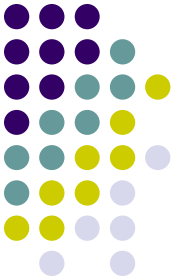
Q

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy



- Involves intraocular bleeding/hemorrhage:

A

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

- Involves intraocular bleeding/hemorrhage: All of them

Q

For each statement, assign the proper condition(s):
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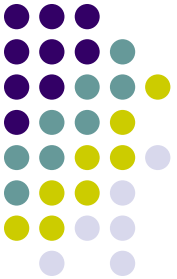
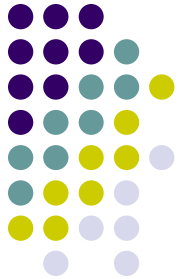


- Involves **intraocular bleeding/hemorrhage**: All of them

Where is the hemorrhage found in:
--Purtscher's?
--Valsalva?
--Terson's?

A

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy



- Involves **intraocular bleeding/hemorrhage**: All of them

Where is the hemorrhage found in:
--Purtscher's? Intraretinal
--Valsalva?
--Terson's?

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

Purtscher retinopathy: Intraretinal hemorrhage

Q

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

- Involves **intraocular bleeding/hemorrhage**: All of them

Where is the hemorrhage found in:
--Purtscher's? **Intraretinal**
--Valsalva?
--Ter

What section of the retina is most commonly involved in Purtscher's?

A

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

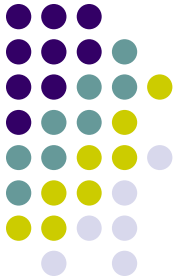
- Involves **intraocular bleeding/hemorrhage**: All of them

Where is the hemorrhage found in:
--Purtscher's? **Intraretinal**
--Valsalva?
--Ter

What section of the retina is most commonly involved in Purtscher's?
The peripapillary area

Q

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy



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Where is the hemorrhage found in:
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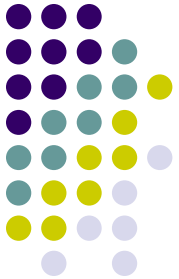
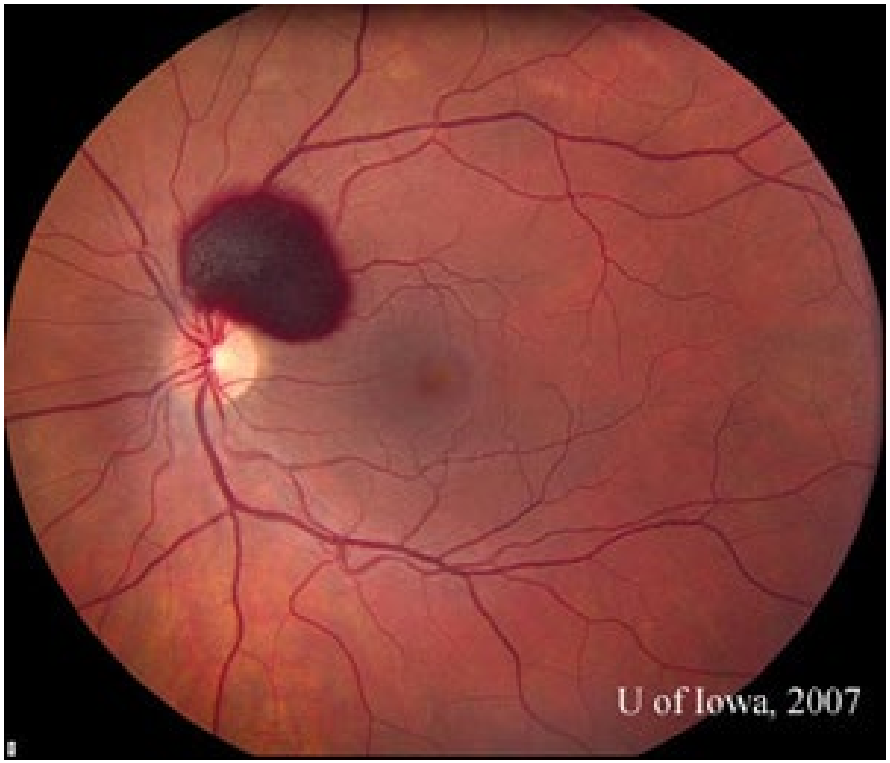
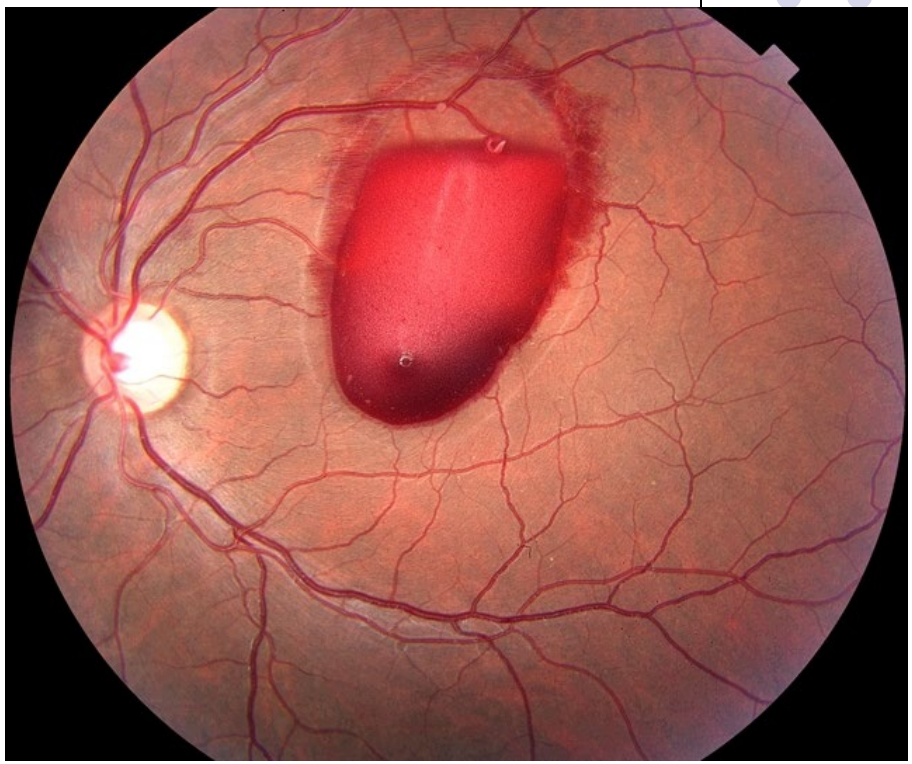


- Involves **intraocular bleeding/hemorrhage**: All of them

Where is the hemorrhage found in:
--Purtscher's? Intraretinal
--Valsalva? Sub-ILM
--Terson's?

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy





Valsalva retinopathy: Sub-ILM hemorrhage

Q

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

- Involves **intraocular bleeding/hemorrhage**: All of them

Where is the hemorrhage found in:
--Purtscher's? Intraretinal
--Valsalva? Sub-ILM
--Terson's?

