainly

What is the long-term visual prognosis for eyes with OIS?

This is uncertain, but it is often poor. One sign in particular portends poor vision (this sign will be identified shortly).

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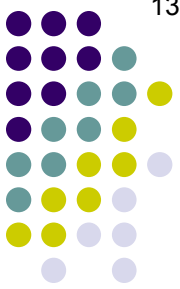
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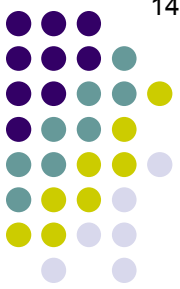
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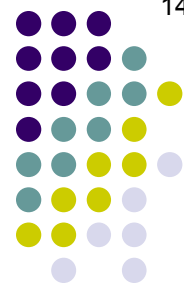
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- NVI/NVA
- AC cell/flare**
- Retinal vascular

Symptoms:

Decreased vision

Will all OIS pts manifest cell and flare?

No, but a fairly significant minority will (20%)

How severe is the reaction?

Not terrible--certainly nowhere near the 'hypopyon' range, say.

Of note, the classic presentation will have flare that is out of proportion to the cell.

Yes, OIS is a dz. Not rare before 55

How common is

Estimates vary, but fair to say it's an uncommon condition—vastly less common than diabetic retinopathy and/or CRVO, certainly

What is the long-term visual prognosis for eyes with OIS?

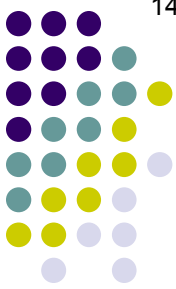
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Does OIS carry implications for the general health of the afflicted individual?

Indeed it does—the 5-year mortality rate of OIS is 40%!

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Ocular Ischemic Syndrome



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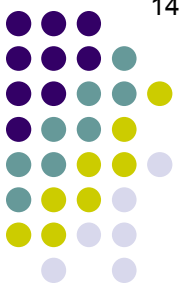
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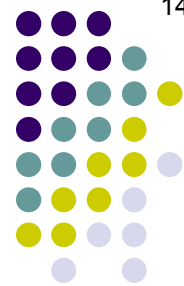
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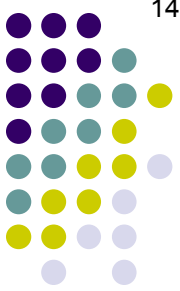
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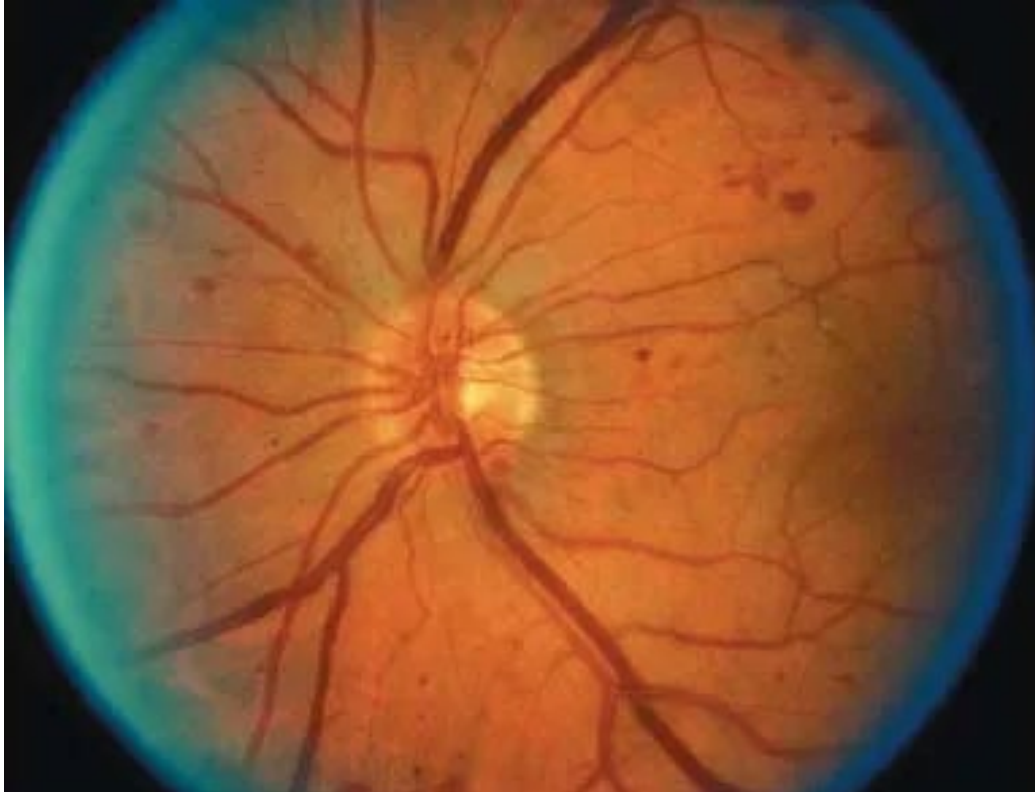
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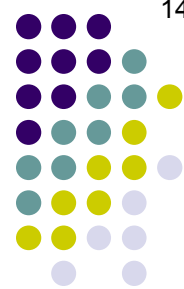
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OIS: Arteriolar narrowing; venous dilation without tortuosity



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Estimate Here we encounter another inconsistency in the BCSC books, common than diabetic regarding the appearance of the retinal venules in OIS:

- Appearance per the *Neuro* book: "dilated (nontortuous)"
- Per the *Retina* book: "dilated but not very tortuous"

What is it? --Per the *Uveitis* book: "dilated [and] tortuous"

This is unusual --Per the *Uveitis* book: "dilated [and] tortuous" vision (this sign will be identified shortly).

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No question—proceed

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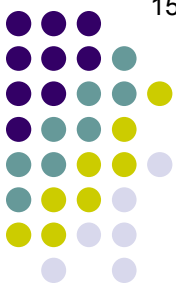
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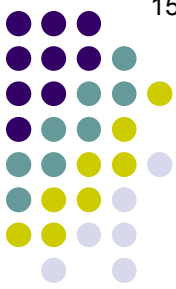
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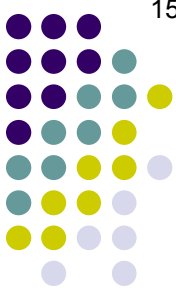
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FWIW, EyeWiki states the venules are “dilated but not tortuous.” This is my understanding as well. Caveat emptor.

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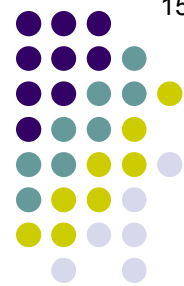
Head's up: We will have much more to say about differentiating between OIS and CRVO later in the slide-set

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Is the decreased vision constant, or intermittent?

Yes, OIS is a diagnosis of exclusion. It's rare before 55

How common is it?

Estimates vary, but fair to say it's an uncommon condition—vastly less common than diabetic retinopathy and/or CRVO, certainly

What is the long-term visual prognosis for eyes with OIS?

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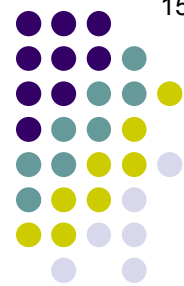
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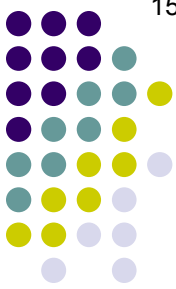
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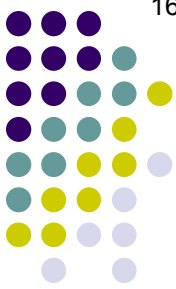
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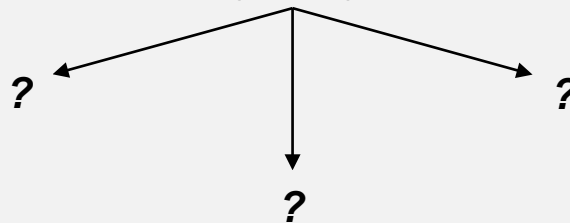
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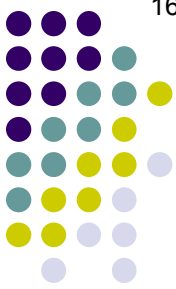
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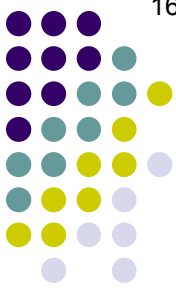
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What is Uhthoff's phenomenon?

Uhthoff's phenomenon

What is Uhthoff's phenomenon?

This is a transient increase in vision that will be followed by a decrease in vision.

Does OIS cause blindness?

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TMVL in **condition** 2ndry to **three words**

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TMVL in optic neuritis 2ndry to increased body temp

What temp-elevating activity does the Neuro book emphasize?

Disc edema

Drusen

Uhthoff's phenomenon

Does OIS can

Indeed it does—the 5-year mortality rate of OIS is 40%!



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It can be either

What is the term of art for intermittent vision loss in one eye?
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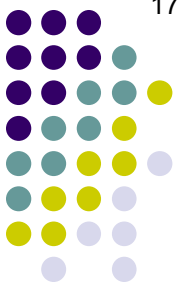
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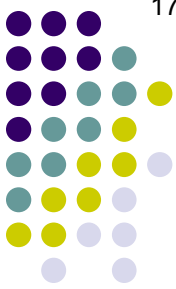
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- └ Dry eyes

Vascular issues

- └ OIS
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- └ ?
- └ ?

