Q

ROP: True or false

- Patients with a PDA are at increased risk of ROP

A

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Q

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- Patients with a **PDA** are at increased risk of ROP True

Why would a Personal Digital Assistant put someone at increased risk of ROP?*

*Do y'all know what a *Personal Digital Assistant* is?

Q

ROP: True or false

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Why would a Personal Digital Assistant put someone at increased risk of ROP?

In this context, PDA stands for quack

A

ROP: True or false

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Why would a Personal Digital Assistant put someone at increased risk of ROP?
In this context, PDA stands for **patent ductus arteriosus**

Q

ROP: True or false

- Patients with a PDA are at increased risk of ROP True
- Birth weight is a greater predictor for ROP than O_2 exposure

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(low birth weight)

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BW (gm)	Risk of ***severe*** ROP
<750	**?%**
750-999	
1000-1250	

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1/2

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Note the pattern…

Q

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Is exposure to supplemental O2 a risk factor at all?

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ROP: True or false

There is another risk factor that is tied for #1 with LBW—what is it?

- Pati… True
- Birth weight is a greater predictor for ROP than O_2 exposure True; **LBW is #1 risk factor** along with…?

A

ROP: True or false

There is another risk factor that is tied for #1 with LBW—what is it?
Infant age, ie, prematurity (probably not surprising that prematurity is a risk factor for retinopathy **of prematurity**)

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Development of significant ROP correlates best with the infant's **postmenstrual** age.
Postmenstrual age equals [one way of measuring infant age] + [another] age.

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What does this indicate about the relationship between timing of ROP development and an infant's chronologic age?

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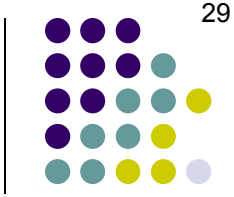
Q

ROP: True or false



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Which of the following are demonstrated risk factors for developing ROP?
--Paternal age
--Sepsis
--Receiving a blood transfusion (the infant, not mother)
--Poor postnatal weight gain
--Fever (w/o sepsis)
--Intraventricular hemorrhage

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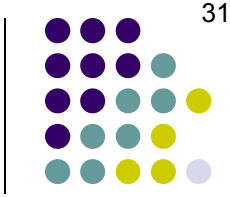

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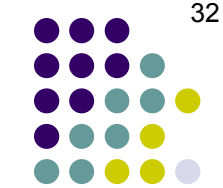
Q/A

ROP: True or false



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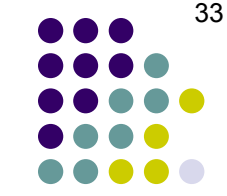

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Q

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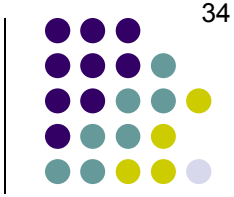

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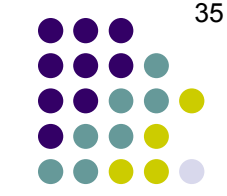

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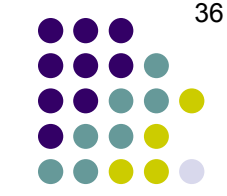

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What does the term **Everest in utero** *have to do with ROP?*

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What does the term **Everest in utero** *have to do with ROP?*
The term highlights the fact that the gestational environment is profoundly hypoxic compared to life ex utero. Oxygen levels in utero are about what they are at the 26,000 ft level on Everest—the so-called 'death zone.' It is under these O_2 conditions that the retinal vasculature is supposed to develop.

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When the preemie experiences normal ex utero O_2 levels, further development of the retinal vasculature is suppressed. This leaves more peripheral retinal areas with inadequate oxygenation. As they mature, these hypoxic retinal cells do what hypoxic retinal cells tend to do—they produce VEGF. The result is the now-familiar cascade of neovascularization, bleeding, and tractional retinal detachment.

ROP: True or false

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In other words, ROP is a ***biphasic disease:***

(No question yet—keep going)

strong evidence that excess P_aO_2 is not causative

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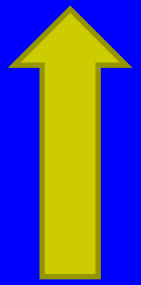

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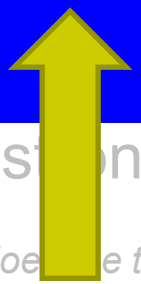

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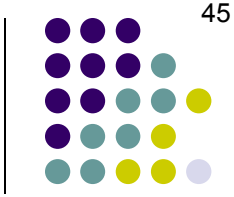

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In other words, ROP is a ***biphasic disease:***
--First, premature birth (+/- supplemental O_2) exposes the immature retina to vastly higher-than-normal O2 levels, leading to **downregulation of VEGF**. This causes the immature retinal vascular tree to ***stop proliferating.***
--Later, the (unvascularized) peripheral retina becomes metabolically active. The lack of vascularization renders the peripheral retina hypoxic, leading to **upregulation of VEGF**. This causes the vascular tree to ***start proliferating again.***

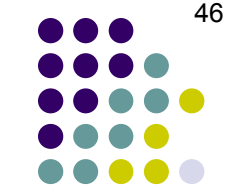
- strong evidence that excess P_aO_2 is not causative

What does the term **Everest in utero** *have to do with ROP?*
The term highlights the fact that the gestational environment is profoundly hypoxic compared to life ex utero. Oxygen levels in utero are about what they are at the 26,000 ft level on Everest—the so-called 'death zone.' It is under these O_2 conditions that the retinal vasculature is supposed to develop.

What does this suggest about premature birth and the pathophysiology of ROP?
When the preemie experiences normal ex utero O_2 levels, further development of the retinal vasculature is suppressed. This leaves more peripheral retinal areas with inadequate oxygenation. As they mature, these hypoxic retinal cells do what hypoxic retinal cells tend to do—they produce VEGF. The result is the now-familiar cascade of neovascularization, bleeding, and tractional retinal detachment.

Q

ROP: True or false



- Patients with a PDA are at increased risk of ROP True
- Birth weight is a greater predictor for ROP than O_2 exposure True; LBW is #1 risk factor
- Exposure to ambient light has a small but significant effect on ROP development False; the *Light-ROP* study found no relationship
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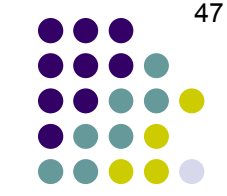
- Whites have a greater risk of ROP than blacks

A

ROP: True or false



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- The sexes have roughly equal ROP incidence rates

Q/A

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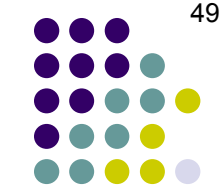

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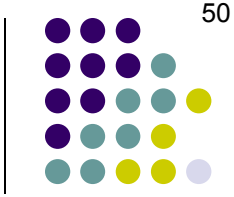
- Whites have a greater risk of ROP than blacks True
- The sexes have roughly equal ROP incidence rates False; ROP is significantly more common in M vs F

A

ROP: True or false



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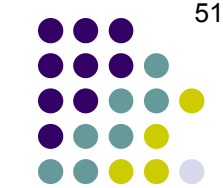
Q

ROP: True or false



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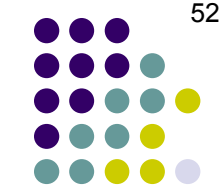
- Whites have a greater risk of ROP than blacks True
- The sexes have roughly equal ROP incidence rates False; ROP is significantly more common in males
- Once the ROP process starts, it usually progresses to an advanced level

Q/A

ROP: True or false



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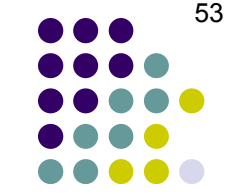
- Whites have a greater risk of ROP than blacks True
- The sexes have roughly equal ROP incidence rates False; ROP is significantly more common in males
- Once the ROP process starts, it usually progresses to an advanced level False; roughly % of ROP arrests spontaneously, without significant sequelae

A

ROP: True or false



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- Whites have a greater risk of ROP than blacks True
- The sexes have roughly equal ROP incidence rates False; ROP is significantly more common in males
- Once the ROP process starts, it usually progresses to an advanced level False; roughly 80% of ROP arrests spontaneously, without significant sequelae

Q

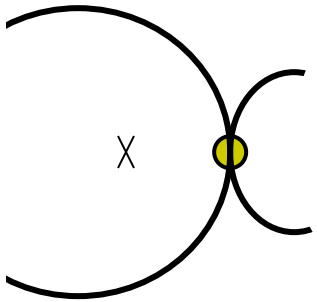
- *ROP classification*: Based on pathology criterion (called…), another criterion (called…), and another criterion (two words) status:

A

- *ROP classification*: Based on pathology **location** (*zone*), **appearance** (*stage*), and **plus disease** status:

Q

- *ROP classification*: Based on pathology **location** (*zone*), **appearance** (*stage*), and **plus disease** status:
  - **Location**
    - *Zone 1*:
    - *Zone 2*
    - *Zone 3*



(OD)

A

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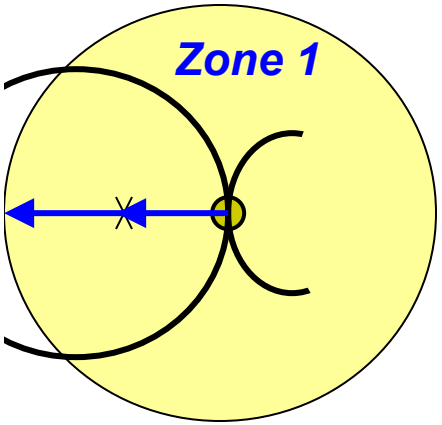
    - *Zone 1*: Circle around ONH w/ radius 2x disc-fovea distance
    - *Zone 2*
    - *Zone 3*

(ONH = optic nerve head)



(OD)