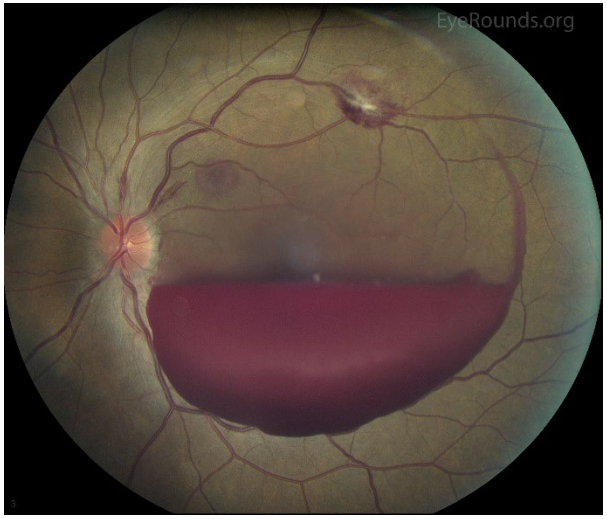
A

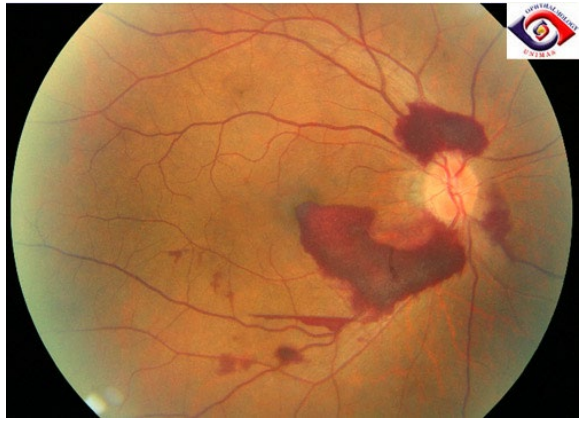
For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

- Involves **intraocular bleeding/hemorrhage**: All of them

Where is the hemorrhage found in:
--Purtscher's? Intraretinal
--Valsalva? Sub-ILM
--Terson's? Sub-ILM, sub-hyaloid, or intra-vitreal

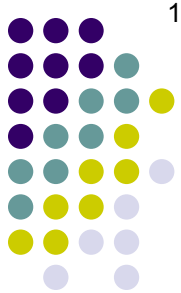
For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy





Terson syndrome: Sub-ILM, sub-hyaloid, intra-vitreal

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy



- Involves **intraocular bleeding/hemorrhage**: All of them

Where is the hemorrhage found in:

As we shall see, this is the first of many ways in which Purtscher's differs from Valsalva and Terson's retinopathies!

--*Purtscher's?* **Intraretinal**

--*Valsalva?* **Sub-ILM**

--*Terson's?* **Sub-ILM, sub-hyaloid, or intra-vitreal**

Q

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

- Involves intraocular bleeding/hemorrhage: All of them
- 2ndry to compression injury of chest, head:

A

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

- Involves intraocular bleeding/hemorrhage: All of them
- 2ndry to compression injury of chest, head: Purtscher

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For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

- Involves intraocular bleeding/hemorrhage: All of them
- 2ndry to compression injury of chest, head: **Purtscher**

What is the pathologic process underlying Purtscher's?

Q/A

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

- Involves intraocular bleeding/hemorrhage: All of them
- 2ndry to compression injury of chest, head: **Purtscher**

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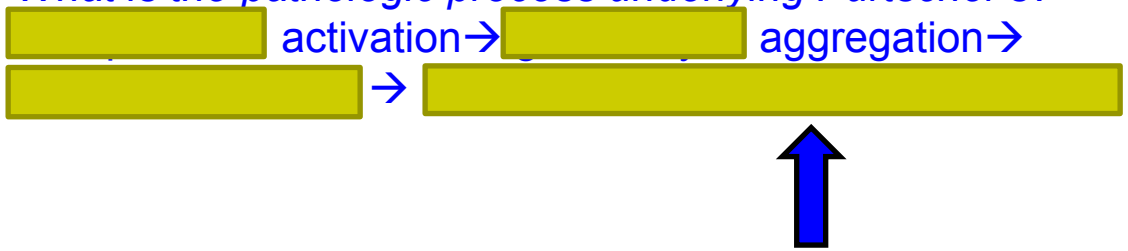


Let's tackle this topic in reverse. What is the direct, proximal cause of retinal hemorrhages in Purtscher's?

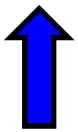
A

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

- Involves intraocular bleeding/hemorrhage: All of them
- 2ndry to compression injury of chest, head: **Purtscher**

What is the pathologic process underlying Purtscher's?

[redacted] activation→ [redacted] aggregation→
[redacted] → occlusion of small retinal arterioles



Let's tackle this topic in reverse. What is the direct, proximal cause of retinal hemorrhages in Purtscher's?
Occlusion of small retinal arterioles

Q

For each statement, assign the proper condition(s):
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Occlusion of small retinal arterioles

What is the cause of the occlusion?

A

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

- Involves intraocular bleeding/hemorrhage: All of them
- 2ndry to compression injury of chest, head: **Purtscher**

What is the pathologic process underlying Purtscher's?

[redacted] activation→ [redacted] aggregation→ leukoembolization → occlusion of small retinal arterioles

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Occlusion of small retinal arterioles

What is the cause of the occlusion? **Leukoembolization**

Q

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

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- 2ndry to compression injury of chest, head: **Purtscher**

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Occlusion of small retinal arterioles

What is the cause of the occlusion? **Leukoembolization**

Aggregates of what sort of immune cells form the emboli?

A

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

- Involves intraocular bleeding/hemorrhage: All of them
- 2ndry to compression injury of chest, head: **Purtscher**

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[redacted] activation→ granulocyte aggregation→ leukoembolization → occlusion of small retinal arterioles

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Occlusion of small retinal arterioles

What is the cause of the occlusion? **Leukoembolization**

Aggregates of what sort of immune cells form the emboli?
Granulocytes

Q

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

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And lastly: Activation of which aspect of the immune system begins the cascade?

What is the pathologic process underlying Purtscher's?
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Let's tackle this topic in reverse. What is the direct, proximal cause of retinal hemorrhages in Purtscher's?
Occlusion of small retinal arterioles

What is the cause of the occlusion? **Leukoembolization**

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Granulocytes

A

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

- Involves intraocular bleeding/hemorrhage: All of them
- 2ndry to compression injury of chest, head: **Purtscher**

And lastly: Activation of which aspect of the immune system begins the cascade?
The complement system

What is the pathologic process underlying Purtscher's?
Complement activation→ granulocyte aggregation→ leukoembolization → occlusion of small retinal arterioles

Let's tackle this topic in reverse. What is the direct, proximal cause of retinal hemorrhages in Purtscher's?
Occlusion of small retinal arterioles

What is the cause of the occlusion? **Leukoembolization**

Aggregates of what sort of immune cells form the emboli?
Granulocytes

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

- Involves intraocular bleeding/hemorrhage: All of them
- 2ndry to compres

Now read it in order to cinch the process in your memory!