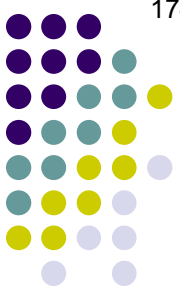
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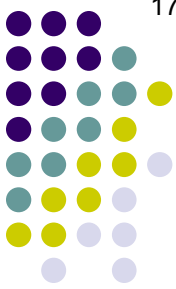
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How common is it?

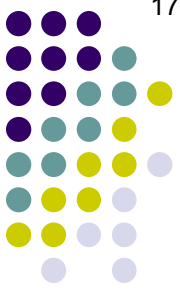
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What is the long-term visual prognosis for eyes with OIS?

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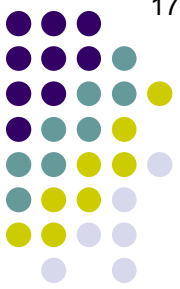
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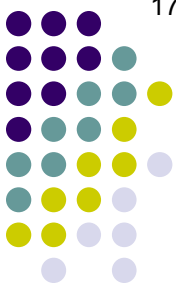
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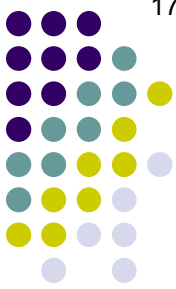
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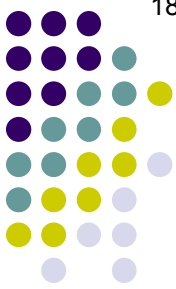
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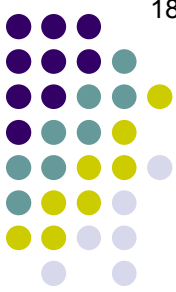
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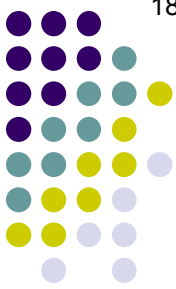
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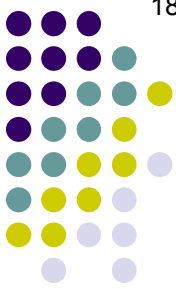
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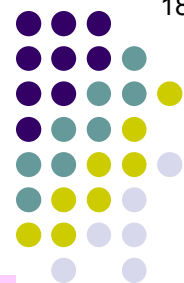
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Signs

- Intraocular pressure
- NVI/MA
- AC
- Retinal

Yes, OIS

How common

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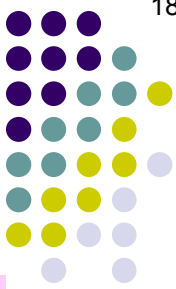
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Signs

- Intraocular pressure
- NVI/NAION
- ACG
- Retinal ischemia

Yes, OIS

55

How common is OIS?

Estimated prevalence

diagnosed. When considering the differential diagnosis of acute angle-closure glaucoma?

--OIS

--Subacute angle-closure glaucoma

Pupillary block

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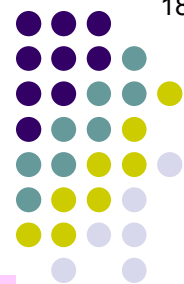
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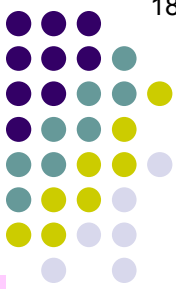
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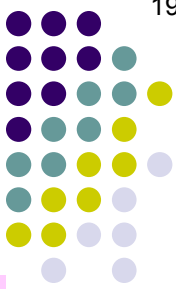
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Signs

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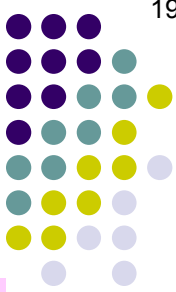
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Pupillary block

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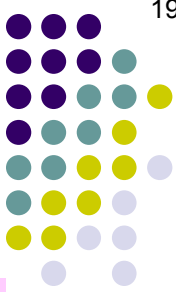
Circling back to the original point: What happens during sleep that provides pain relief in subacute angle-closure glaucoma?

Does OIS carry implications for the general health of the affected individual?

Indeed it does—the 5-year mortality rate of OIS is 40%!

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Ocular Ischemic Syndrome



In a nutshell, what is OIS?

A constellation of signs and symptoms due to chronic ocular hypoperfusion.

Are you sure about this? I thought pupillary block was the mechanism underlying acute angle-closure glaucoma.

Pupillary block is the mechanism underlying both subacute **and** acute angle-closure glaucoma. It also underlies chronic angle-closure glaucoma, and is implicated in some cases of plateau iris syndrome.

Signs

- Intraocular pressure
- N/V
- ACG
- Retinal

If they share a mechanism, how do acute and subacute angle-closure glaucoma differ?

In **acute** ACG, the entire angle becomes occluded over a short period of time, producing a precipitous rise in IOP. The extremely high IOP causes severe eye pain and HA, N/V, and blurry vision. The event will not resolve without intervention.

In **subacute** ACG, some *portion* of the angle occludes *episodically*, resulting in periods of moderate (not extreme) IOP elevation. This IOP causes moderate eye pain and HA, and blurry vision. The episodes resolve spontaneously, often after sleep. IOP is normal between episodes, which can make diagnosis challenging.

Yes, O

How can

E. Whe

di three conditions should come to mind: V

--OIS

--**Subacute angle-closure glaucoma**

--Migraine

will be identified shortly).

subacute angle-closure glaucoma?

Pupillary block

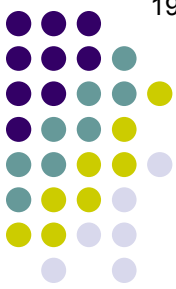
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- Decreased vision
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How common is it?

Estimates vary, but
diabetic retinopathy

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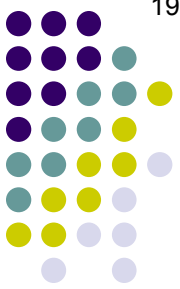
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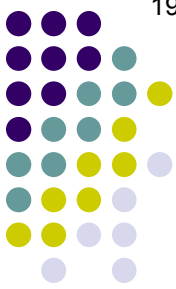
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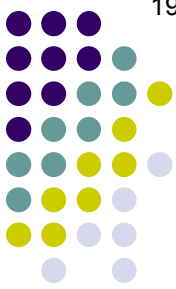
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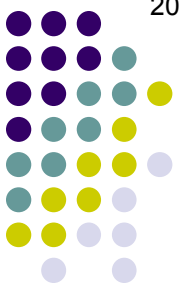
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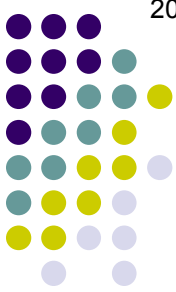
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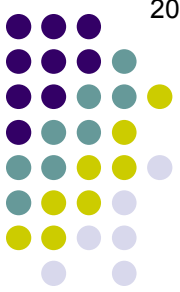
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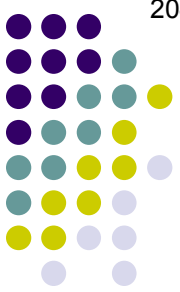
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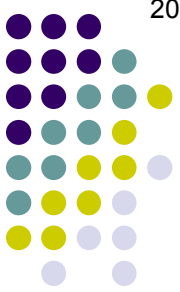
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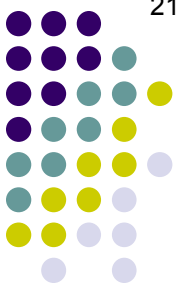
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Her result would be normal—which makes this test very useful in determining whether a pt with VA loss has macular/vascular dz vs an optic neuropathy

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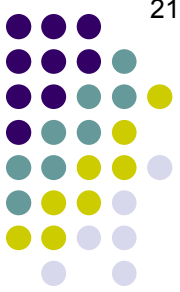
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Hints forthcoming

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Four more signs come up enough that we should at least mention them here:

Estimates vary, but fair to say it's an uncommon condition—much less common than diabetic retinopathy and

What is the long-term visual prognosis for eyes with OIS?

This is uncertain, but it is often poor. One sign in particular portends poor vision (this sign will be identified shortly).

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- ? [Kinda goes with cell/flare]
- ?
- ?
- ?

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- Ocular surface injection*
- ?
- ?
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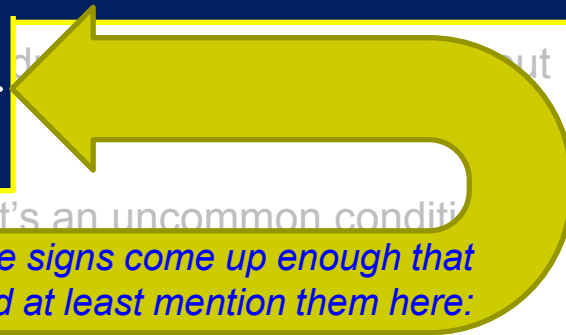
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This is uncertain, but it is often poor. One sign in particular portends poor vision (this sign will be identified shortly).

Does OIS carry implications for the general health of the afflicted individual?

Indeed it does—the 5-year mortality rate of OIS is 40%!



In a nutshell, what is OIS?