Q

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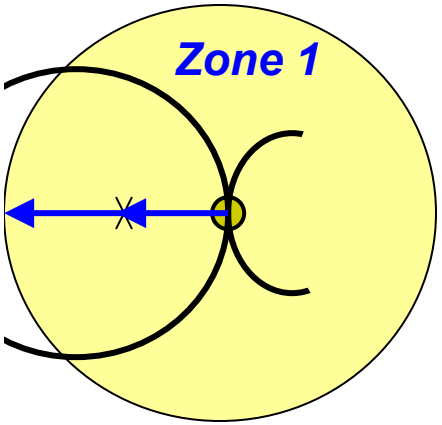

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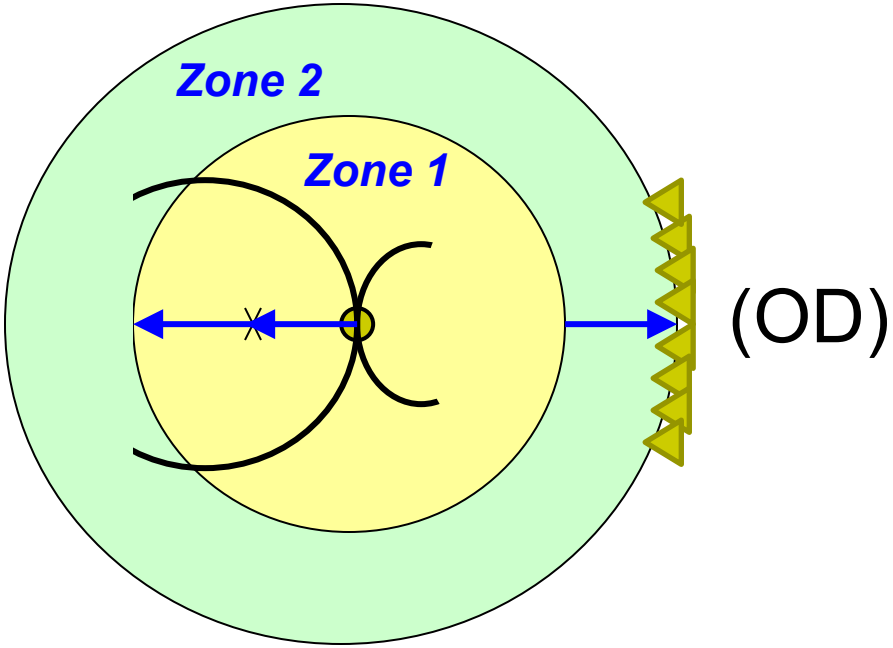

Q

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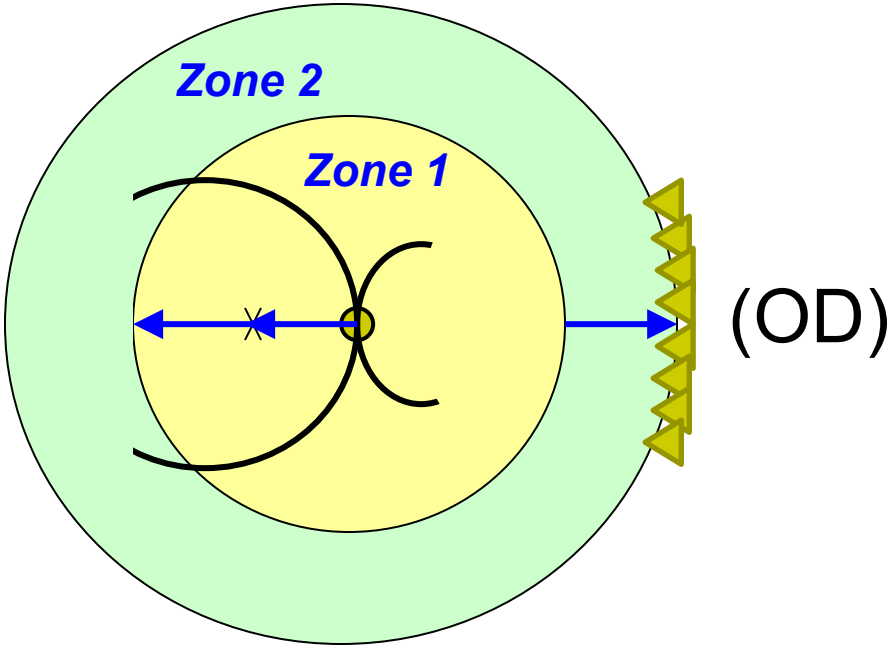

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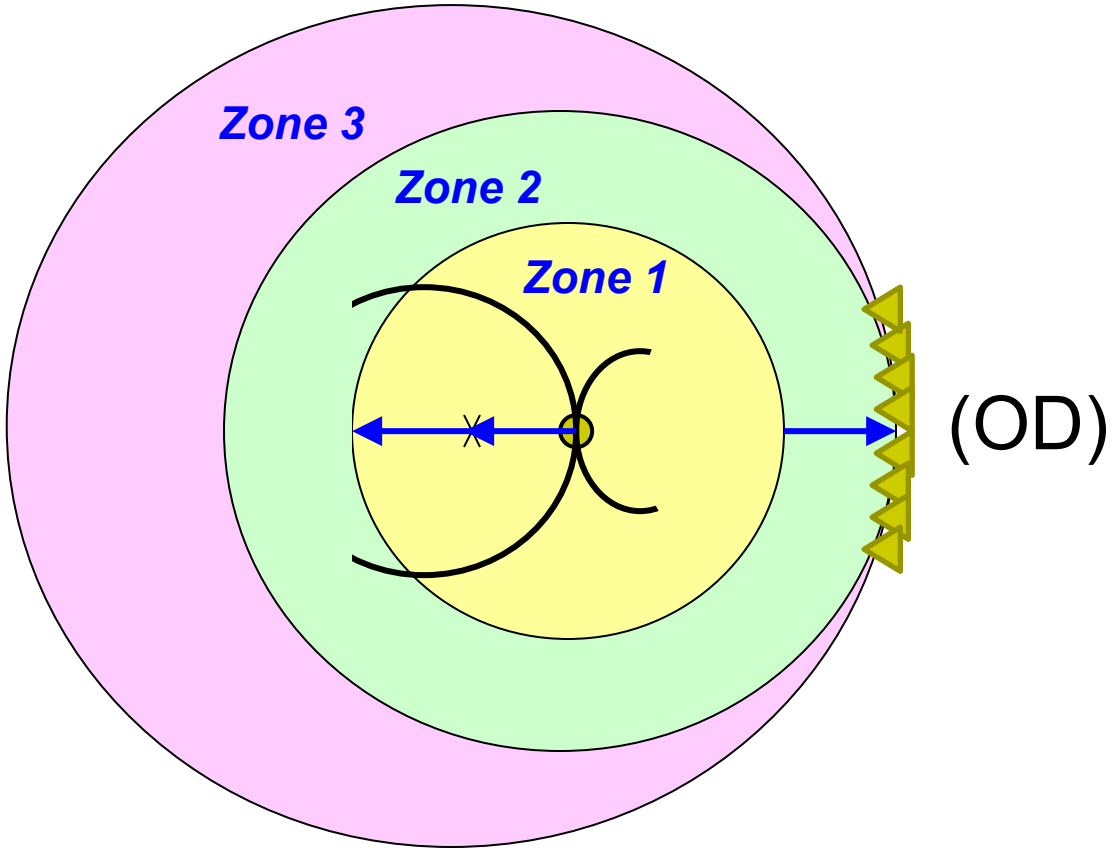

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    - *Stage 1*:
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    - *Stage 5*

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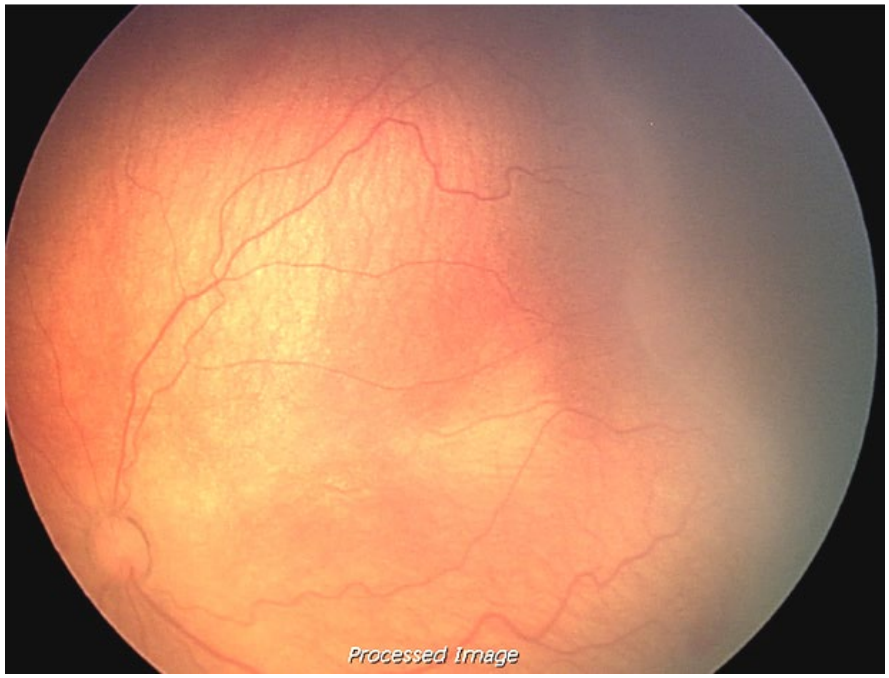