What is the pathologic process underlying Purtscher's?
Complement activation→ granulocyte aggregation→ leukoembolization → occlusion of small retinal arterioles

And lastly: Activation of which aspect of the immune system begins the cascade?
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Let's tackle this topic in reverse. What is the direct, proximal cause of retinal hemorrhages in Purtscher's?
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What is the cause of the occlusion? **Leukoembolization**

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For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

- Involves intraocular bleeding/hemorrhage: All of them
- 2ndry to compression injury of chest, head: Purtscher
- Cotton-wool spots common, expected:

A

For each statement, assign the proper condition(s):
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A classic finding in Purtscher's is 'polygonal-shaped areas of retinal whitening.' What is the eponymous name for these areas?

A

For each statement, assign the proper condition(s):
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A classic finding in Purtscher's is 'polygonal-shaped areas of retinal whitening.' What is the eponymous name for these areas?
'Purtscher flecken'

Q

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'Areas of retinal whitening'--isn't this the same thing as CWS?

Q/A

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Yes and no…
Cotton-wool spots occur when branches of the pre-capillary vascular level network are occluded.

Q/A

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three words .

A

For each statement, assign the proper condition(s):
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A

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In contrast, **Purtscher flecken** develop when occlusion occurs at the level of retinal circulation.

A

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

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In contrast, **Purtscher flecken** develop when occlusion occurs at the *capillary* level of retinal circulation. These vessels are located deeper in the retina, and thus their occlusion doesn't affect the retina nerve fiber layer—so no CWS.

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

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the retina; th
nerve fiber la
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Let's take a brief derail to drill down on this idea (I promise an on-topic payoff at the end)

Q

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

Blood supply

Blood supply

Blood supply

Blood supply

Blood supply

How many blood supplies does the retina receive?

Blood supply

Blood supply

Blood supply

Blood supply

Blood supply

Blood supply

Blood supply

A

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

Blood supply

How many blood supplies does the retina receive? Two

Blood supply

Q

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

Blood supply:
?

What are the sources of the retina's two blood supplies?

Blood supply:
?

A

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

Blood supply:
Central retinal artery

What are the sources of the retina's two blood supplies?

Blood supply:
Choriocapillaris

Q

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

- **Retinal Layers**
  - Internal limiting membrane
  - two words layer
  - two words layer
  - two words layer
  - two words layer
  - two words layer (aka…(one word) layer)
  - two words layer
  - External limiting membrane
  - two/words inner and outer segments
- **RPE**
- **Bruch's membrane**

Blood supply:
Central retinal artery

What are the layers of the retina?

Blood supply:
Choriocapillaris

Q

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

- **Retinal Layers**
  - Internal limiting membrane
  - Nerve fiber layer
  - Ganglion cell layer
  - Inner plexiform layer
  - Inner nuclear layer
  - Outer plexiform layer (Henle's layer)
  - Outer nuclear layer
  - External limiting membrane
  - Rod/cone inner and outer segments
- **RPE**
- **Bruch's membrane**

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Which layers are supplied by each blood supply?

Blood supply:
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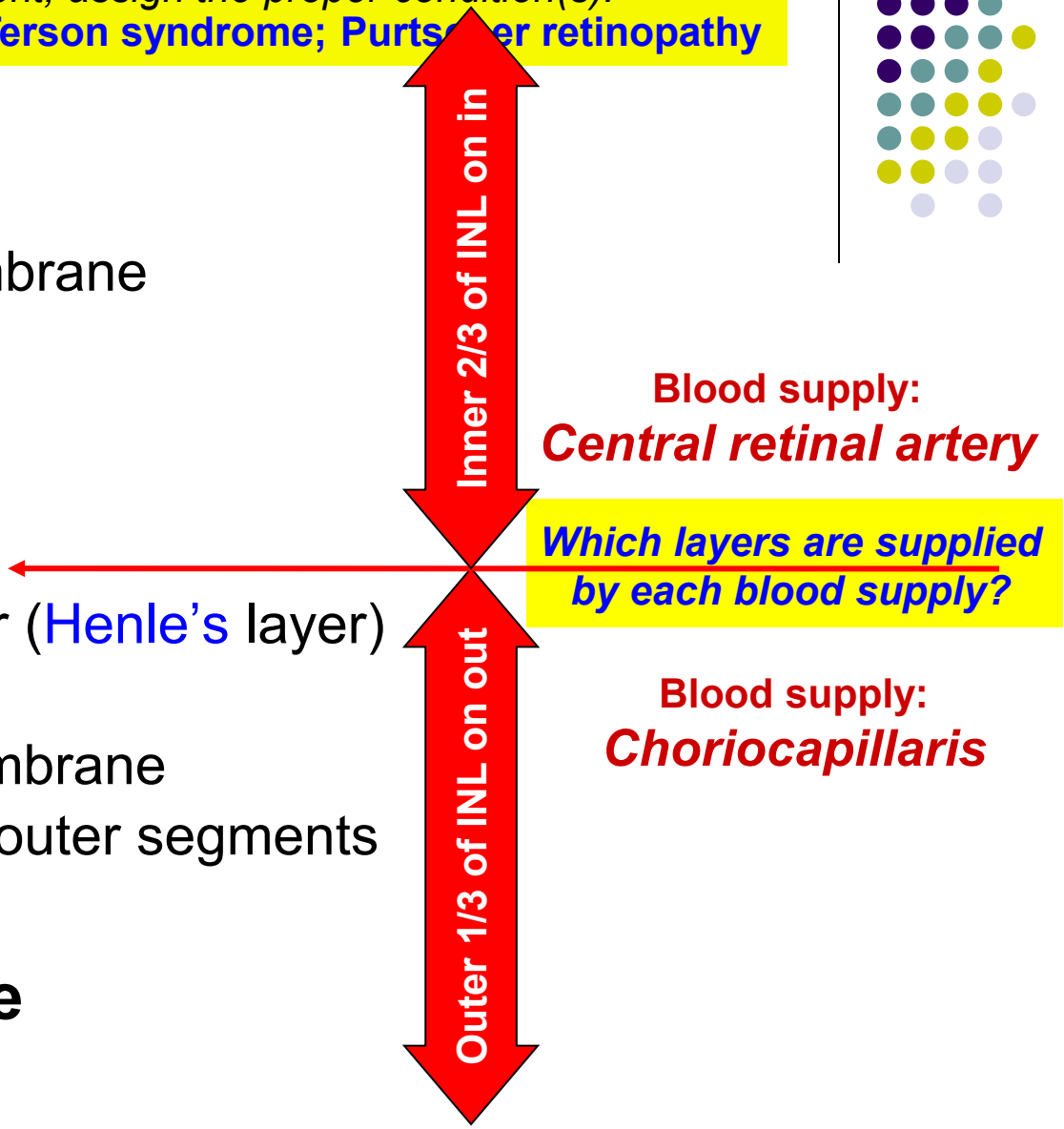