A constellation of **signs and symptoms** owing to chronic ocular hypoperfusion

What are the signs/symptoms of OIS?

Signs:

- Intraretinal hemorrhages
- NVI/NVA
- AC cell/flare
- Retinal vascular changes
- Ocular surface injection*
- Corneal edema*
- ONH [redacted]
- ?

Symptoms:

- Decreased vision
- Pain
- Prolonged photostress recovery time



Four more signs come up enough that we should at least mention them here:

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- ? [*Another anterior-seg dev*]

Symptoms:

- Decreased vision
- Pain
- Prolonged photostress recovery time



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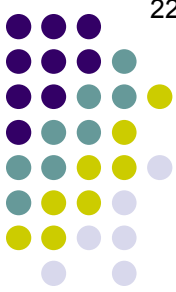
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Symptoms:

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- Pain
- Prolonged photostress recovery time



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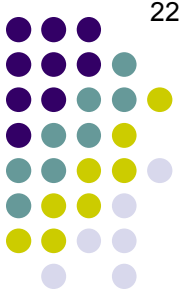
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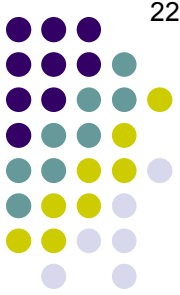


What type of cataract is classically associated with OIS?

:

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Symptoms:

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...but 65 ; and it's rare before 55

Estimates vary, but fair to say it's an uncommon condition, mostly less common than

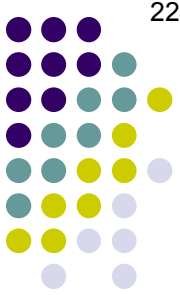
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:Posterior subcapsular (PSC)

portends poor vision (this sign

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Symptoms:

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What type of cataract is classically associated with OIS?

:Posterior subcapsular (PSC)

Are other ocular ischemic conditions associated with PSC?

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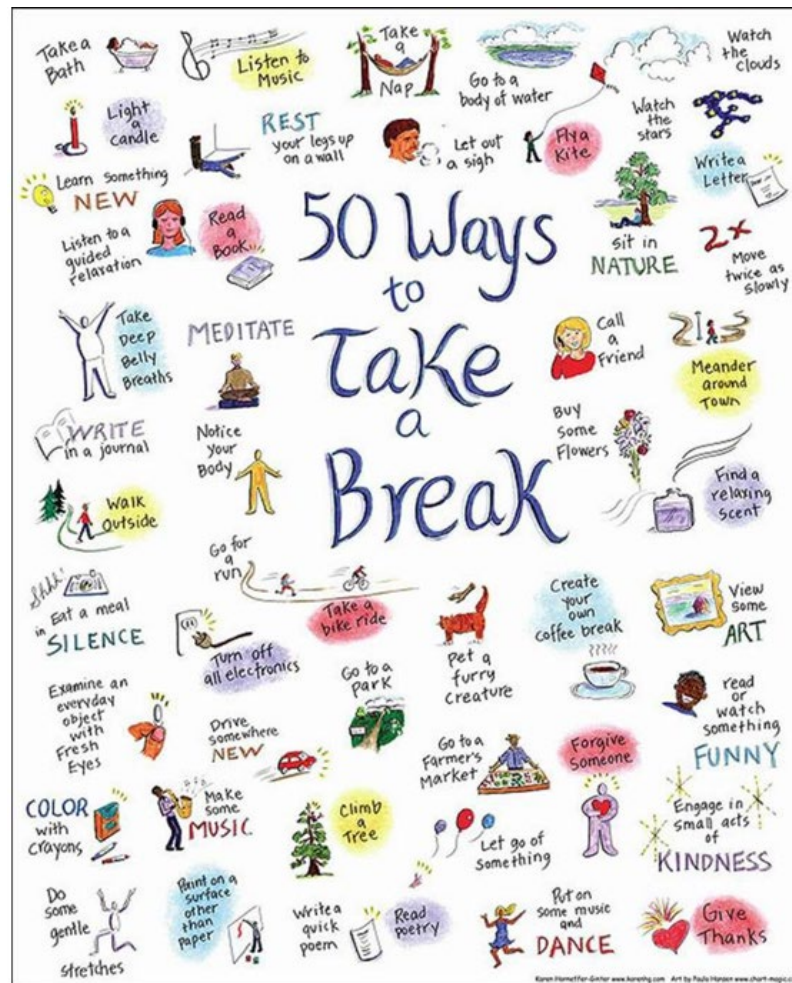
:Posterior subcapsular (PSC)

Are other ocular ischemic conditions associated with PSC?

I'm glad you asked...

Does OIS carry implications for the general health of the afflicted individual?

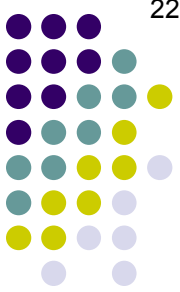
Indeed it does—the 5-year mortality rate of OIS is 40%!



(This is a good point in the set to take a break)

Q

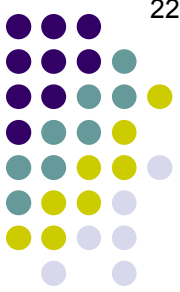
Ocular Ischemic Syndrome



- Regarding ischemic conditions that cause PSCs...The *Lens* book names # besides OIS.
- Ocular ischemic syndrome

A

Ocular Ischemic Syndrome



- Regarding ischemic conditions that cause PSCs...The *Lens* book names **three** besides OIS.
 -
 - **Ocular ischemic syndrome**
 -
 -

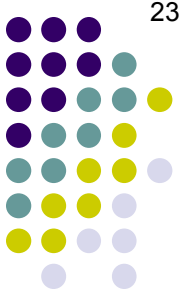


Q

Ocular Ischemic Syndrome

- Regarding ischemic conditions that cause PSCs...The *Lens* book names **three** besides OIS. *What are they?*
 - ?
 - Ocular ischemic syndrome
 - ?
 - ?

Mnemonic forthcoming



Q

Ocular Ischemic Syndrome

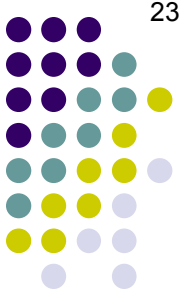
- Regarding ischemic conditions that cause PSCs...The *Lens* book names **three** besides OIS. *What are they?*
 - **B**
 - **O**cular ischemic syndrome
 - **A**
 - **T**

Mnemonic: **BOAT**

Hints forthcoming

Q

Ocular Ischemic Syndrome

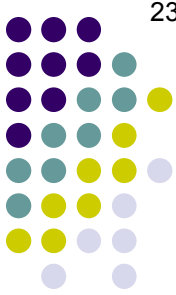


- Regarding ischemic conditions that cause PSCs...The *Lens* book names **three** besides OIS. *What are they?*

- Systemic ● **B**
- **O**cular ischemic syndrome
- Ocular ● **A**
- Systemic ● **T**

Mnemonic: **BOAT**

Hints: One is ocular and...
Two are systemic and...



Q

Ocular Ischemic Syndrome

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- Systemic ● **B**
- **O**cular ischemic syndrome
- Ocular ● **A**
- Systemic ● **T**

Mnemonic: **BOAT**

Hints: One is ocular and...**iatrogenic**

Two are systemic and...**eponymous, and rare (but you read about them in med school)**



- Regarding ischemic conditions that cause PSCs...The *Lens* book names **three** besides OIS. *What are they?*

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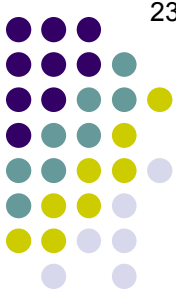
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Mnemonic: **How bad can the cataract get in these conditions?**

Hints: One

Two (I'm a med school)



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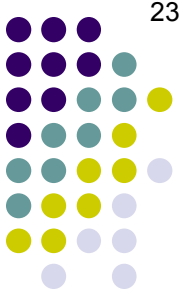
Mnemonic: **How bad can the cataract get in these conditions?**

Hints: One **Total opacification is not uncommon**

Two (I forgot the name of the other one, but I know it's in med school)

Q

Ocular Ischemic Syndrome



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In a nutshell, what is Buerger's disease?

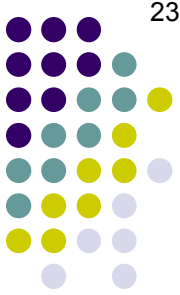
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Systemic

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In a nutshell, what is Buerger's disease?

An inflammatory vaso-occlusive disease of **size range**-sized vessels

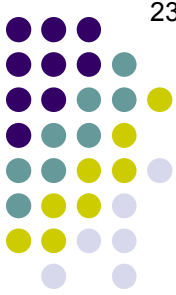
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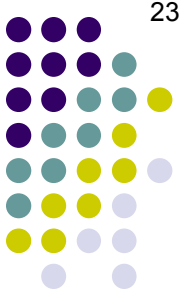
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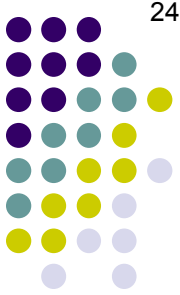
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Systemic

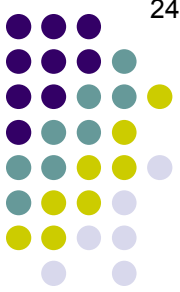
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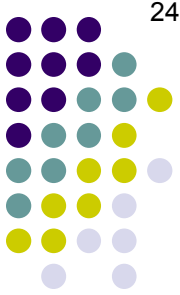
Ocular An inflammatory vaso-occlusive disease of small/medium -sized vessels. It has a propensity for affecting vessels of the extremities, and because of this, it is not uncommon for Buerger's pts to undergo multiple two words.