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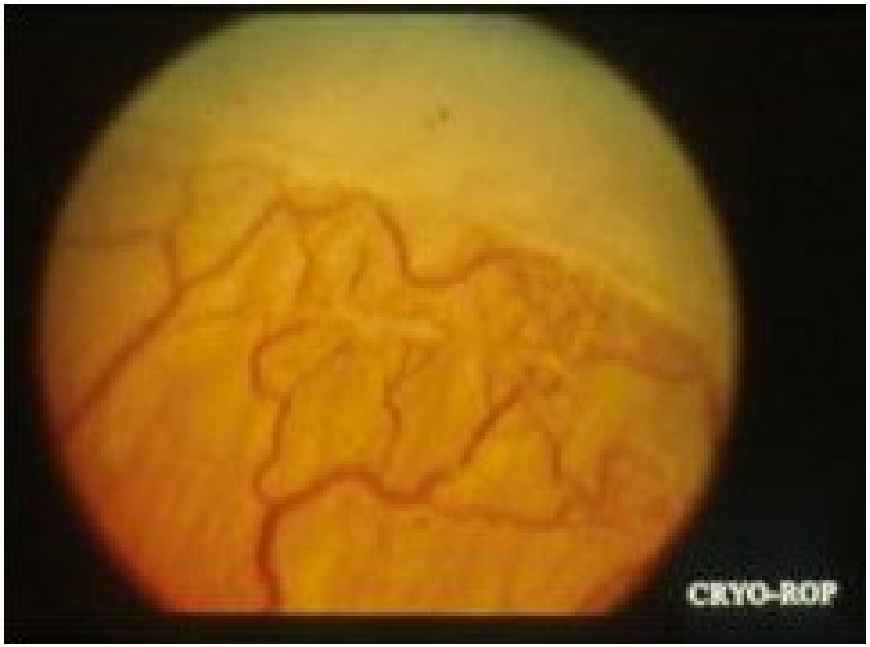

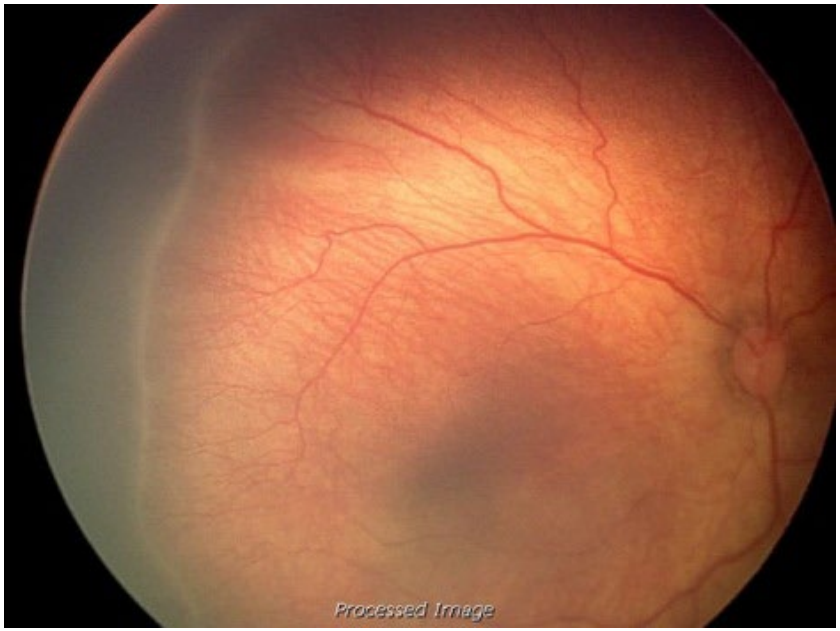

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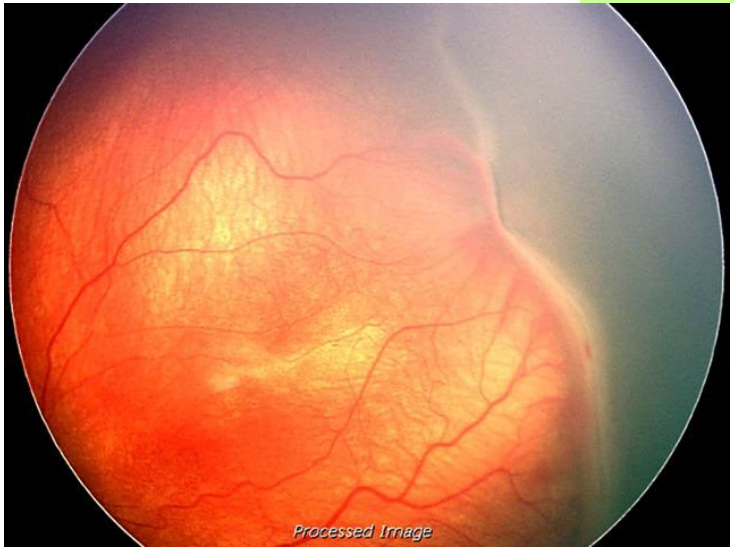
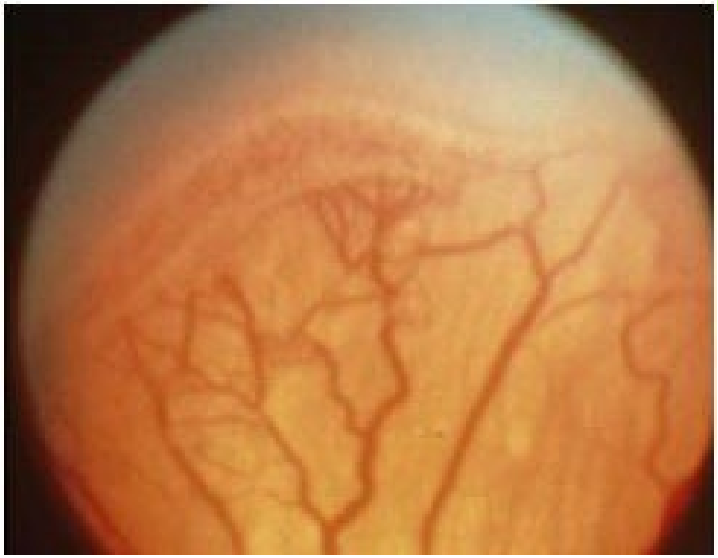
    - *Stage 3*: Ridge with extensive neo growing through ILM

(ILM = internal limiting membrane)





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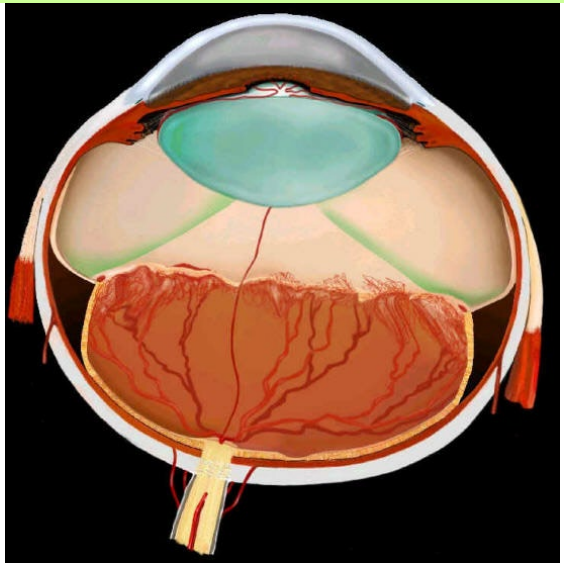
    - *Stage 4*: Subtotal RD
    - *Stage 5*



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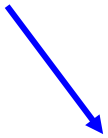

Stage 4 is divided into two substages:
4a: RD with macula…
4b: RD with macula…

A

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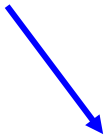

Stage 4 is divided into two substages:
4a: RD with macula…***on***
4b: RD with macula…***off***

Q

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    - *Stage 4*: Subtotal RD
    - *Stage 5*:

A

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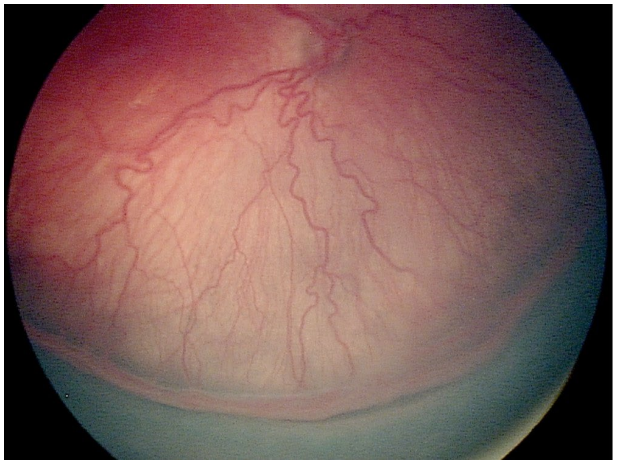
    - *Stage 4*: Subtotal RD
    - *Stage 5*: Total RD



Q

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    - *Stage 3*: Ridge with extensive neo growing through ILM
    - *Stage 4*: Subtotal RD
    - *Stage 5*: **Total RD**

What description is usually applied to the Stage 5 total RD?

A

- *ROP classification*: Based on pathology location (*zone*), **appearance** (*stage*), and plus disease status:
  - **Location**
    - *Zone 1*: Circle around ONH w/ radius 2x disc-fovea distance
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  - **Appearance**
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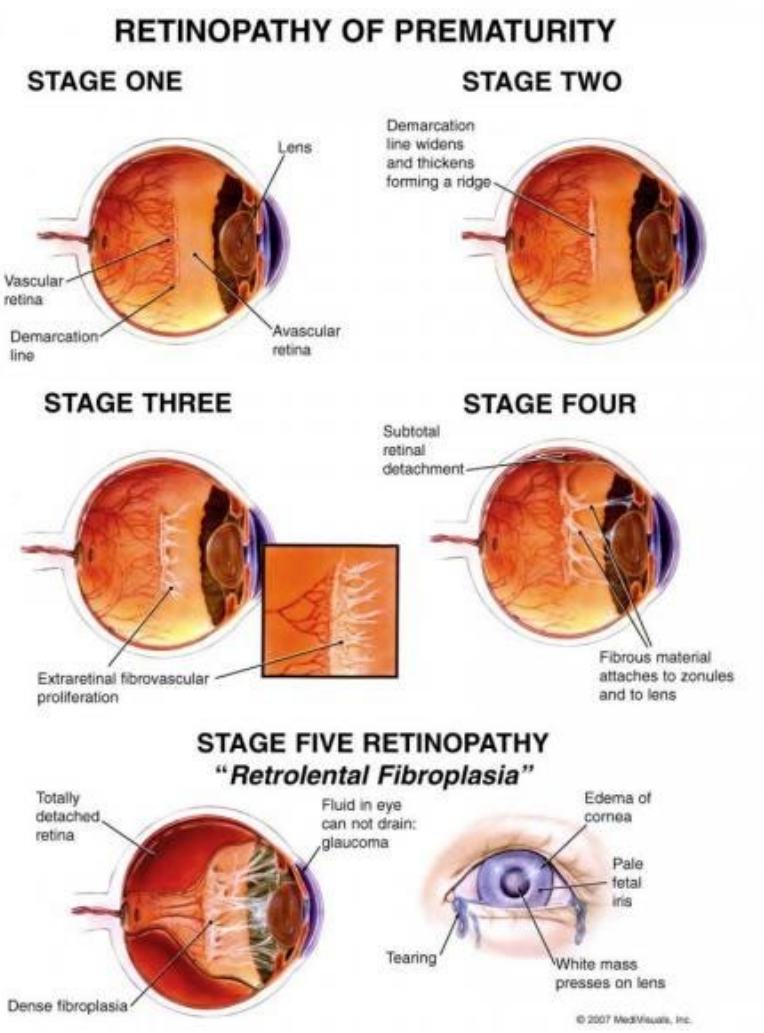
    - *Stage 3*: Ridge with extensive neo growing through ILM
    - *Stage 4*: Subtotal RD
    - *Stage 5*: **Total RD**