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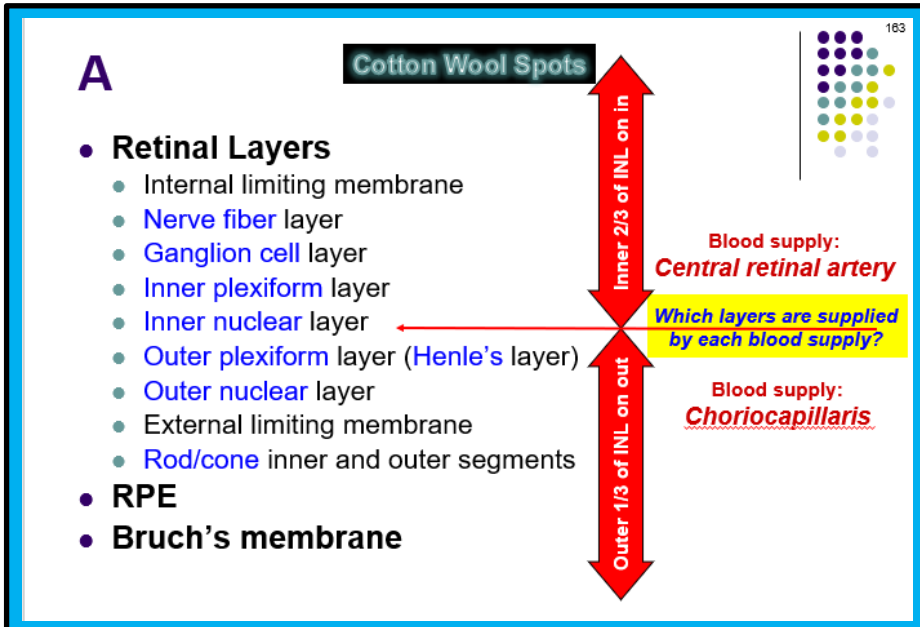

The payoff:

*This slide reminded us that the retinal vasculature does **not** supply the deep portion of the retina.*

nerve fibers served by the obstructed vessel. Axoplasmic stasis renders the affected nerve fibers white—ie, a CWS.
In contrast, **Purtscher flecken** develop when occlusion occurs at the *capillary* level of retinal circulation. **These vessels are located deeper in the retina**, and thus their occlusion doesn't affect the retina nerve fiber layer--so no CWS.

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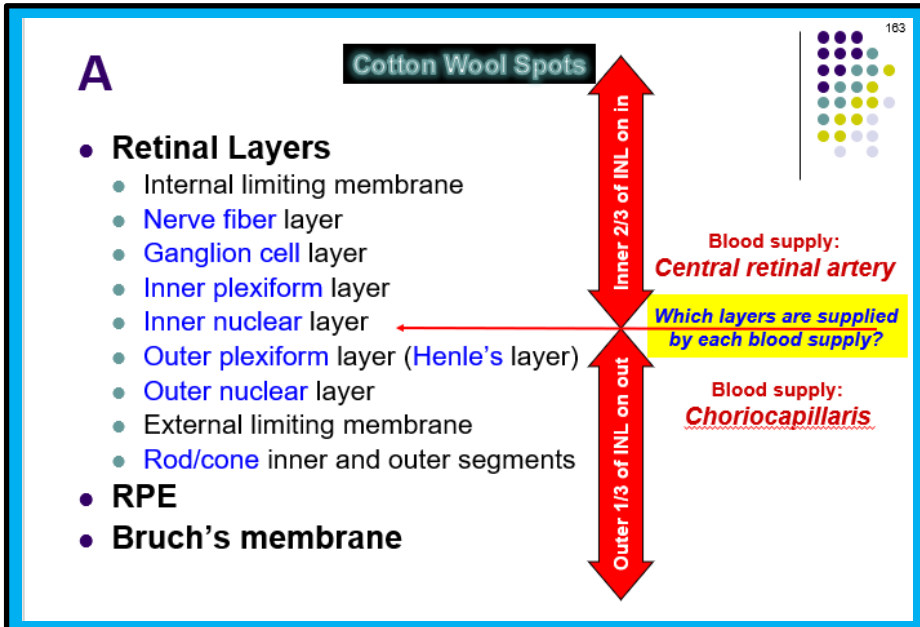

The payoff:

*This slide reminded us that the retinal vasculature does **not** supply the deep portion of the retina.* The point being that, when we say Purtscher flecken are related to 'vessels located deeper in the retina,' you must bear in mind that *deeper* is a relative term, and that the involved retina is actually somewhat **centrally** positioned.

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- **Cotton-wool spots common, expected: Purtscher**

A classic finding in Purtscher's is 'polygonal-shaped areas of retinal whitening.' What is the eponymous name for these areas?

'**Purtscher flecken**'

How can Purtscher flecken and CWS be differentiated at DFE?

'Areas of retinal whiteni

Yes and no…

Cotton-wool spots occ

are occluded. These vessels are located in the superficial (ie, inner) portion of the retina; thus, the layer of the retina most affected by their occlusion is the nerve fiber layer . Obstruction of the RNFL causes axoplasmic stasis in the nerve fibers served by the obstructed vessel. Axoplasmic stasis renders the affected nerve fibers white—ie, a CWS.

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CWS have indistinct borders (like puffs of cotton wool—get it?), and obscure vessels running through them.

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How can Purtscher flecken and CWS be differentiated at DFE?
CWS have indistinct borders (like puffs of cotton wool—get it?), and obscure vessels running through them. In contrast, Purtscher flecken are more sharply demarcated and do **not** obscure adjacent vessels—in fact, a 'clear zone' appears between vessels and the surrounding flecken.