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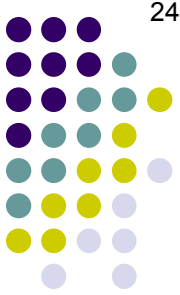
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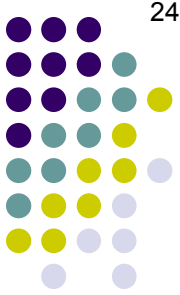
Mnemonic: BOAT

Hints: One is ocular and...iatrogenic

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Q

Ocular Ischemic Syndrome



It was noted that anterior segment ischemia syndrome is iatrogenic. In very general terms, what physician-related activity is the cause?

Systemic

Ocular

- **Anterior segment ischemia syndrome**
- Takayasu's arteritis (Pulseless disease)

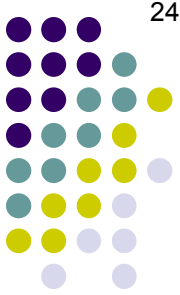
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Systemic

Ocular

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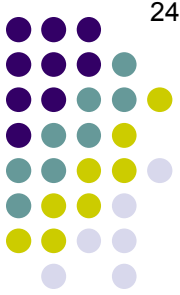
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Again in general terms, how does eye surgery cause anterior segment ischemia?

Systemic

Ocular

- **Anterior segment ischemia syndrome**

Systemic

- Takayasu's arteritis (Pulseless disease)

Mnemonic: **BOAT**

Hints: One is ocular and **iatrogenic**

Two are systemic and...epithymous, and rare (but you read about them in med school)

A

Ocular Ischemic Syndrome



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By impeding/disrupting blood flow to the anterior segment

Systemic

Ocular

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Systemic

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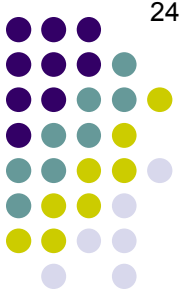
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Again in general terms, how does eye surgery cause anterior segment ischemia?

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What two eye surgeries are the most common cause?

--?

--?

Ocular

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Systemic

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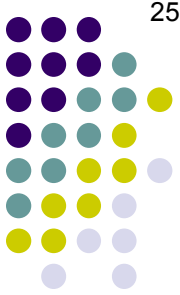
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Eye surgery

Again in general terms, how does eye surgery cause anterior segment ischemia?

By impeding/disrupting blood flow to the anterior segment

What two eye surgeries are the most common cause?

- Scleral buckling surgery
- Strabismus surgery

Ocular

- **Anterior segment ischemia syndrome**

Systemic

- Takayasu's arteritis (Pulseless disease)

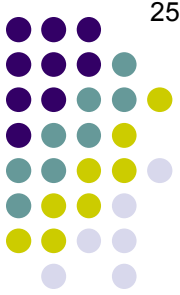
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What two eye surgeries are the most common cause?

--Scleral buckling surgery

--Strabismus surgery on # or more muscles simultaneously

Ocular

● **Anterior segment ischemia syndrome**

Systemic

● Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

*Hints: One is ocular and. **iatrogenic***

Two are systemic and...eponymous, and rare (but you read about them in med school)

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Ocular Ischemic Syndrome



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Again in general terms, how does eye surgery cause anterior segment ischemia?

By impeding/disrupting blood flow to the anterior segment

What two eye surgeries are the most common cause?

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Ocular

● **Anterior segment ischemia syndrome**

Systemic

● Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

*Hints: One is ocular and. **iatrogenic***

Two are systemic and...eponymous, and rare (but you read about them in med school)

Q

In a nutshell, what is Takayasu's arteritis?

● R
P
O

Systemic ●



Ocular ●

Systemic ●

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

Hints: One is ocular and...iatrogenic

Two are systemic and...eponymous, and rare (but you read about them in med school)

Q/A

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vs smaller vessels

● R
P
O

Systemic ●

●

Ocular ●

Systemic ●

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

Hints: One is ocular and...iatrogenic

Two are systemic and...eponymous, and rare (but you read about them in med school)

A

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

● R
P
O

Systemic ●



Ocular ●

Systemic ●

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

Hints: One is ocular and...iatrogenic

Two are systemic and...eponymous, and rare (but you read about them in med school)

Q

In a nutshell, what is Takayasu's arteritis?

Answer: An inflammatory disease that typically affects larger vessels

occlusive vasculitis

What clinically significant effect results from this occlusion?

● R
P
O

Systemic

Ocular

Systemic

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

Hints: One is ocular and...iatrogenic

Two are systemic and...eponymous, and rare (but you read about them in med school)

A

In a nutshell, what is Takayasu's arteritis?

Answer: **occlusive vasculitis** that typically affects larger vessels

What clinically significant effect results from this occlusion?

Downstream issues related to chronic (or acute-on-chronic) ischemia

● R
P
O

Systemic ●

●

Ocular ●

Systemic ●

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

Hints: One is ocular and...iatrogenic

Two are systemic and...eponymous, and rare (but you read about them in med school)

Q

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

● R
P
O

Systemic ●

●

Ocular ●

Systemic ●

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

Hints: One is ocular and...iatrogenic

Two are systemic and...eponymous, and rare (but you read about them in med school)

Q/A

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

phrase

is the classic description of the affected vessels

● R
P
O

Systemic

Ocular

Systemic

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

Hints: One is ocular and...iatrogenic

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A

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The aorta and its major branches' is the classic description of the affected vessels

● R
P
O

Systemic ●

●

Ocular ●

Systemic ●

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

Hints: One is ocular and...iatrogenic

Two are systemic and...eponymous, and rare (but you read about them in med school)

Q

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The aorta and its **major branches**' is the classic description of the affected vessels

Does this include the carotids?

● R
P
O

Systemic ●

●

Ocular ●

Systemic ●

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

Hints: One is ocular and...iatrogenic

Two are systemic and...eponymous, and rare (but you read about them in med school)

A

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The aorta and its **major branches**' is the classic description of the affected vessels

Does this include the carotids?

Indeed it does

● R
P
O

Systemic ●

●

Ocular ●

Systemic ●

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

Hints: One is ocular and...iatrogenic

Two are systemic and...eponymous, and rare (but you read about them in med school)

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In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The aorta and its **major branches**' is the classic description of the affected vessels

Does this include the carotids?

Indeed it does

Are the vertebrals 'major enough' be affected?

Systemic

Ocular

Systemic

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

Hints: One is ocular and...iatrogenic

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An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

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Does this include the carotids?

Indeed it does

Are the vertebrals 'major enough' be affected?

They are indeed

Systemic

Ocular

Systemic

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

Hints: One is ocular and...iatrogenic

Two are systemic and...eponymous, and rare (but you read about them in med school)

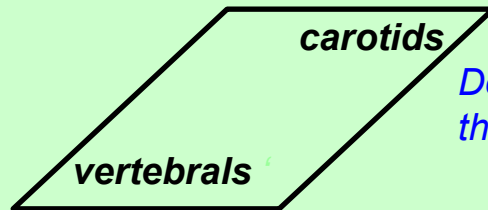
Q

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The aorta and its **major branches**' is the classic description of the affected vessels



Does involvement of these vessels put the pt a risk of CNS involvement?

● R
P
O

Systemic ●

●

Ocular ●

Systemic ●

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

Hints: One is ocular and...iatrogenic

Two are systemic and...eponymous, and rare (but you read about them in med school)

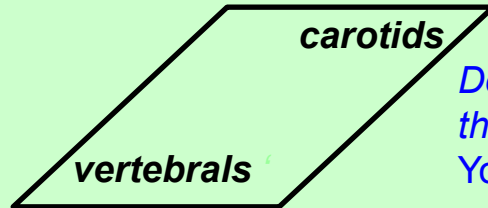
A

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The aorta and its **major branches**' is the classic description of the affected vessels



Does involvement of these vessels put the pt at risk of CNS involvement?
You betcha

● R
P
O

Systemic ●

●

Ocular ●

Systemic ●

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

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An occlusive vasculitis that typically affects larger vessels

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'The aorta and its major branches' is the classic description of the affected vessels

●

R

Is it common, or rare?

P

O

Systemic

●

●

Ocular

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Systemic

●

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An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The aorta and its major branches' is the classic description of the affected vessels

●

R

Is it common, or rare?

Rare

P

O

Systemic

●

●

Ocular

●

Systemic

●

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

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In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The aorta and its major branches' is the classic description of the affected vessels

●

R

Is it common, or rare?

Rare

P

O

Is there a gender predilection?

Systemic

●

●

Ocular

●

Systemic

●

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

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Q/A

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An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The aorta and its major branches' is the classic description of the affected vessels

● R

Is it common, or rare?

Rare

P

Is there a gender predilection?

O

Yes, it is far more common in

Systemic ●

●

Ocular ●

Systemic ●

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

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●

R

Is it common, or rare?

Rare

P

Is there a gender predilection?