What description is usually applied to the Stage 5 total RD?
It is described as a 'funnel' RD


RETINOPATHY OF PREMATURITY
STAGE ONE
Lens
Vascular retina
Demarcation line
Avascular retina
STAGE TWO
Demarcation line widens and thickens forming a ridge
STAGE THREE
Extraretinal fibrovascular proliferation
STAGE FOUR
Subtotal retinal detachment
Fibrous material attaches to zonules and to lens
STAGE FIVE RETINOPATHY
"Retrolental Fibroplasia"
Totally detached retina
Fluid in eye can not drain: glaucoma
Dense fibroplasia
Edema of cornea
Pale fetal iris
Tearing
White mass presses on lens
© 2007 MediVisuals, Inc.

ROP stages

Q

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    - *Stage 3*: Ridge with extensive neo growing through ILM
    - *Stage 4*: Subtotal **RD**
    - *Stage 5*: Total **RD**

What are the three basic types of retinal detachment (generally speaking; not specific to ROP)?

A

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    - *Stage 5*: Total **RD**

What are the three basic types of retinal detachment (generally speaking; not specific to ROP)?
Rhegmatogenous, exudative and tractional

Q

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What are the three basic types of retinal detachment (generally speaking; not specific to ROP)?
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Which sort of RD occurs in ROP?
Tractional RD (TRD)

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    - *Stage 4*: Subtotal RD
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  - **Presence/absence of plus disease**
    - *Plus* disease = two/words retinal vessels

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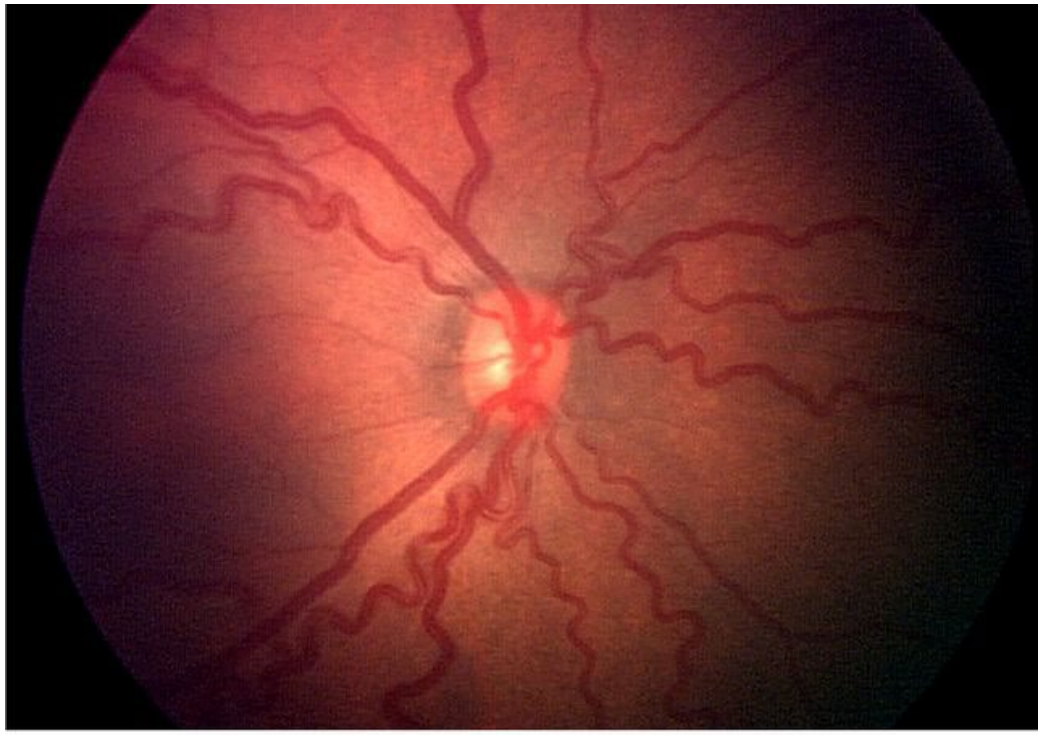

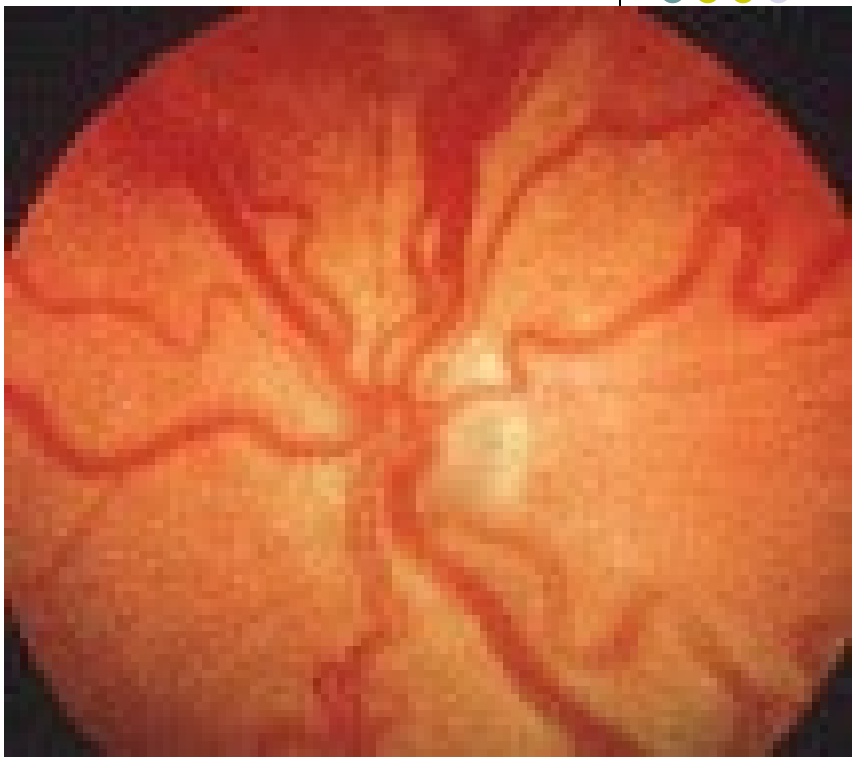

ROP: *Plus* disease

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A standardized photo exists indicating the 'official' amount needed

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What if the vessels are definitely dilated/tortuous, but not to the extent indicated in the standardized photo?

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How dilated/tortuous do the vessels need to be to qualify as plus disease?
A standardized photo exists indicating the 'official' amount needed

What if the vessels are definitely dilated/tortuous, but not to the extent indicated in the standardized photo?
This is referred to as **Pre-Plus disease**

Q

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      - Indicates [two words] is taking place

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      - Indicates arteriovenous shunting is taking place
      - Strong indicator that disease [one word] is occurring

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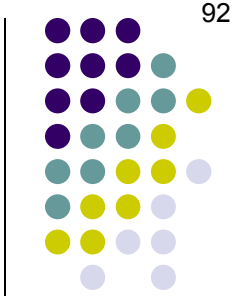
    - *Plus* disease = Dilated/tortuous retinal vessels
      - Indicates arteriovenous shunting is taking place
      - Strong indicator that disease progression is occurring

ROP: Treatment Considerations



- This is the ***outdated*** definition of when to treat ROP (so-called *Threshold disease*):
  - 5 contiguous clock hours or 8 noncontiguous hours of Stage 3 disease (or worse) in Zone I or II, associated with plus disease

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The **CRYO-ROP** study

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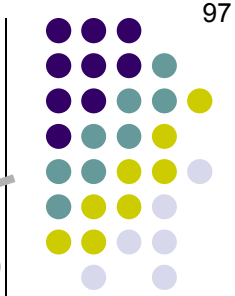
ROP: Treatment Considerations



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1.
or
2.
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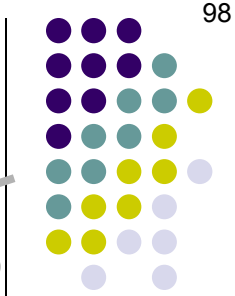

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The **ET-ROP** (Early Treatment of Retinopathy of Prematurity) study

ROP: Treatment Considerations

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  - 5 contiguous clock hours or 8 noncontiguous hours

The motivating factor behind the **ET-ROP** was to see whether earlier intervention could improve upon these dismal results

What's wrong with these criteria for treatment? Why don't we use them anymore?
Research indicated **that less than 13% of children treated via these criteria went on to have 20/40 or better vision in treated eyes**! That's not a very good outcome, so these criteria have been revised.

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Per the ET-ROP, disease meeting these criteria are known as what 'type' of ROP?

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ROP: Treatment Considerations

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  - **5 contiguous clock hours or 8 noncontiguous hours of Stage 3 disease (or worse) in Zone I or II, associated with plus disease**

Note that disease meeting ET-ROP criteria for treatment would not have met threshold under CRYO-ROP criteria. For this reason, the new criteria are sometimes referred to as *'pre-threshold Type I ROP'*

What are the new criteria?