For each statement, assign the proper condition(s):
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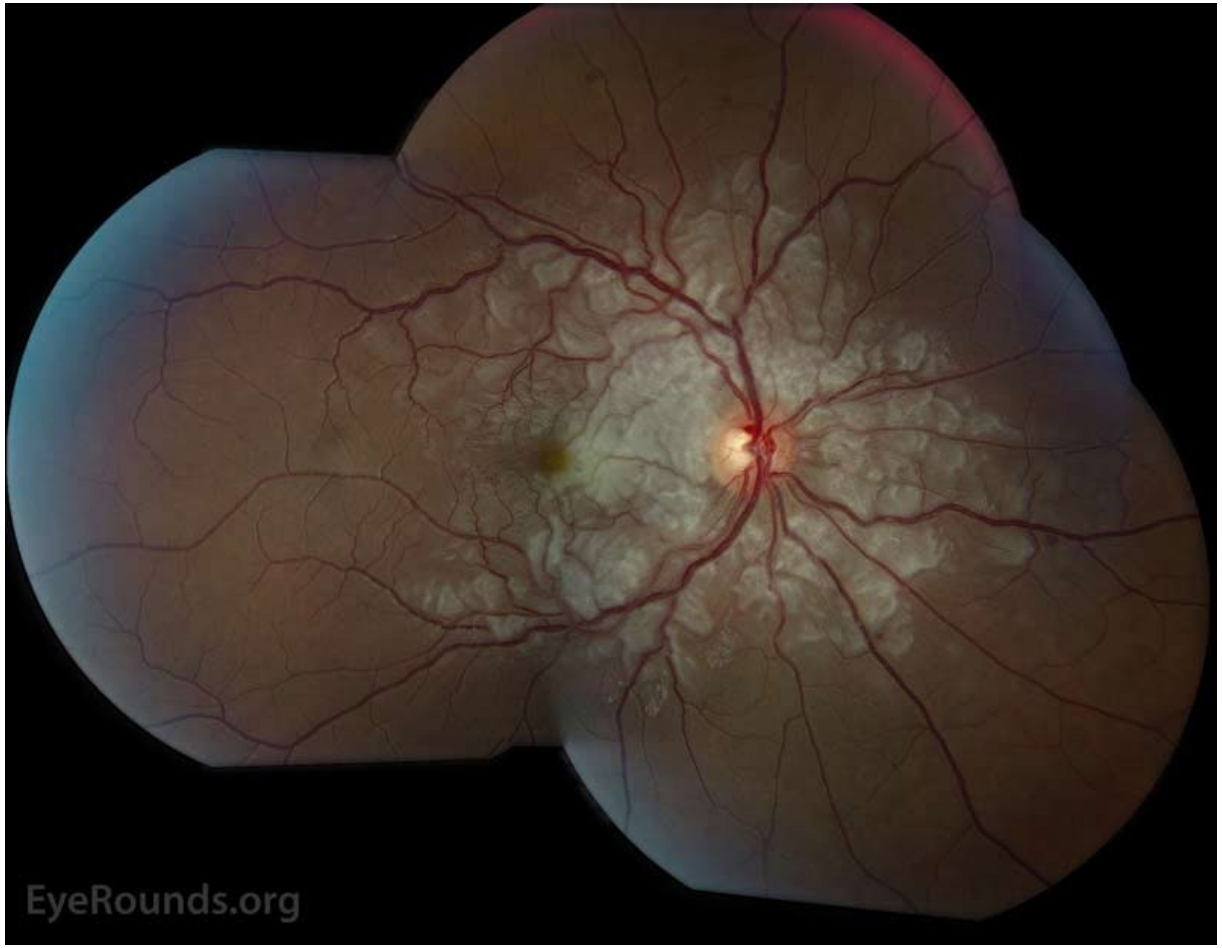

Purtscher flecken

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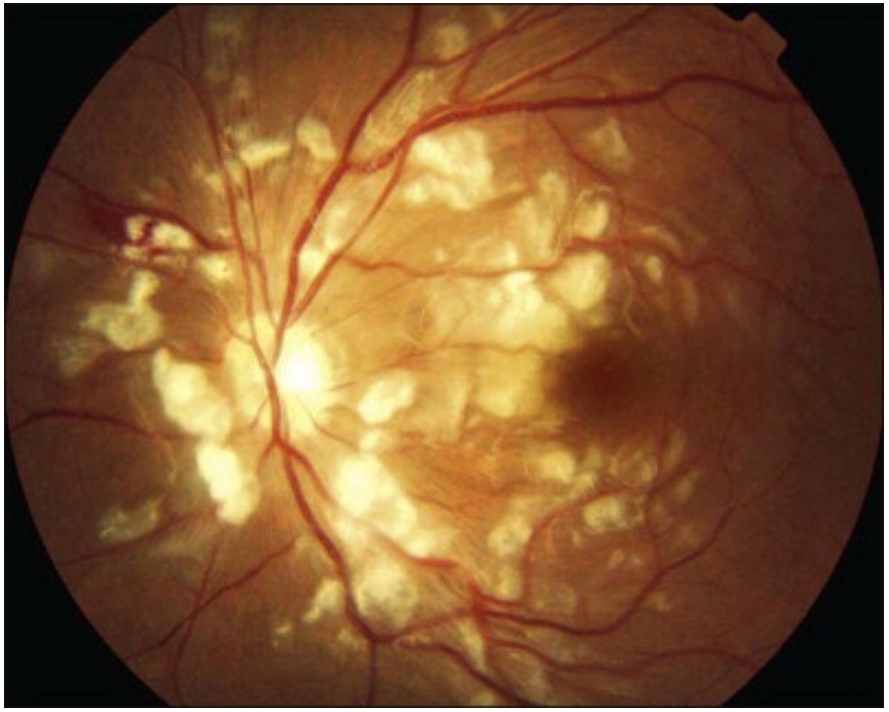
Purtscher flecken



Purtscher flecken *and* cotton-wool spots

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Flecken, flecken…where have I heard that before?
You're probably thinking of **glaukomflecken***

(*Not referring here to Dr Glaukomflecken)

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That's it! Clinically speaking, what are glaukomflecken?

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Small white patches ('flecks') beneath the anterior capsule of the lens

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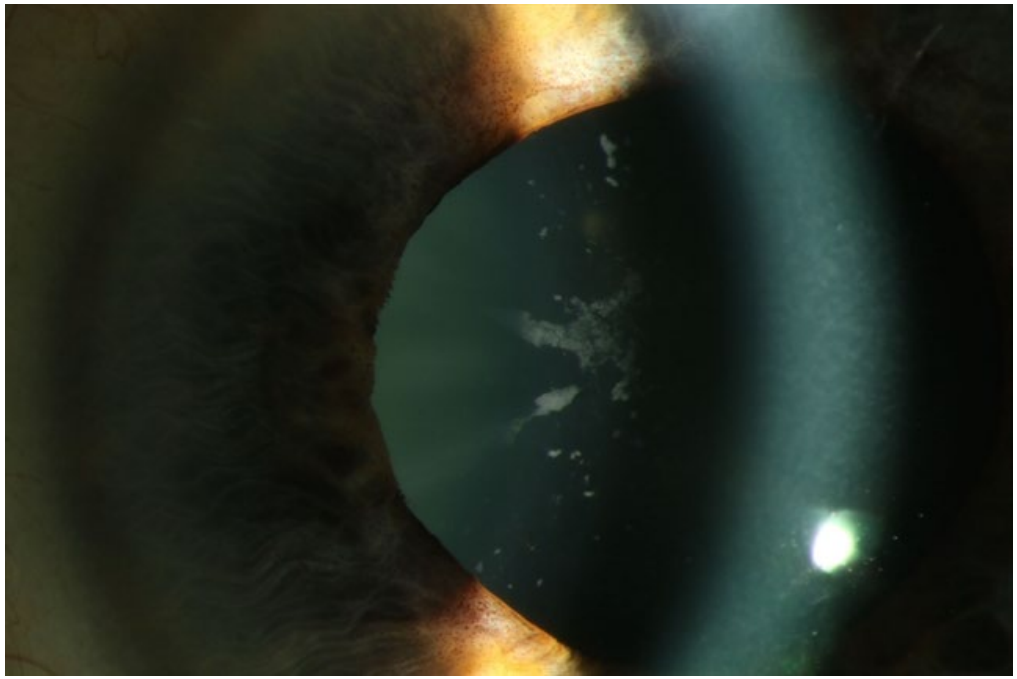

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How do they form, ie, what is the pathophysiology?
The high IOP damages lens epithelial cells just beneath the capsule, and the damaged cells subsequently necrose

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Wadda ya mean, none? Everyone knows these cause Purtscher's. What's the dealio?