O

Yes, it is far more common in women

Systemic

●

●

Ocular

●

Systemic

●

Takayasu's arteritis (Pulseless disease)

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Is it common, or rare?

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Is there a gender predilection?

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Yes, it is far more common in women

Systemic

●

Is there an age predilection?

●

Ocular

●

Systemic

●

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

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Q/A

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An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The aorta and its major branches' is the classic description of the affected vessels

● R

Is it common, or rare?

Rare

P

Is there a gender predilection?

O

Yes, it is far more common in women

Systemic

●

Is there an age predilection?

Yes, most cases present in

life period

●

Ocular

●

Systemic

●

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

Hints: One is ocular and...iatrogenic

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Is it common, or rare?

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Is there a gender predilection?

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Yes, it is far more common in women

Systemic

●

Is there an age predilection?

Yes, most cases present in early adulthood

●

Ocular

●

Systemic

●

Takayasu's arteritis (Pulseless disease)

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Systemic

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Is there an age predilection?

Yes, most cases present in early adulthood

●

Is there an ethnicity predilection?

Ocular

●

Systemic

●

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'The aorta and its major branches' is the classic description of the affected vessels

● R

Is it common, or rare?

Rare

P

Is there a gender predilection?

O

Yes, it is far more common in women

Systemic

●

Is there an age predilection?

Yes, most cases present in early adulthood

●

Is there an ethnicity predilection?

Ocular

●

Yes, it is reported at higher rates in [redacted] populations

Systemic

●

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

Hints: One is ocular and...iatrogenic

Two are systemic and...eponymous, and rare (but you read about them in med school)

A

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The aorta and its major branches' is the classic description of the affected vessels

●

R

Is it common, or rare?

Rare

P

Is there a gender predilection?

O

Yes, it is far more common in women

Systemic

●

Is there an age predilection?

Yes, most cases present in early adulthood

●

Is there an ethnicity predilection?

Ocular

●

Yes, it is reported at higher rates in Asian populations

Systemic

●

Takayasu's arteritis (Pulseless disease)

Mnemonic: BOAT

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In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

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'The aorta and its major branches' is the classic description of the affected vessels

●

R

Is it common, or rare?

Rare

P

Is there a gender predilection?

O

Yes, it is far more common in women

Systemic

●

Is there an age predilection?

Yes, most cases present in early adulthood

●

Is there an ethnicity predilection?

Ocular

●

Yes, it is reported at higher rates in Asian populations

Systemic

●

Takayasu's arteritis (Pulseless disease)

Mnemonic: If you encounter Takayasu's (on the OKAP), how is it likely to present?

Hints: C

T

ool)

Q/A

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The aorta and its major branches' is the classic description of the affected vessels

● R *Is it common, or rare?*

Rare

P

Is there a gender predilection?

O

Yes, it is far more common in women

Systemic

●

Is there an age predilection?

Yes, most cases present in early adulthood

●

Is there an ethnicity predilection?

Ocular

●

Yes, it is reported at higher rates in Asian populations

Systemic

●

Takayasu's arteritis (Pulseless disease)

Mnemonic

If you encounter Takayasu's (on the OKAP), how is it likely to present?

Hints: C

As a demographic of ethnicity descent with OIS, abb., or abb. + word

T

ool)

A

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The aorta and its major branches' is the classic description of the affected vessels

● R *Is it common, or rare?*

Rare

P

Is there a gender predilection?

O

Yes, it is far more common in women

Systemic

●

Is there an age predilection?

Yes, most cases present in early adulthood

●

Is there an ethnicity predilection?

Ocular

●

Yes, it is reported at higher rates in Asian populations

Systemic

●

Takayasu's arteritis (Pulseless disease)

Mnemonic: If you encounter Takayasu's (on the OKAP), how is it likely to present?

Hints: (As a young woman of Asian descent with OIS, TVL, or VF loss

T

ool)

Q

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The aorta and its major branches' is the classic description of the affected vessels

● R

Is it common, or rare?

Rare

P

Is there a gender predilection?

O

Yes, it is far more common in women

Systemic

●

Is there an age predilection?

Yes, most cases present in early adulthood

●

Is there an ethnicity predilection?

Ocular

●

Yes, it is reported at higher rates in Asian populations

Systemic

●

Takayasu's arteritis (Pulseless disease)

Mnemonic

If you encounter Takayasu's (on the OKAP), how is it likely to present?

Hints: C

As a young woman of Asian descent with OIS, TVL, or VF loss

T

What nonocular complaints might she have?

ool)

A

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The aorta and its major branches' is the classic description of the affected vessels

● R *Is it common, or rare?*

Rare

P

Is there a gender predilection?

O

Yes, it is far more common in women

Systemic

●

Is there an age predilection?

Yes, most cases present in early adulthood

●

Is there an ethnicity predilection?

Ocular

●

Yes, it is reported at higher rates in Asian populations

Systemic

●

Takayasu's arteritis (Pulseless disease)

Mnemonic: If you encounter Takayasu's (on the OKAP), how is it likely to present?

Hints: C As a young woman of Asian descent with OIS, TVL, or VF loss

T What nonocular complaints might she have?

Constitutional S/S: Fever, night sweats, weight loss; also joint pain, fatigue

ool)

Q

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

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● R

Is it common, or rare?

Rare

P

Is there a gender predilection?

O

Yes, it is far more common in women

Systemic

●

Is there an age predilection?

Yes, most cases present in early adulthood

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Is there an ethnicity predilection?

Ocular

●

Yes, it is reported at higher rates in Asian populations

Systemic

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Takayasu's arteritis (Pulseless disease)

Mnemonic

If you encounter Takayasu's (on the OKAP), how is it likely to present?

Hints: C

As a young woman of Asian descent with OIS, TVL, or VF loss

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What nonocular complaints might she have?

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What is the classic (nonocular) exam finding?

ool)

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Rare

P

Is there a gender predilection?

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Yes, it is far more common in women

Systemic

●

Is there an age predilection?

Yes, most cases present in early adulthood

●

Is there an ethnicity predilection?

Ocular

●

Yes, it is reported at higher rates in Asian populations

Systemic

●

Takayasu's arteritis (Pulseless disease)

Mnemonic

If you encounter Takayasu's (on the OKAP), how is it likely to present?

Hints: C

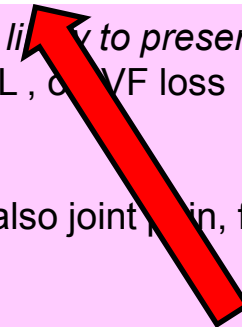
As a young woman of Asian descent with OIS, TVL, & VF loss

What nonocular complaints might she have?

Constitutional S/S: Fever, night sweats, weight loss; also joint pain, fatigue

What is the classic (nonocular) exam finding?

Weak, absent, or asymmetric pulses of the upper extremities (hence the name)



Q

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The ... affected vessels

If an OKAP question refers a young woman of Asian descent with CVA-like symptoms and eye issues, another condition should come to mind. What is it?

● R

P

O

Is there a gender predilection?

Yes, it is far more common in **women**

Systemic ●

Is there an age predilection?

Yes, most cases present in **early adulthood**

●

Ocular ●

Is there an ethnicity predilection?

Yes, it is reported at higher rates in **Asian** populations

Systemic ●

Takayasu's arteritis (Pulseless disease)

Mnemonic: If you encounter Takayasu's (on the OKAP), how is it likely to present?

Hints: C As a young woman of Asian descent with OIS, TVL, or VF loss

T

What nonocular complaints might she have?

Constitutional S/S: Fever, night sweats, weight loss; also joint pain, fatigue

What is the classic (nonocular) exam finding?

Weak, absent, or asymmetric pulses of the upper extremities (hence the name)

A

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The ... affected vessels

If an OKAP question refers a young woman of Asian descent with CVA-like symptoms and eye issues, another condition should come to mind. What is it?

Moyamoya

Is there a gender predilection?

Yes, it is far more common in **women**

Is there an age predilection?

Yes, most cases present in **early adulthood**

Is there an ethnicity predilection?

Yes, it is reported at higher rates in **Asian** populations

Systemic

Ocular

Systemic

Takayasu's arteritis (Pulseless disease)

Mnemonic: If you encounter Takayasu's (on the OKAP), how is it likely to present?

Hints: C As a young woman of Asian descent with OIS, TVL, or VF loss

What nonocular complaints might she have?

Constitutional S/S: Fever, night sweats, weight loss; also joint pain, fatigue

What is the classic (nonocular) exam finding?

Weak, absent, or asymmetric pulses of the upper extremities (hence the name)

Q

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The ... affected vessels

If an OKAP question refers a young woman of Asian descent with CVA-like symptoms and eye issues, another condition should come to mind. What is it?

Moyamoya

What is moyamoya disease?

Systemic

Hints: (As a young woman of Asian descent with CVA, TIA, or VI loss)

What nonocular complaints might she have?

Constitutional S/S: Fever, night sweats, weight loss; also joint pain, fatigue

What is the classic (nonocular) exam finding?

Weak, absent, or asymmetric pulses of the upper extremities (hence the name)

Q/A

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The disease typically affects the aorta and its major branches, and the affected vessels

If an OKAP question refers a young woman of Asian descent with CVA-like symptoms and eye issues, another condition should come to mind. What is it?

Moyamoya

What is moyamoya disease?