Treatment is indicated if the ROP meets one of three criteria:

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By what special name is 'Zone 1 + Plus disease' known?

anymore?
ria went
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Why is it called Rush disease?
Because these eyes are at especially high risk of very rapid progression to TRD

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Which infants are at particular risk for developing Rush disease?
Those weighing under 1000 grams

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ROP: Treatment Considerations

Another term is used for aggressive posterior ROP--what is it?

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Is APROP simply another name for Rush disease?

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ROP: Treatment Considerations

Another term is used for aggressive posterior ROP--what is it?
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While the terms are sometimes used interchangeably, the clinical appearance and behavior of APROP can differ from that of Rush dz. APROP is characterized by the presence of neovascular fronds lying flat on the retinal surface (ie, without a ridge) in Zone 1 or posterior Zone 2. Active A-V shunting is the rule.

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1)
2)
3)
4)

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While the terms are sometimes used interchangeably, the clinical appearance and behavior of APROP can differ from that of Rush dz. APROP is characterized by the presence of neovascular fronds lying flat on the retinal surface (ie, without a ridge) in Zone 1 or posterior Zone 2. Active A-V shunting is the rule. APROP is notorious for four unfortunate tendencies:

1) Progressing directly from Stage 1 to Stage 3 disease;
2) very rapid progression--Stage 1 to 3 (or even 4) in a matter of days;
3) a proclivity to recur despite seemingly adequate treatment; and
4) a less-than-robust response to conventional laser treatment

By what special name is 'Zone 1 + Plus disease' known?
Rush disease

Why is it called Rush disease?
Because these eyes are at especially high risk of very rapid progression to TRD

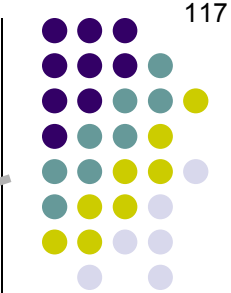
Which infants are at particular risk for developing Rush disease?
Those weighing under 1000 grams

anymore?
ria went
outcome,

1. Zone 1, any Stage, with Plus disease
or
2. Zone 1, Stage 3, with or without Plus disease
or
3. Zone 2, Stage 2 or 3, with Plus disease

Q

ROP: Treatment Considerations



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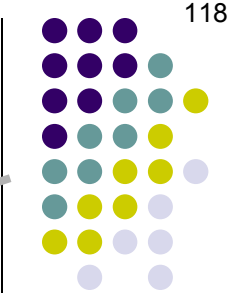

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bad complication (2 words)

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--Less bad thing to tissue
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Although it must be stressed that laser treatment is not wholly benign—issues with intra-operative apnea and/or adverse cardiac events have been reported, as have sequelae including cataract and glaucoma.

Q

ROP: Treatment Considerations

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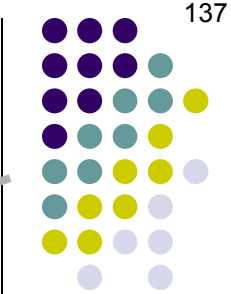

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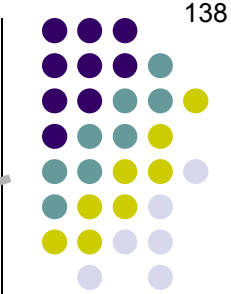

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ROP: Treatment Considerations

Another term is used for aggressive posterior ROP--what is it?
It is called **Aggressive Posterior ROP** (APROP)

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While the terms are sometimes used interchangeably, the clinical appearance and behavior of APROP can differ from that of Rush dz. APROP is characterized by the presence of neovascular fronds lying flat on the retinal surface (ie, without a ridge) in Zone 1 or posterior Zone 2. Active A-V shunting is the rule. APROP is notorious for four unfortunate tendencies:

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Recall this info from a previous slide

What's wrong with these criteria for treatment? Why don't we use them ar[illegible]e?

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As mentioned previously, APROP is notorious for its poor response to convention laser tx (CLT)

What was the treatment protocol?
Pts received a single intravitreal injection of 0.625 mg bevacizumab (note that this is ½ the usual adult dose), or CLT

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In eyes with Zone 1 APROP, the rate of recurrence after CLT was 42%, whereas the rate after intravitreal bevacizumab was only 6%.

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What about in eyes with posterior Zone 2 APROP?

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The recurrence rates did not differ statistically

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What about post-treatment development of the immature peripheral retina?

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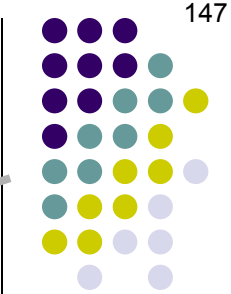
ROP: Treatment Considerations



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*What is the **UN**conventional treatment for ROP?*
Intravitreal bevacizumab

What clinical trial evaluated intravitreal bevacizumab as a primary treatment for ROP?
The **BEAT-ROP** (Bevacizumab Eliminates Angiogenic Threat in ROP) trial

What's wrong with these criteria for treatment? Why don't we use them anymore?

What was the key finding of the BEAT-ROP trial?
In eyes with Zone 1 APROP, the rate of recurrence after CLT was 42%, whereas the rate after intravitreal bevacizumab was only 6%.

What about in eyes with posterior Zone 2 APROP?
The recurrence rates did not differ statistically

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Another, smaller study found that recurrence after bevacizumab occurred as late as 69 weeks postmenstrual age.

(No question yet—keep going)

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In addition to the late age at which they occur, in what other important manner can recurrences after bevacizumab differ from those after CLT?

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Recurrences after CLT always occur at the ridge where neovascularization first occurred. However, some cases of post-bevacizumab recurrence develop at new locations well anterior to the original ridgeline.

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Recurrences after CLT always occur at the ridge where neovascularization first occurred. However, some cases of post-bevacizumab recurrence develop at new locations well anterior to the original ridgeline. It is speculated that the location of these recurrences demarcate regions of retina for which ischemia (and VEGF production) outlasted the presence of therapeutic levels of bevacizumab in the eye.

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Systemic effects

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Not quite. There are a host of criticisms of the BEAT-ROP trial specifically, as well as **concerns regarding the use of intravitreal bevacizumab in infants generally**.

Systemic effects

What was the issue re systemic effects*?*

intravitreal bevacizumab was only 6%.

What about in eyes with posterior Zone 2 APROP?
The recurrence rates did not differ statistically

What about post-treatment development of the immature peripheral retina?
Peripheral vascularization proceeded in an apparently normal fashion in the bevacizumab eyes, but not in the CLT eyes

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On the other hand, there is no reason to think CLT has any long-term effects outside the eye.

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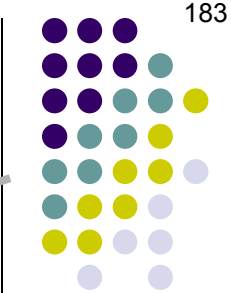
Q

ROP: Treatment Considerations



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  - 5 contiguous clock hours or 8 noncontiguous hours of Stage 3 disease (or worse) in Zone I or II, associated with plus disease

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Research indicated that less than 13% of children treated via these criteria went on to have 20/40 or better vision in treated eyes! That's not a very good outcome, so these criteria have been

What are the new criteria?
Treatment is indicated if t

1. Zone 1, any Stage, with
or
2. Zone 1, Stage 3, with o
or
3. Zone 2, Stage 2 or 3, with Plus disease

What if the pt develops a TRD--how is that managed?

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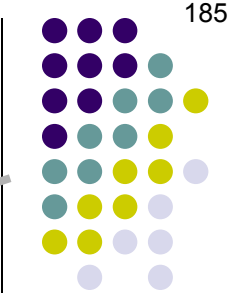
PPV and/or scleral buckle

(PPV = Pars plana vitrectomy)

Q

ROP: Treatment Considerations



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Is it effective?

A

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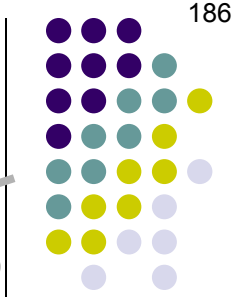

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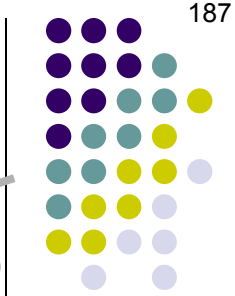
What if the pt develops a TRD--how is that managed?
PPV and/or scleral buckle

Is it effective?
Not so much. Only 30% of cases achieve anatomic reattachment; of these, only 25% are still attached at 5 years, and only 10% have ambulatory vision

Q

ROP: Treatment Considerations



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What [illegible]
Treat

Once a decision to treat has been made, how long can it be deferred?

1. Zone 1, any Stage, with Plus disease
or
2. Zone 1, Stage 3, with or without Plus disease
or
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What [illegible]
Treat

Once a decision to treat has been made, how long can it be deferred?
When possible, treatment should be initiated within **72 hours**

1. Zone 1, any Stage, with Plus disease
or
2. Zone 1, Stage 3, with or without Plus disease
or
3. Zone 2, Stage 2 or 3, with Plus disease

Q

ROP: Screening and Follow-Up

- ***ROP screening***
  - ***Who?***
    - Screen all infants…
      - …with a birth weight of less than # gm

A

ROP: Screening and Follow-Up

- ***ROP screening***
  - ***Who?***
    - Screen all infants…
      - …with a birth weight of less than 1500 gm

Q

ROP: Screening and Follow-Up

- ***ROP screening***
  - ***Who?***
    - Screen all infants…
      - …with a birth weight of less than 1500 gm, ***and/or***
      - …whose gestational age at birth was # weeks or less

A

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- ***ROP screening***
  - ***Who?***
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What about infants >1500 gm and/or with gestational age >30 weeks? Should they be screened?