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Does Terson's follow a subarachnoid hemorrhage, a subdural hemorrhage, or either/both?

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Does Terson's represent the direct extension of an intracranial bleed into the eye via dural compartments?

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Does Terson's represent the direct extension of an intracranial bleed into the eye via dural compartments?
No

OK, then what is the cause?

A

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

- Involves intraocular bleeding/hemorrhage: All of them
- 2ndry to compression injury of chest, head: Purtscher
- Cotton-wool spots common, expected: Purtscher
- 2ndry to coughing, vomiting, straining at stool: Valsalva
- 2ndry to pancreatitis, SLE, amniotic-fluid embolization, long-bone fracture: None (*but…*)
- 2ndry to abrupt **intracranial hemorrhage: Terson**

Does Terson's follow a subarachnoid hemorrhage, a subdural hemorrhage, or either/both?
Either/both

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No

OK, then what is the cause?
We'll get to that shortly

Q

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- Vision loss often permanent:

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^
after Terson and Valsalva?

What is the visual prognosis in Terson or Valsalva retinopathy?

A

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  ^
  after Terson and Valsalva? **Great!**

What is the visual prognosis in Terson or Valsalva retinopathy?
For both, vision is expected to return to baseline

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

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- 2ndry to pancreatitis, SLE, amniotic-fluid embolization, long-bone fracture: None (*but…*)
- 2ndry to abrupt intracranial hemorrhage: Terson
- Vision loss often permanent: Purtscher

As we shall see, this is the first of many ways in which Purtscher's differs from Valsalva and Terson's retinopathies!

Another example of this!

^ after Terson and Valsalva? **Great!**

What is the visual prognosis in Terson or Valsalva retinopathy?
For both, vision is expected to return to baseline

Q

For each statement, assign the proper condition(s):
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- Vision loss often permanent: Purtscher
- 2ndry to an acute increase in intraocular **venous** pressure:

*Note: **Not** IOP!*

A

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Note that Valsalva retinopathy and Terson's share a common final pathway—an acute rise in intraocular venous pressure produces backpressure in the capillary and arteriolar beds, causing some of these vessels to rupture.

Q

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Note that Valsalva retinopathy and Terson's share a common final pathway—an acute rise in intraocular venous pressure produces backpressure in the capillary and arteriolar beds, causing some of these vessels to rupture.

In sharp contrast, Purtscher's results from an [redacted] process occurring within the arterial side of the peripapillary vascular bed.

A

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In sharp contrast, Purtscher's results from an *occlusive* process occurring within the arterial side of the peripapillary vascular bed.

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- Vision loss often permanent: Purtscher
- 2ndry to an acute increase in intraocular **venous** pressure: Valsalva; Terson

As we shall see, this is the first of many ways in which Purtscher's differs from Valsalva and Terson's retinopathies!

Yet another example

Note that Valsalva retinopathy and Terson's share a common final pathway--an acute rise in intraocular venous pressure produces backpressure in the capillary and arteriolar beds, causing some of these vessels to rupture.

In sharp contrast, Purtscher's results from an *occlusive* process occurring within the arterial side of the peripapillary vascular bed.

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- Vision loss often permanent: Purtscher
- 2ndry to an acute increase in intraocular venous pressure: Valsalva; Terson
- FA→arteriolar obstruction, leakage:

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For each statement, assign the proper condition(s):
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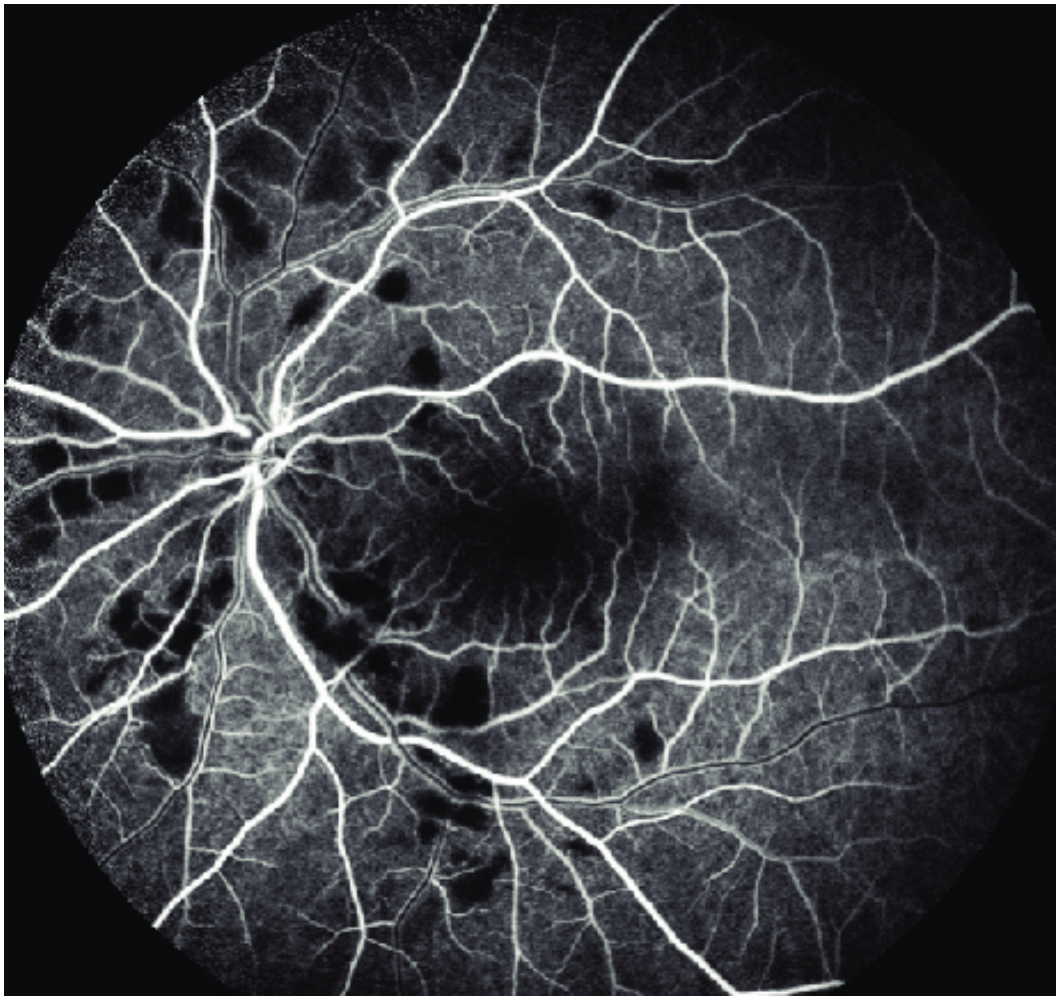
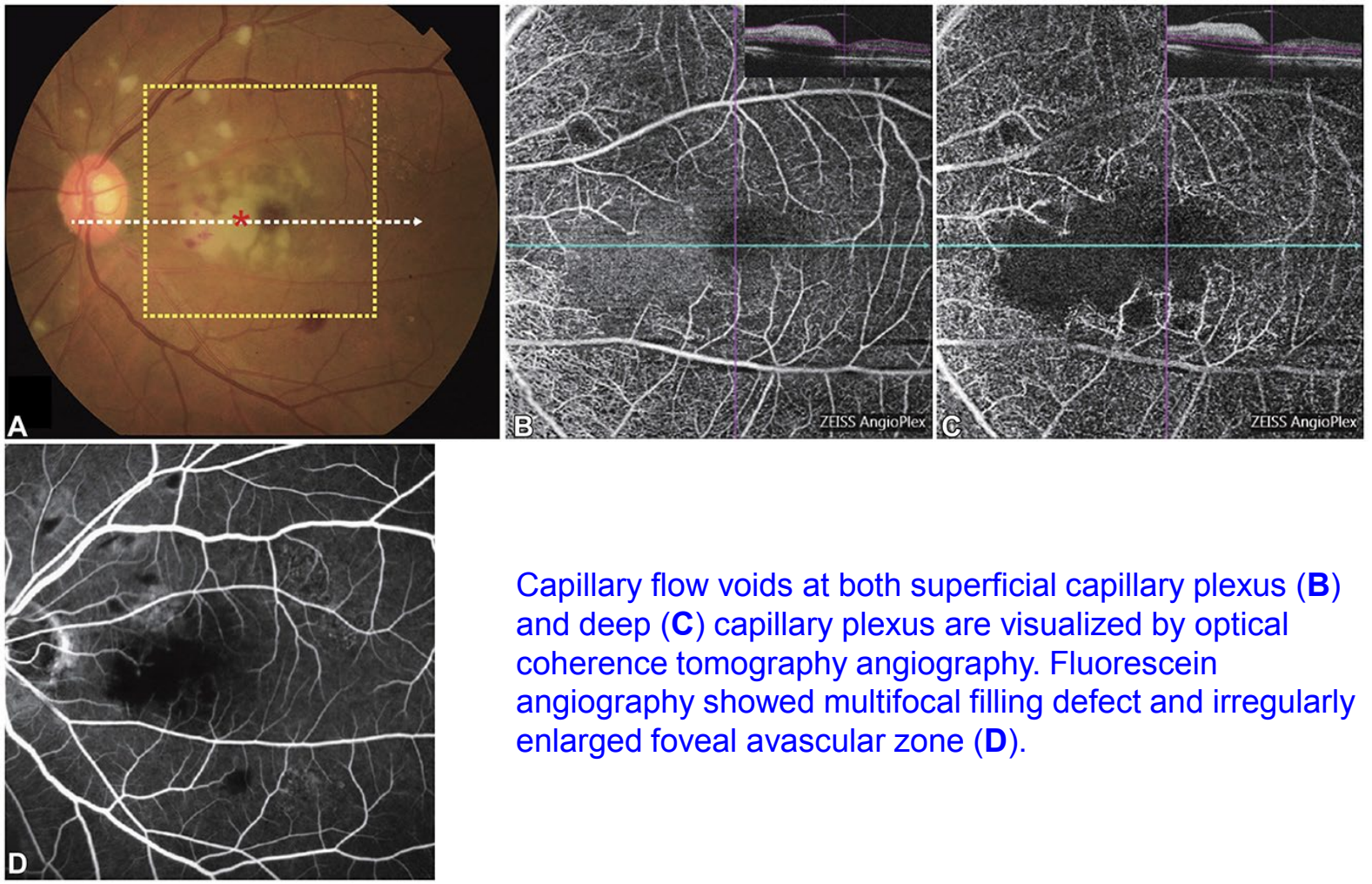


Purtscher retinopathy: Arteriolar obstruction

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy



Capillary flow voids at both superficial capillary plexus (**B**) and deep (**C**) capillary plexus are visualized by optical coherence tomography angiography. Fluorescein angiography showed multifocal filling defect and irregularly enlarged foveal avascular zone (**D**).

Purtscher retinopathy: Arteriolar obstruction

Q

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- Vision loss often permanent: Purtscher
- 2ndry to an acute increase in intraocular venous pressure: Valsalva; Terson
- FA→arteriolar obstruction, leakage: Purtscher
- Retinal edema common, expected:

A

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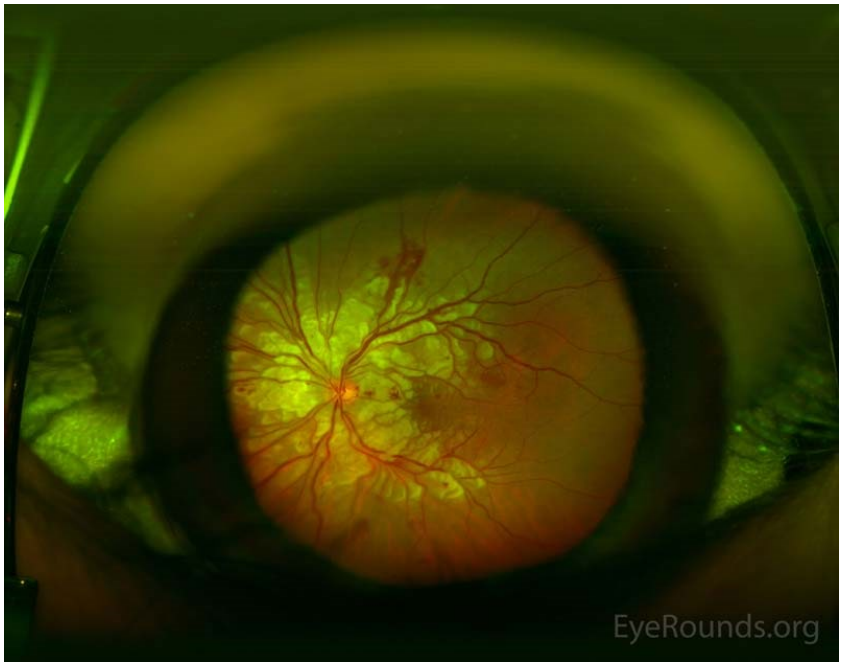