An [] vascular condition primarily affecting the terminal and proximal [] arteries

two arteries

two arteries

Systemic

Ocular

Systemic

Hints: (As a young woman of Asian descent with CVA, TIA, or VI loss)

What nonocular complaints might she have?

Constitutional S/S: Fever, night sweats, weight loss; also joint pain, fatigue

What is the classic (nonocular) exam finding?

Weak, absent, or asymmetric pulses of the upper extremities (hence the name)

A

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The ... affected vessels

If an OKAP question refers a young woman of Asian descent with CVA-like symptoms and eye issues, another condition should come to mind. What is it?

Moyamoya

What is moyamoya disease?

An occlusive vascular condition primarily affecting the terminal internal carotids and proximal anterior and middle cerebral arteries

Systemic

Hints: (As a young woman of Asian descent with CVA, TIA, or VI loss)

What nonocular complaints might she have?

Constitutional S/S: Fever, night sweats, weight loss; also joint pain, fatigue

What is the classic (nonocular) exam finding?

Weak, absent, or asymmetric pulses of the upper extremities (hence the name)

Q

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The ... affected vessels

If an OKAP question refers a young woman of Asian descent with CVA-like symptoms and eye issues, another condition should come to mind. What is it?

Moyamoya

What is moyamoya disease?

An occlusive vascular condition primarily affecting the terminal internal carotids and proximal anterior and middle cerebral arteries

With what ONH anomaly is moyamoya dz associated?

Systemic

Hints: (... As a young woman of Asian descent with CVA, TVE, or VI loss

What nonocular complaints might she have?

Constitutional S/S: Fever, night sweats, weight loss; also joint pain, fatigue

What is the classic (nonocular) exam finding?

Weak, absent, or asymmetric pulses of the upper extremities (hence the name)

A

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The ... affected vessels

If an OKAP question refers a young woman of Asian descent with CVA-like symptoms and eye issues, another condition should come to mind. What is it?

Moyamoya

What is moyamoya disease?

An occlusive vascular condition primarily affecting the terminal internal carotids and proximal anterior and middle cerebral arteries

With what ONH anomaly is moyamoya dz associated?

Morning-glory disc

Systemic

Hints: (As a young woman of Asian descent with CVA, TVE, or VI loss)

What nonocular complaints might she have?

Constitutional S/S: Fever, night sweats, weight loss; also joint pain, fatigue

What is the classic (nonocular) exam finding?

Weak, absent, or asymmetric pulses of the upper extremities (hence the name)

Q

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The ... affected vessels

If an OKAP question refers a young woman of Asian descent with CVA-like symptoms and eye issues, another condition should come to mind. What is it?

Moyamoya

What is moyamoya disease?

An occlusive vascular condition primarily affecting the terminal internal carotids and proximal anterior and middle cerebral arteries

With what ONH anomaly is moyamoya dz associated?

Morning-glory disc

In a nutshell, what is morning-glory disc anomaly?

Systemic

Hints: (As a young woman of Asian descent with CVA, TVE, or VI loss)

What nonocular complaints might she have?

Constitutional S/S: Fever, night sweats, weight loss; also joint pain, fatigue

What is the classic (nonocular) exam finding?

Weak, absent, or asymmetric pulses of the upper extremities (hence the name)

ool)

Q/A

In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

'The ... affected vessels

If an OKAP question refers a young woman of Asian descent with CVA-like symptoms and eye issues, another condition should come to mind. What is it?

Moyamoya

What is moyamoya disease?

An occlusive vascular condition primarily affecting the terminal internal carotids and proximal anterior and middle cerebral arteries

With what ONH anomaly is moyamoya dz associated?

Morning-glory disc

In a nutshell, what is morning-glory disc anomaly?

A congenital ONH malformation in which the nerve head appears very

shape

large
vs
small

and

Hints: (As a young woman of Asian descent with CVD, TVE, or VI loss)

What nonocular complaints might she have?

Constitutional S/S: Fever, night sweats, weight loss; also joint pain, fatigue

What is the classic (nonocular) exam finding?

Weak, absent, or asymmetric pulses of the upper extremities (hence the name)

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In a nutshell, what is Takayasu's arteritis?

An occlusive vasculitis that typically affects larger vessels

How 'large' are we talking about here?

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If an OKAP question refers a young woman of Asian descent with CVA-like symptoms and eye issues, another condition should come to mind. What is it?

Moyamoya

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An occlusive vascular condition primarily affecting the terminal internal carotids and proximal anterior and middle cerebral arteries

With what ONH anomaly is moyamoya dz associated?

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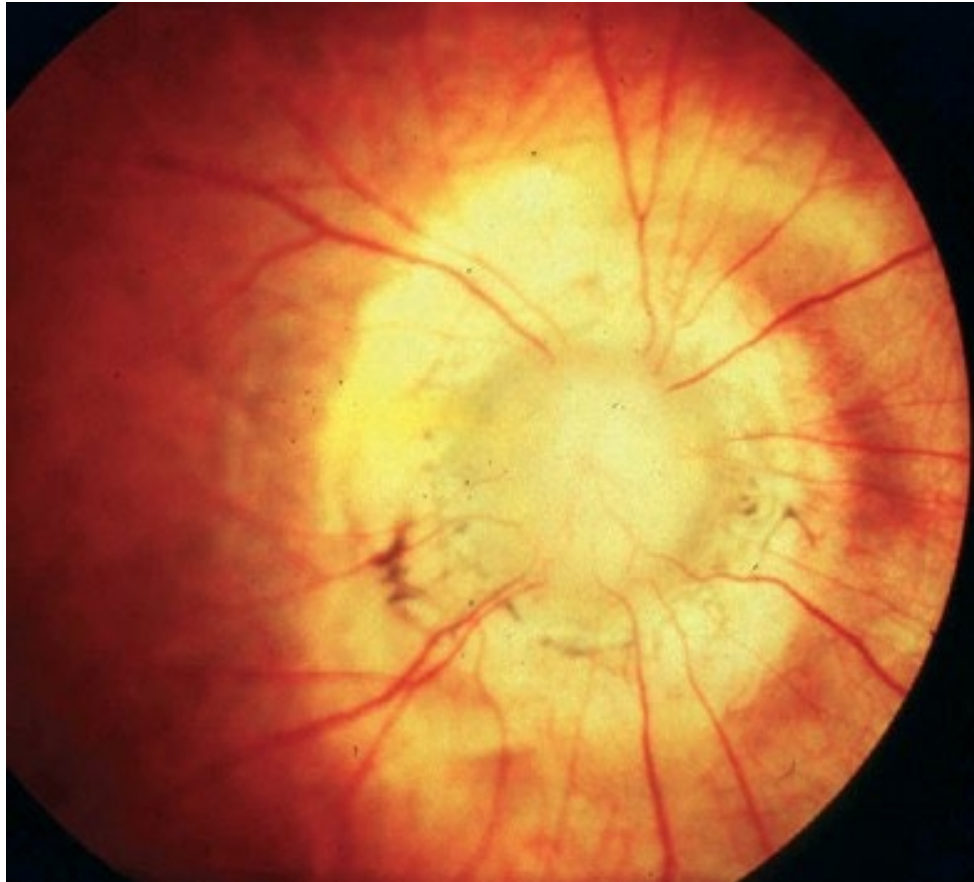
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Ocular Ischemic Syndrome



Morning-glory disc: Lotsa straight vessels emanating from the rim

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For more on moyamoya, see slide-set FELT10

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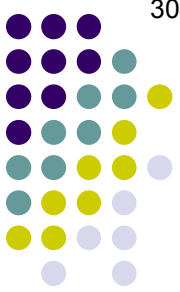
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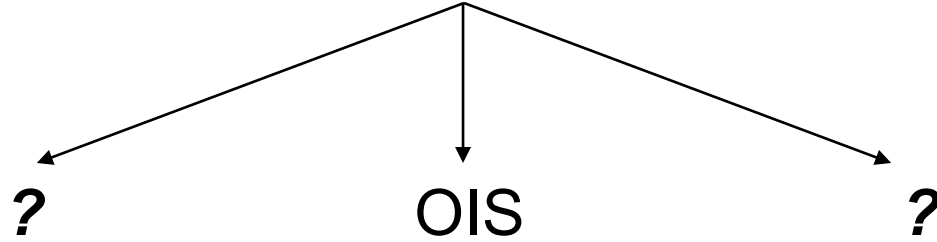
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(This is a good point in the set to take a break)