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  - ***Who?***
    - Screen all infants…
      - …with a birth weight of less than 1500 gm, ***and/or***
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What about infants >1500 gm and/or with gestational age >30 weeks? Should they be screened?
Not as a general rule. However, the guidelines state that such infants should be screened if/when their neonatologist feels it is indicated

Q

ROP: Screening and Follow-Up

- ***ROP screening***
  - ***Who?***
    - Screen all infants…
      - …with a birth weight of less than 1500 gm, ***and/or***
      - …whose gestational age at birth was 30 weeks or less
  - ***When?***
    - Timing of first screen is a function of pt

A

- ***ROP scre***
  - ***Who?***
    - Screen a
      - …with
      - …whos
  - ***When?***
    - Timing of first screen is a function of pt age *(see table)*

Gestational age	*Postmenstrual age*	*Chronologic age at time of first ROP screening*
22	31	9
23	31	8
24	31	7
25	31	6
26	31	5
27	31	4
28	32	4
29	33	4
30	34	4
31	35	4
32	36	4

Q

- ***ROP scre***
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      - Serious ROP rare before postmenstrual age # weeks, so this is the youngest age that requires screening

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Don't try and memorize the table! Instead, here is first-screen timing in a nutshell:

No question—proceed when ready

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If the infant's gestational age at birth was 27 weeks or younger, perform first screen at ***postmenstrual* age 31 weeks**,
or

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Don't try and memorize the table! Instead, here is first-screen timing in a nutshell:
If the infant's gestational age at birth was 27 weeks or younger, perform first screen at ***postmenstrual* age 31 weeks**,
or
If the infant's gestational age at birth was 28 weeks or older, perform first screen at ***chronologic* age 4 weeks**

No question—proceed when ready

Q

ROP: Screening and Follow-Up

- ***ROP screening***
  - ***Who?***
    - Screen all infants…
      - …with a birth weight of less than 1500 gm, ***and/or***
      - …whose gestational age at birth was 30 weeks or less
  - ***When?***
    - Timing of first screen is a function of pt age *(see table)*
      - Serious ROP rare before postmenstrual age 31 weeks, so this is the youngest age that requires screening
  - ***How Often?***
    - A single screening exam is sufficient if the retina is

three words

A

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    - Otherwise, #-#, time period follow-up is indicated (depending upon exam findings)

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  - ***How Often?***
    - A single screening exam is sufficient if the retina is fully vascularized OU
    - Otherwise, 1 - 3 week follow-up is indicated (depending upon exam findings)

Q

ROP: Screening and Follow-Up

- ***Long-term follow-up***: A child with ROP needs periodic follow-up beyond the newborn period because…
  - pathology can lead to RD in decade(s) of life

A

ROP: Screening and Follow-Up

- ***Long-term follow-up***: A child with ROP needs periodic follow-up beyond the newborn period because…
  - Vitreoretinal traction can lead to RD in 1st or 2nd decade

Q

ROP: Screening and Follow-Up

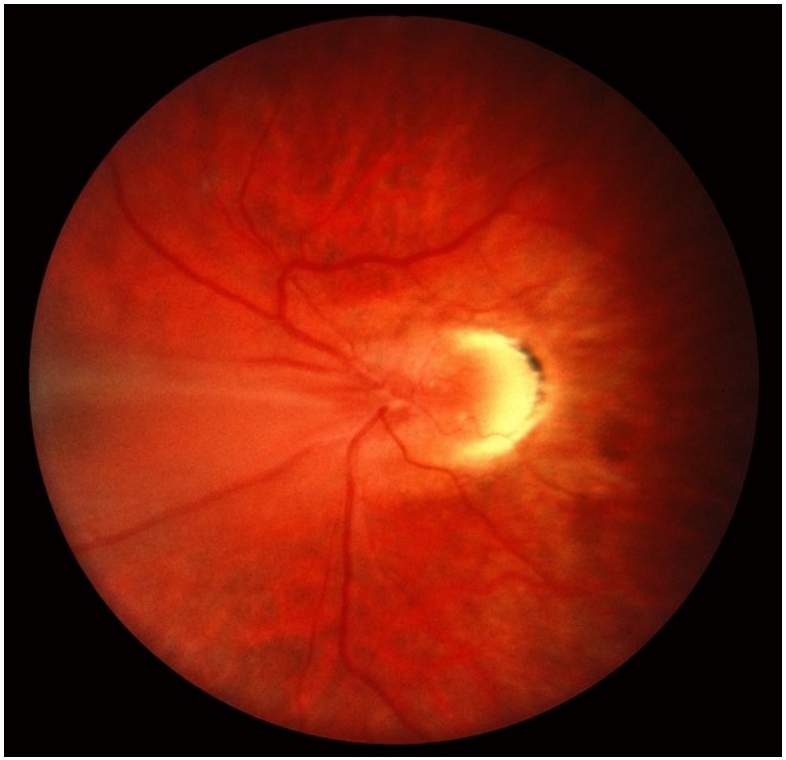
- ***Long-term follow-up***: A child with ROP needs periodic follow-up beyond the newborn period because…
  - Vitreoretinal traction can lead to RD in 1st or 2nd decade
  - Amblyopia can result from refractive problem, macular pathology, and/or EOM problem

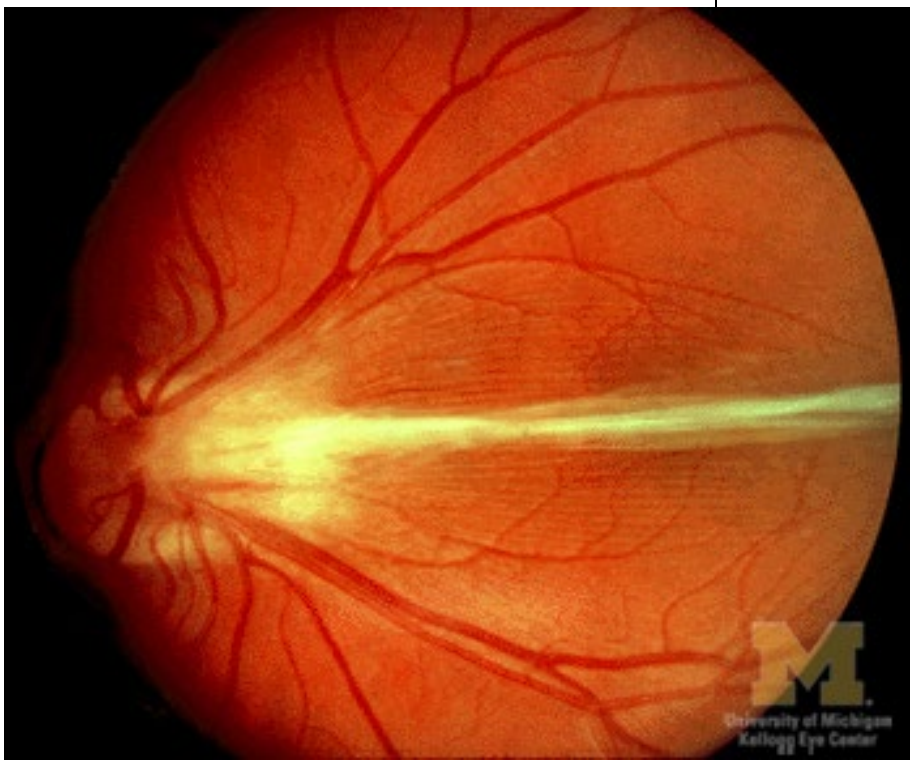
A

ROP: Screening and Follow-Up

- ***Long-term follow-up***: A child with ROP needs periodic follow-up beyond the newborn period because…
  - Vitreoretinal traction can lead to RD in 1st or 2nd decade
  - Amblyopia can result from high myopia, macular dragging, and/or strabismus

ROP: Screening and Follow-Up

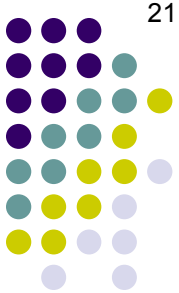




ROP: Macular dragging

Q

ROP: Screening and Follow-Up



- ***Long-term follow-up***: A child with ROP needs periodic follow-up beyond the newborn period because…
  - Vitreoretinal traction can lead to RD in 1st or 2nd decade
  - Amblyopia can result from high myopia, macular dragging, and/or strabismus
    - Macular dragging can produce pseudo EOM problem

A

ROP: Screening and Follow-Up

- ***Long-term follow-up***: A child with ROP needs periodic follow-up beyond the newborn period because…
  - Vitreoretinal traction can lead to RD in 1st or 2nd decade
  - Amblyopia can result from high myopia, macular dragging, and/or strabismus
    - Macular dragging can produce pseudostrabismus

Q

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  - Vitreoretinal traction can lead to RD in 1st or 2nd decade
  - Amblyopia can result from high myopia, macular dragging, and/or strabismus
    - Macular dragging can produce pseudostrabismus
      - Will have positive [exam finding in pseudo-EOM problem], but no [exam finding] on [exam maneuver]

A

ROP: Screening and Follow-Up

- ***Long-term follow-up***: A child with ROP needs periodic follow-up beyond the newborn period because…
  - Vitreoretinal traction can lead to RD in 1st or 2nd decade
  - Amblyopia can result from high myopia, macular dragging, and/or strabismus
    - Macular dragging can produce pseudostrabismus
      - Will have positive angle kappa, but no shift on cover testing

ROP: Screening and Follow-Up

- ***Long-term follow-up***: A child with ROP needs periodic follow-up beyond the newborn period because…
  - Vitreoretinal traction can lead to RD in 1st or 2nd decade
  - Amblyopia can result from high myopia, macular dragging, and/or strabismus
    - **Macular dragging** can produce pseudostrabismus
      - Will have positive angle kappa, but no shift on cover testing

Speaking of macular dragging…

Q

ROP: Screening and Follow-Up

- In addition to a dragged macula, ROP pts often have a dragged 

A

ROP: Screening and Follow-Up

- In addition to a dragged macula, ROP pts often have a dragged disc.