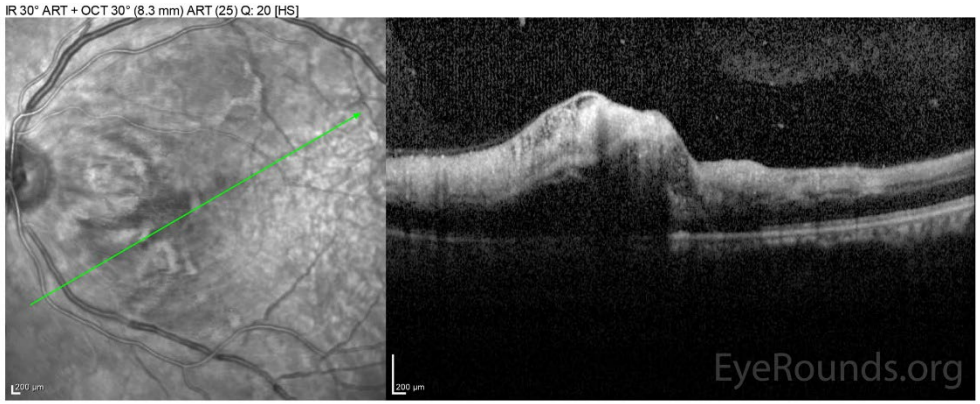

Purtscher retinopathy: Retinal edema

Q

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- 2ndry to abrupt intracranial hemorrhage: Terson
- Vision loss often permanent: Purtscher
- 2ndry to an acute increase in intraocular venous pressure: Valsalva; Terson
- FA→arteriolar obstruction, leakage: Purtscher
- Retinal edema common, expected: Purtscher
- DDx includes PVD, retinal mAcroaneurysm:

Note: MacroA, **not** microA!

A

For each statement, assign the proper condition(s):
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Valsalva vs Terson vs Purtscher: Highlights

	Valsalva retinopathy	Terson syndrome	Purtscher retinopathy
Intraocular heme present?	*?*	*?*	*?*

A

For each statement, assign the proper condition(s):
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Valsalva vs Terson vs Purtscher: Highlights

	Valsalva retinopathy	Terson syndrome	Purtscher retinopathy
Intraocular heme present?	Yes	Yes	Yes

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For each statement, assign the proper condition(s):
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- DDx includes PVD, retinal mAcroaneurysm: Valsalva

Valsalva vs Terson vs Purtscher: Highlights

	Valsalva retinopathy	Terson syndrome	Purtscher retinopathy
Intraocular heme present?	Yes	Yes	Yes
Mechanism	?	?	?

A

For each statement, assign the proper condition(s):
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Valsalva vs Terson vs Purtscher: Highlights

	Valsalva retinopathy	Terson syndrome	Purtscher retinopathy
Intraocular heme present?	Yes	Yes	Yes
Mechanism	Increased intraocular venous pressure	Increased intraocular venous pressure	Occlusion of arterioles, capillaries

Q

For each statement, assign the proper condition(s):
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Valsalva vs Terson vs Purtscher: Highlights

	Valsalva retinopathy	Terson syndrome	Purtscher retinopathy
Intraocular heme present?	Yes	Yes	Yes
Mechanism	Increased intraocular venous pressure	Increased intraocular venous pressure	Occlusion of arterioles, capillaries
CWS present?	*?*	*?*	*?*

A

For each statement, assign the proper condition(s):
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Valsalva vs Terson vs Purtscher: Highlights

	Valsalva retinopathy	Terson syndrome	Purtscher retinopathy
Intraocular heme present?	Yes	Yes	Yes
Mechanism	Increased intraocular venous pressure	Increased intraocular venous pressure	Occlusion of arterioles, capillaries
CWS present?	No	No	Yes

Q

For each statement, assign the proper condition(s):
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Valsalva vs Terson vs Purtscher: Highlights

	Valsalva retinopathy	Terson syndrome	Purtscher retinopathy
Intraocular heme present?	Yes	Yes	Yes
Mechanism	Increased intraocular venous pressure	Increased intraocular venous pressure	Occlusion of arterioles, capillaries
CWS present?	No	No	Yes
Retinal edema present?	***?***	***?***	***?***

A

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

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Valsalva vs Terson vs Purtscher: Highlights

	Valsalva retinopathy	Terson syndrome	Purtscher retinopathy
Intraocular heme present?	Yes	Yes	Yes
Mechanism	Increased intraocular venous pressure	Increased intraocular venous pressure	Occlusion of arterioles, capillaries
CWS present?	No	No	Yes
Retinal edema present?	No	No	Yes

Q

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

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- 2ndr
- Cott
- 2ndr a
- 2ndr , long
- 2ndr
- Visio
- 2ndr sure: Vals
- FA→
- Reti
- DDx includes PVD, retinal mAcroaneurysm: Valsalva

Valsalva vs Terson vs Purtscher: Highlights

	Valsalva retinopathy	Terson syndrome	Purtscher retinopathy
Intraocular heme present?	Yes	Yes	Yes
Mechanism	Increased intraocular venous pressure	Increased intraocular venous pressure	Occlusion of arterioles, capillaries
CWS present?	No	No	Yes
Retinal edema present?	No	No	Yes
Visual prognosis?	*?*	*?*	*?*

A

For each statement, assign the proper condition(s):
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Valsalva vs Terson vs Purtscher: Highlights

	Valsalva retinopathy	Terson syndrome	Purtscher retinopathy
Intraocular heme present?	Yes	Yes	Yes
Mechanism	Increased intraocular venous pressure	Increased intraocular venous pressure	Occlusion of arterioles, capillaries
CWS present?	No	No	Yes
Retinal edema present?	No	No	Yes
Visual prognosis?	Good	Good	Bad

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

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- 2ndr
- Cott
- 2ndr a
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- 2ndr
- Visic
- 2ndr sure: Vals
- FA→
- Retir
- DDx

Valsalva vs Terson vs Purtscher: Highlights

	Valsalva retinopathy	Terson syndrome	Purtscher retinopathy
Intraocular heme present?	**Yes**	**Yes**	**Yes**

So, other than presenting with intraocular heme…

Mechanism	Increased intraocular venous pressure	Increased intraocular venous pressure	Occlusion of arterioles, capillaries
CWS present?	No	No	Yes
Retinal edema present?	No	No	Yes
Visual prognosis?	Good	Good	Bad

For each statement, assign the proper condition(s):
Valsalva retinopathy; Terson syndrome; Purtscher retinopathy

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- DDx

Valsalva vs Terson vs Purtscher: Highlights

	Valsalva retinopathy	Terson syndrome	Purtscher retinopathy
Intraocular heme present?	Yes	Yes	Yes

So, other than presenting with intraocular heme…

Mechanism	Increased intraocular venous pressure	Increased intraocular venous pressure	Occlusion of arterioles, capillaries
CWS present?	**No**	**No**	**Yes**
Retinal edema present?	**No**	**No**	**Yes**
Visual prognosis?	**Good**	**Good**	**Bad**

Valsalva and Terson's are very similar, and differ greatly from Purtscher's!