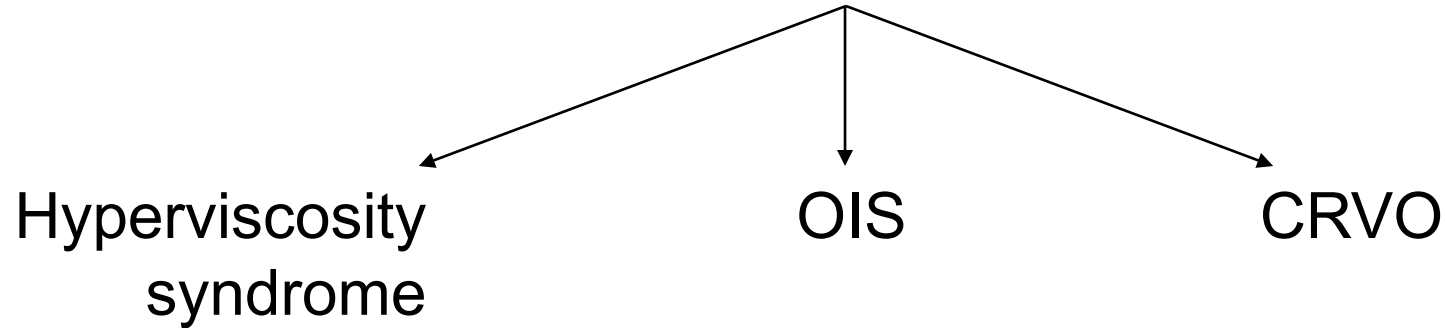


DDx for an OIS-like fundus



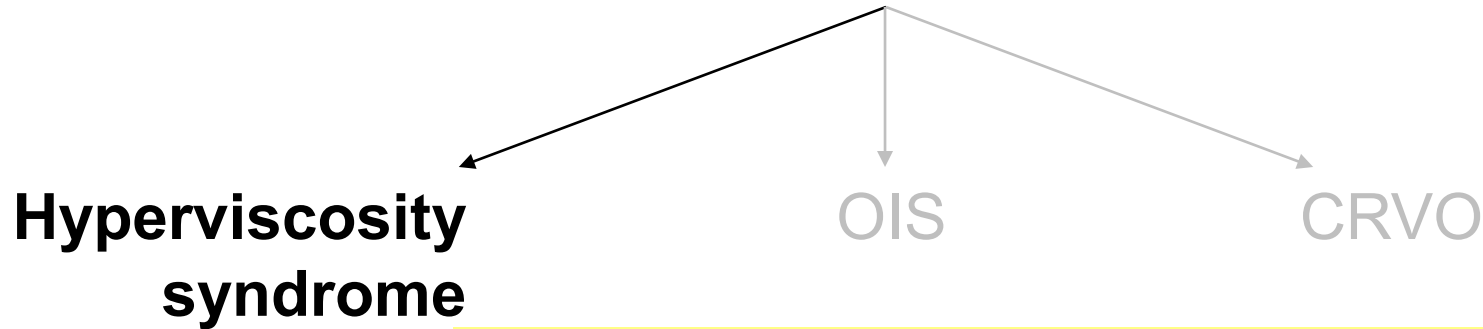


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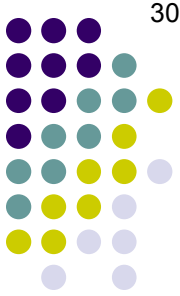


DDx for an OIS-like fundus



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*The Retina book mentions three causes of hyperviscosity syndrome—
what are they?*



DDx for an OIS-like fundus

Hyperviscosity syndrome

Waldenström
macroglobulinemia —
Multiple myeloma —
Polycythemia vera —

OIS

CRVO

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DDx for an OIS-like fundus

Hyperviscosity syndrome

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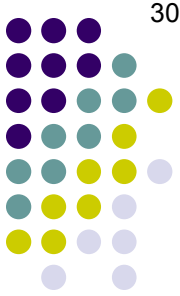
Polycythemia vera

OIS

CRVO

The Retina book mentions three causes of hyperviscosity syndrome—what are they?

What key finding strongly suggests an OIS-like presentation is in fact a manifestation of a hyperviscosity syndrome?



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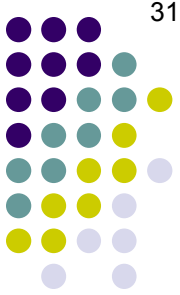
OIS

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The Retina book mentions three causes of hyperviscosity syndrome—what are they?

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If the findings are **bilateral**



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*If the findings are **bilateral***

If hyperviscosity syndrome is suspected, what tests should be ordered?

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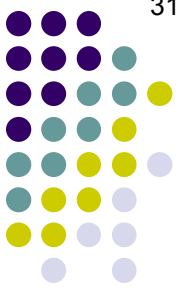
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If hyperviscosity syndrome is suspected, what tests should be ordered?

--CBC

--Serum electrophoresis

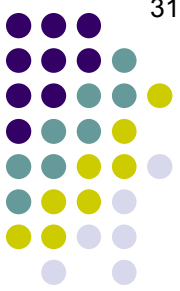
--Measurement of whole-blood viscosity



DDx for an OIS-like fundus

What is the mechanism underlying CRVO?

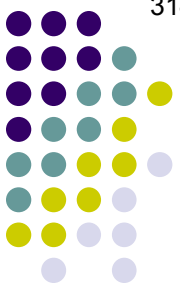
CRVO



DDx for an OIS-like fundus

What is the mechanism underlying CRVO?
Thrombosis of the central retinal vein

CRVO



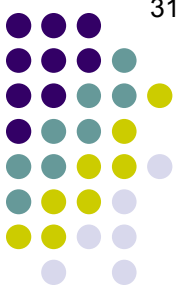
DDx for an OIS-like fundus

What is the mechanism underlying CRVO?

Thrombosis of the central retinal vein

Where does thrombosis typically occur?

CRVO



DDx for an OIS-like fundus

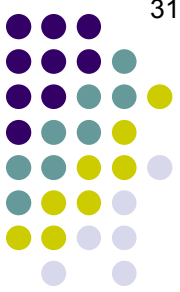
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Where does thrombosis typically occur?

At the lamina cribrosa, or just posterior to it

CRVO



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CRVO



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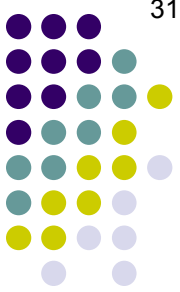
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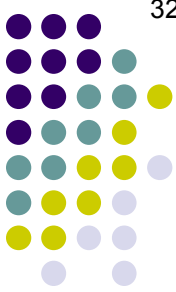
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Vasculopathy contributes to the development of atherosclerotic dz, and it's atherosclerotic changes to retinal arterial vessels that cause them to impinge upon and compress adjacent venous vessels



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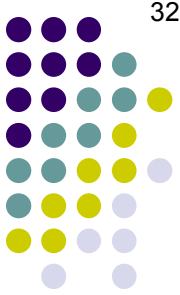
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--Hemorrhages mainly in the nerve fiber layer (FH) [OIS hemorrhages: DBH, in deeper retina]

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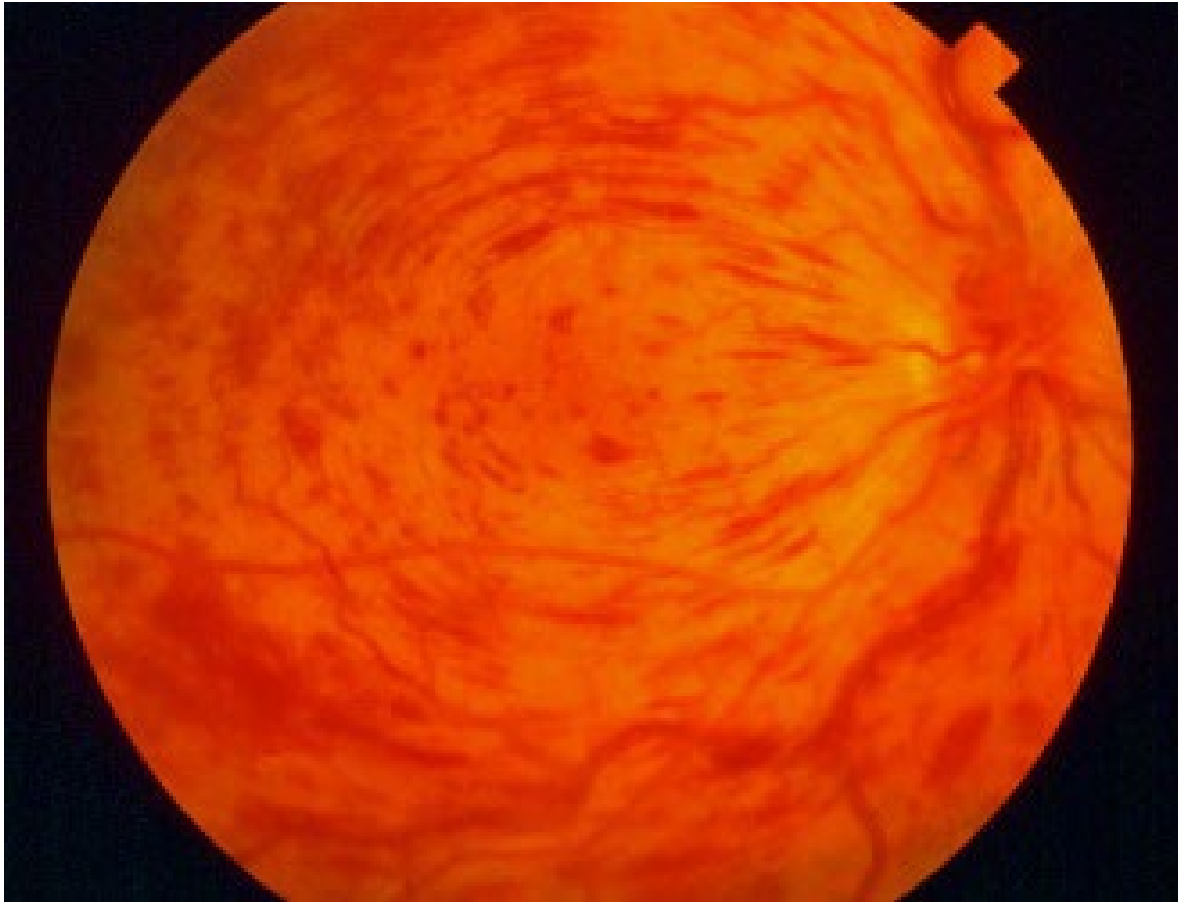
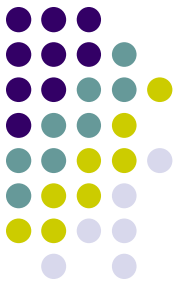
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Ocular Ischemic Syndrome



CRVO: Dilated and tortuous veins; RNFL hemorrhages



DDx for an OIS-like fundus

What is the mechanism underlying CRVO?
Thrombosis of the central retinal vein

OIS

CRVO

What simple, noninvasive test can be performed that reliably differentiates between OIS and CRVO?