Q

ROP: **DDx**

- In addition to a dragged macula, ROP pts often have a dragged disc. *What three other clinical entities can give a similar picture?*

3 things that look like ROP:

1) ***?***
2) ***?***
3) ***?***

Hints forthcoming…

Q

ROP: **DDx**

- In addition to a dragged macula, ROP pts often have a dragged disc. *What three other clinical entities can give a similar picture?*

3 things that look like ROP:

1) *Hint:* A phakomatosis (buzzterm: 'Splashed paint')
2) *?*
3) *?*

A

ROP: **DDx**

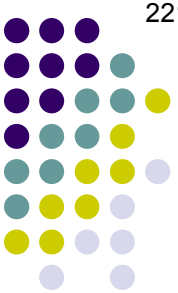
- In addition to a dragged macula, ROP pts often have a dragged disc. *What three other clinical entities can give a similar picture?*

3 things that look like ROP:

1) Incontinentia pigmenti
2) *?*
3) *?*

Q

ROP: **DDx**



- In addition to a dragged macula, ROP pts often have a dragged disc. *What three other clinical entities can give a similar picture?*

3 things that look like ROP:

1) Incontinentia pigmenti
2) *Hint:* A dz of the vitreoretinal interface
3) *?*

A

ROP: **DDx**

- In addition to a dragged macula, ROP pts often have a dragged disc. *What three other clinical entities can give a similar picture?*

3 things that look like ROP:

1) Incontinentia pigmenti
2) Familial exudative vitreoretinopathy (FEVR)
3) *?*

Q

ROP: **DDx**

- In addition to a dragged macula, ROP pts often have a dragged disc. *What three other clinical entities can give a similar picture?*

3 things that look like ROP:

1) Incontinentia pigmenti
2) Familial exudative vitreoretinopathy (FEVR)
3) *Hint:* Can also look like Rb

A

ROP: **DDx**

- In addition to a dragged macula, ROP pts often have a dragged disc. *What three other clinical entities can give a similar picture?*

3 things that look like ROP:

1) Incontinentia pigmenti
2) Familial exudative vitreoretinopathy (FEVR)
3) *Toxocara* chorioretinitis

Q

ROP: **DDx**

What is the eponymous name for IP?

d macula, ROP pts
lisc. *What three other*
e a similar picture?

things that look like ROP:

Incontinentia pigmenti

Familial exudative vitreoretinopathy (FEVR)

Toxocara chorioretinitis

A

ROP: DDx

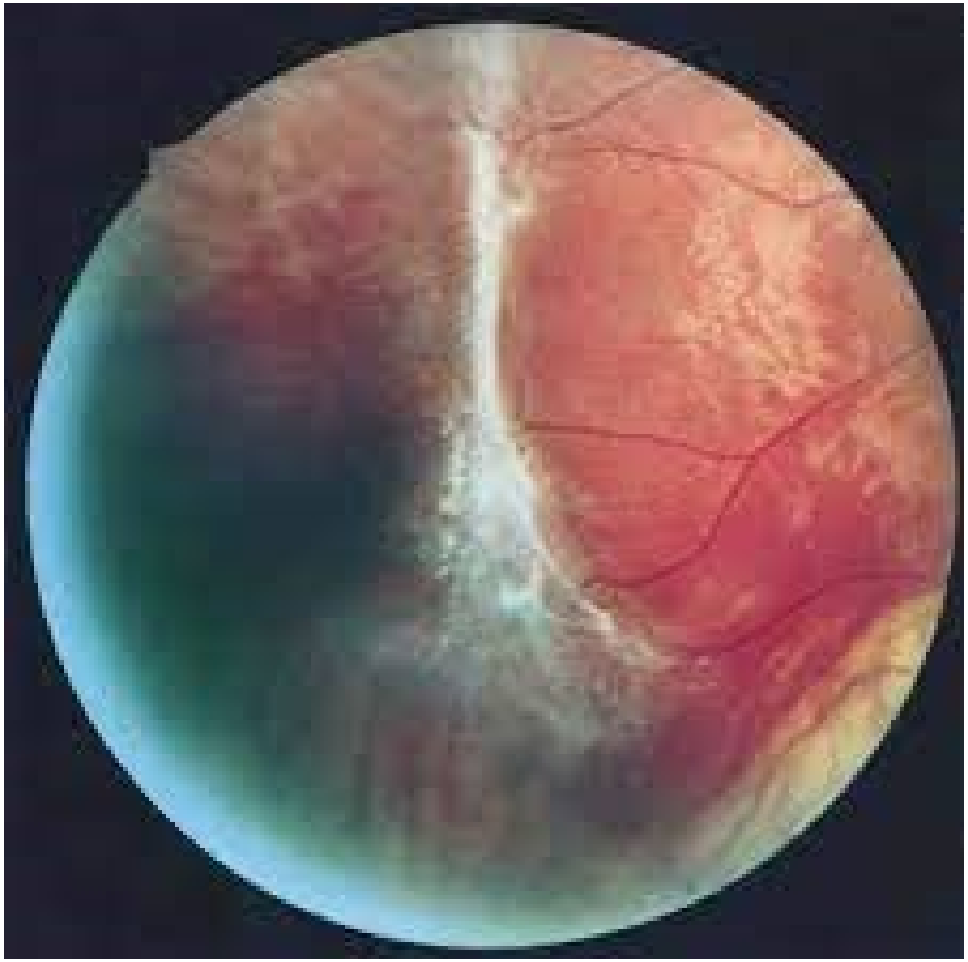
What is the eponymous name for IP?
Bloch-Sulzberger syndrome

d macula, ROP pts
lisc. *What three other*
e a similar picture?

things that look like ROP:

Incontinentia pigmenti
Familial exudative vitreoretinopathy (FEVR)
Toxocara chorioretinitis

ROP: **DDx**



Incontinentia pigmenti

Q

ROP: DDx

What is the eponymous name for IP?
Bloch-Sulzberger syndrome

What is the inheritance pattern of IP?

d macula, ROP pts
lisc. *What three other*
e a similar picture?

things that look like ROP:

Incontinentia pigmenti
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Toxocara chorioretinitis

A

ROP: DDx

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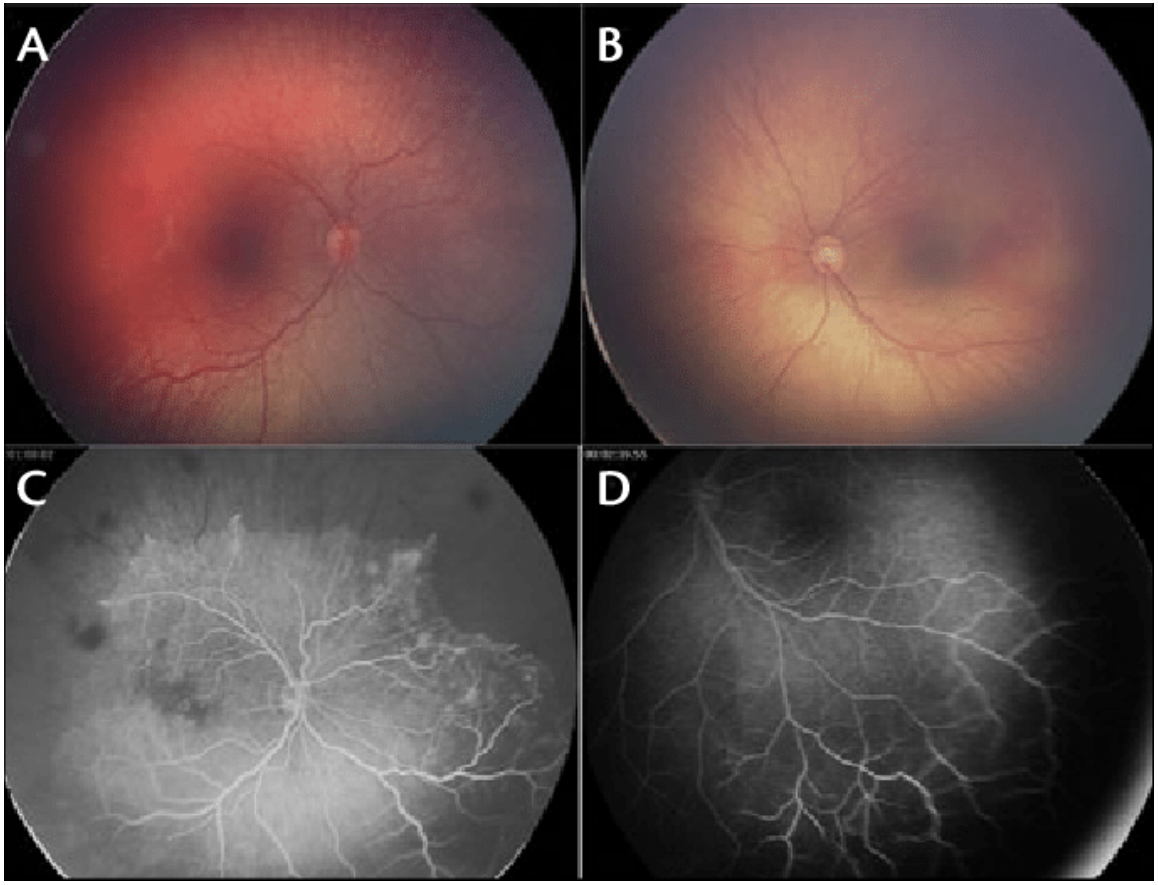

A 4-month old girl with incontinentia pigmenti was admitted for seizures and intracranial hemorrhage. It may be difficult to appreciate the peripheral nonperfusion with RetCam photography alone (A-B), but the findings become clear with RetCam FA

Q

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The appearance of the infant's skin after erythema and bullae develop at age ~

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To what does the buzzterm splashed paint *refer?*
The appearance of the infant's skin after erythema and bullae develop at age ~ 1 week

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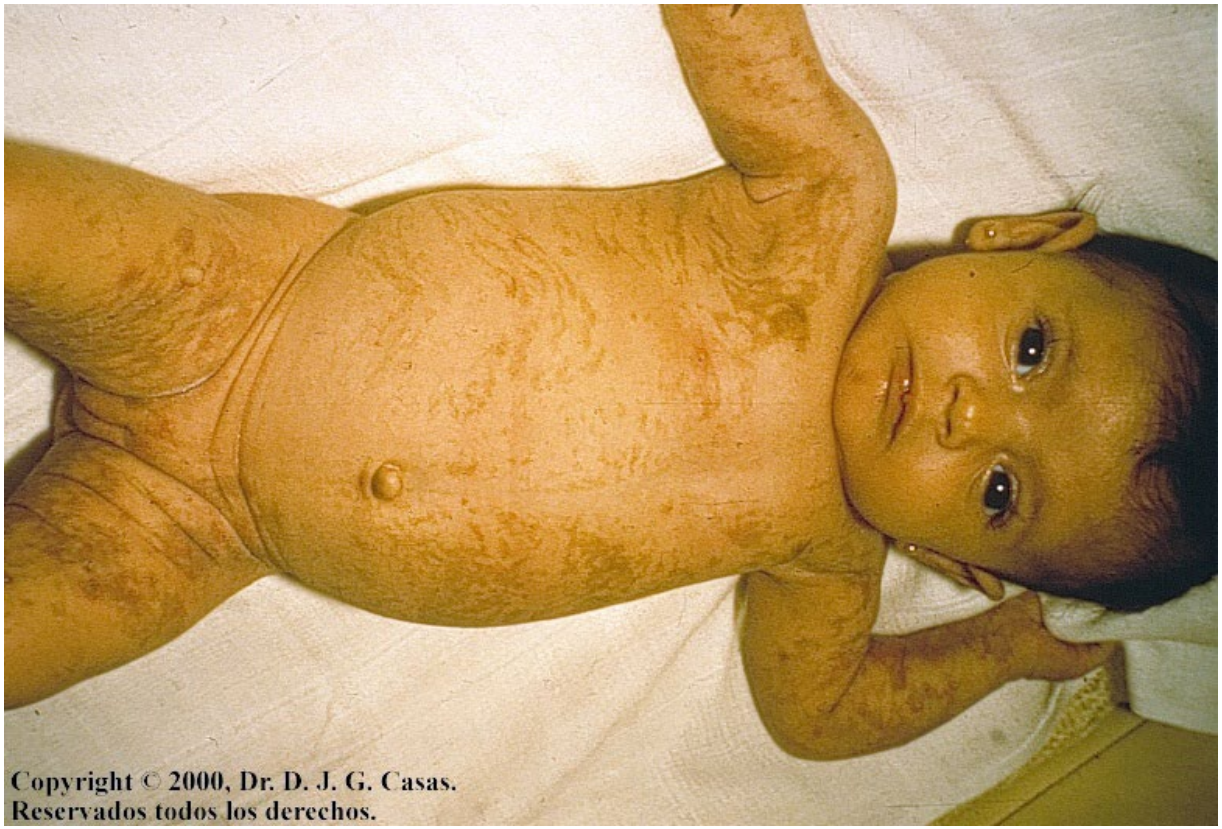

Incontinentia pigmenti: Splashed-paint appearance

Q

ROP: **DDx**

In a nutshell, what sort of condition is FEVR?

- Pa… …ed fovea an… …*er clinical en…*

…:

2) ***Familial exudative vitreoretinopathy*** **(FEVR)**
3) *Toxocara chorioretinitis*

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ROP: **DDx**

In a nutshell, what sort of condition is FEVR?
A vitreoretinal dystrophy

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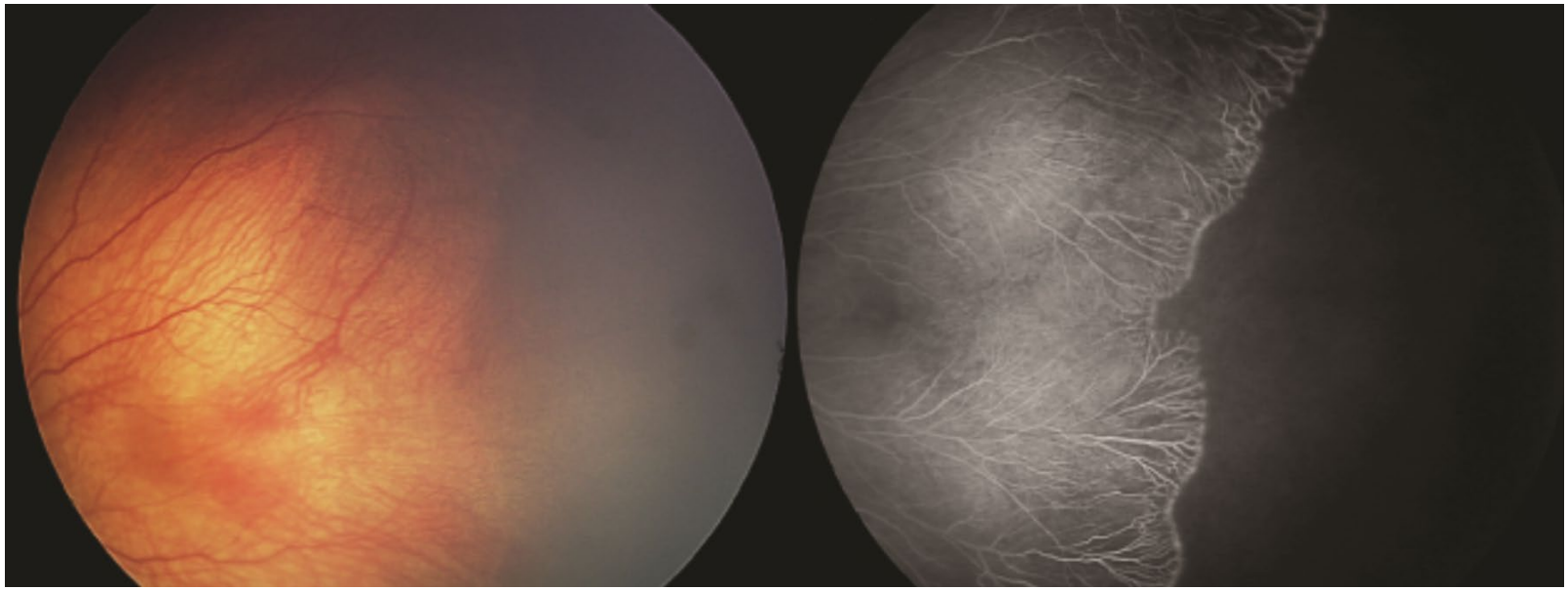

FEVR: Fundus photo and FA

Q

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FEVR babies will be full-term, and have normal oxygenation status

What is the inheritance pattern for FEVR?
AD, AR and X-linked forms all exist

2) ***Familial exudative vitreoretinopathy*** **(FEVR)**
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Q

ROP: **DDx**

- Patients s/p ROP often have a dragged fovea and/or dragged disc. *What three other clinical entities can give a similar picture?*

What sort of bug is Toxocara?

things that look like ROP:

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What sort of bug is Toxocara?
A roundworm

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What is the classic appearance of the ROP-like lesion?
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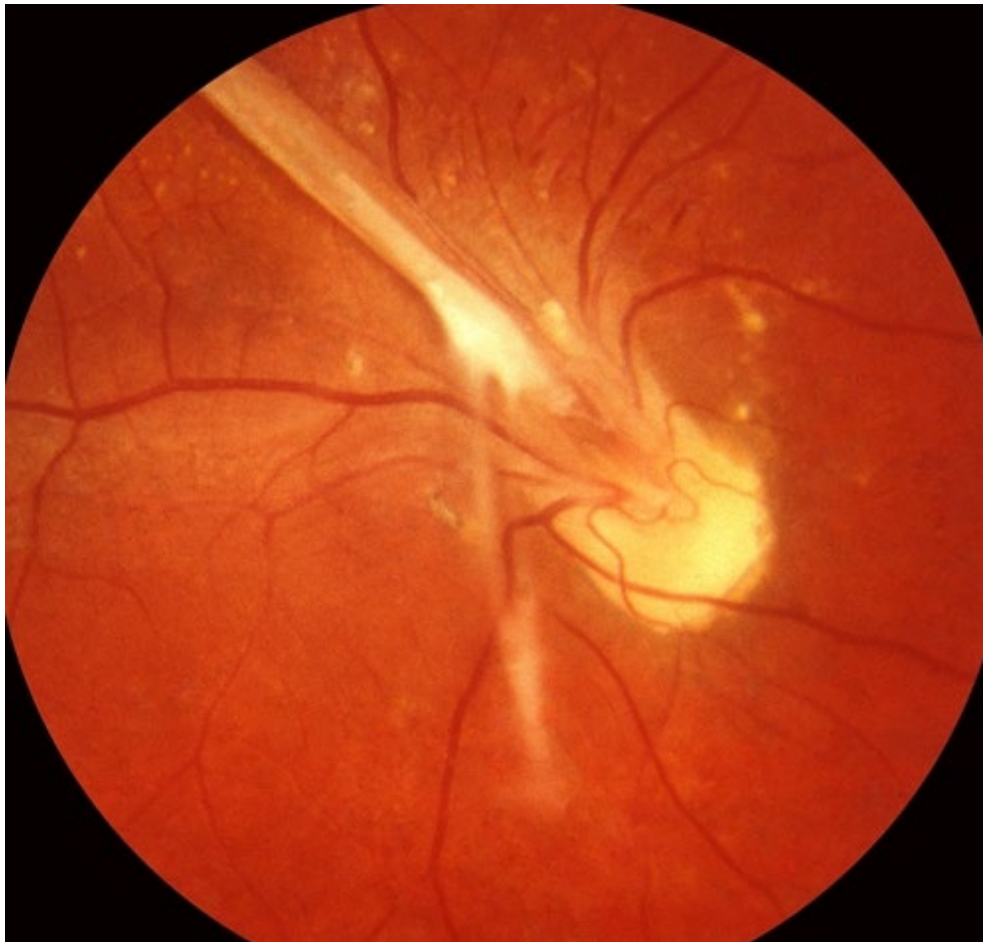

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What percent of ocular toxocariasis pts have the ROP-like presentation?

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ROP: DDx

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Mechanism(s) for disc/foveal dragging in each?

These two share a common mechanism

3 things that look like ROP:

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Mechanism similar to ROP (peripheral neo→retinal traction)

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This one has a different mechanism

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Mechanism similar to ROP (peripheral neo→retinal traction)

Disc/foveal dragging due to inflammatory granuloma

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