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At Ophthalmodynamometry

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What does ophthalmodynamometry measure?

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How does ophthalmodynamometry differentiate between OIS and CRVO?

Perfusion pressure will be low in **one** but normal in **the other**

What two DFE findings are the hallmark of an CRVO event?

--Hemorrhages mainly in the nerve fiber layer (FH) [OIS hemorrhages: DBH, in deeper retina]

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DDx for an OIS-like fundus

What is the mechanism underlying CRVO?
Thrombosis of the central retinal vein

OIS

CRVO

What simple, noninvasive test can be performed that reliably differentiates between OIS and CRVO?
At Ophthalmodynamometry

What does ophthalmodynamometry measure?
De Perfusion pressure of the retinal arterial tree

How does ophthalmodynamometry differentiate between OIS and CRVO?
Va Perfusion pressure will be low in OIS but normal in CRVO

What two DFE findings are the hallmark of an CRVO event?

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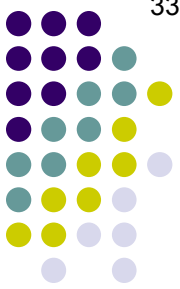
My ophthalmodynamometer is in the shop. Is there a way to check perfusion pressure without it?
Im Th Push gently on the globe while observing the central retinal artery. If it collapses with minimal applied pressure, perfusion pressure is low, and OIS rises to the top of the DDx.

What two DFE findings are the hallmark of a CRVO event?

- Hemorrhages mainly in the nerve fiber layer (FH) [OIS hemorrhages: DBH, in deeper retina]
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Ocular Ischemic Syndrome

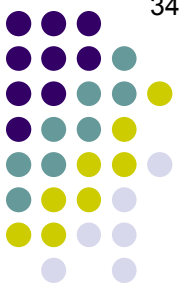
OIS and a mild CRVO can be difficult to differentiate from one another.



No question yet--proceed

Ocular Ischemic Syndrome

OIS and a mild CRVO can be difficult to differentiate from one another.
For each statement, indicate whether it best applies to **OIS**, **CRVO**, or **Both**.

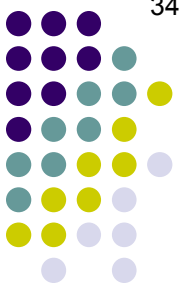


No question yet--proceed

Q

Ocular Ischemic Syndrome

341



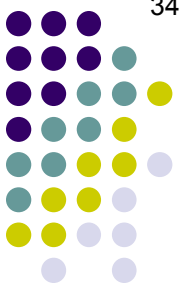
For each statement, indicate whether it best applies to *OIS*, *CRVO*, or *Both*.

- Retinal hemorrhages present:

A

Ocular Ischemic Syndrome

342

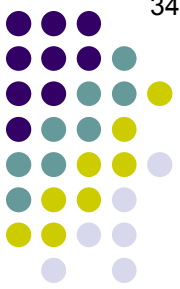


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- Retinal hemorrhages present: **Both**

Q

Ocular Ischemic Syndrome



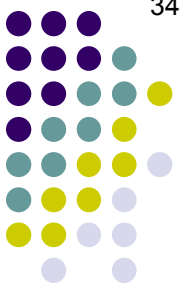
For each statement, indicate whether it best applies to *OIS*, *CRVO*, or *Both*.

- Retinal hemorrhages present: **Both**
- c/o periorbital ache:

A

Ocular Ischemic Syndrome

344



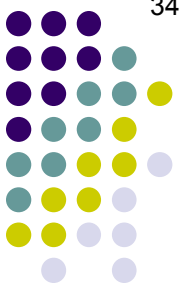
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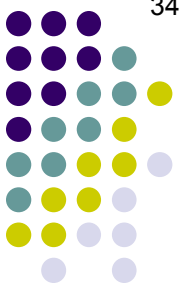
Ocular Ischemic Syndrome

345



For each statement, indicate whether it best applies to *OIS*, *CRVO*, or *Both*.

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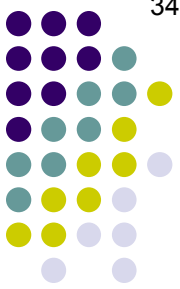
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Ocular Ischemic Syndrome

347

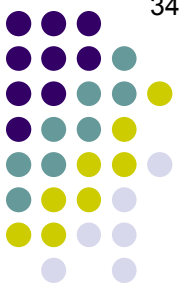


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- Hemorrhages confined to mid-periphery:

A

Ocular Ischemic Syndrome

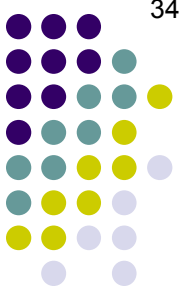


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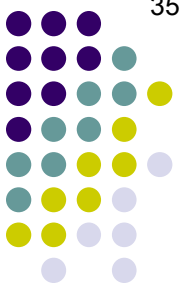
Q

Ocular Ischemic Syndrome



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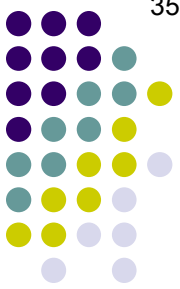
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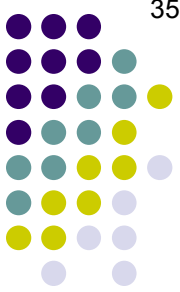
Ocular Ischemic Syndrome

351



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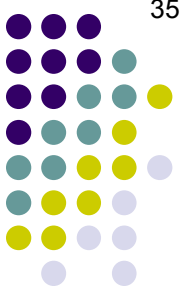


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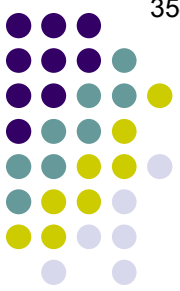
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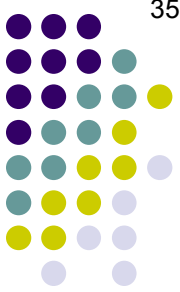
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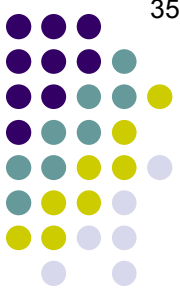


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Ocular Ischemic Syndrome

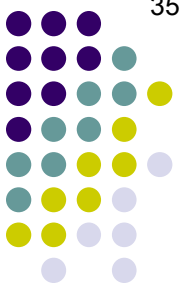


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A

Ocular Ischemic Syndrome

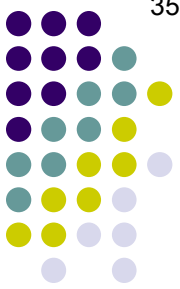


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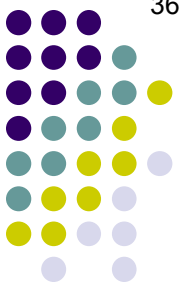
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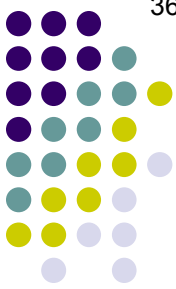


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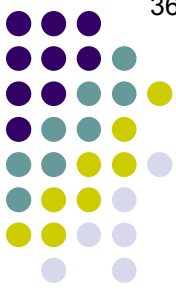
Q

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A

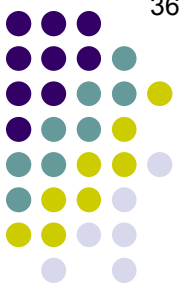
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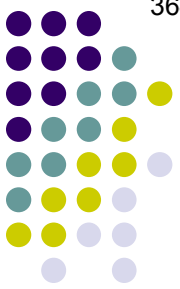
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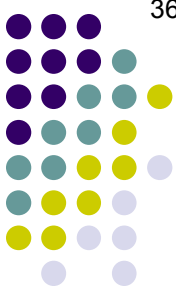
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.. **% to %** : risk of CVA 9% in CEA group, 26% in antiplatelet group; the benefit outweighed the risk, and **these patients should be offered CEA**

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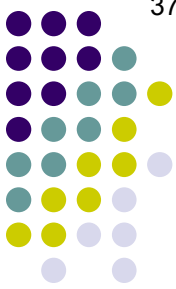
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It is not uncommon for pts with OIS to have 100% blockage of their ipsilateral carotid artery. Note that 100% blockage of the carotids is a **contraindication** to CEA, as it is ineffective in these cases.



Q

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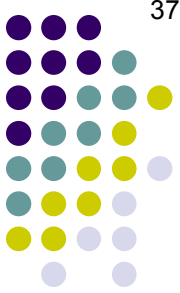
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