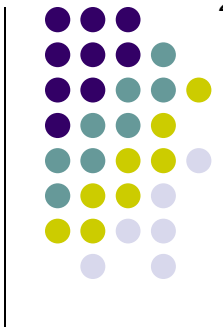


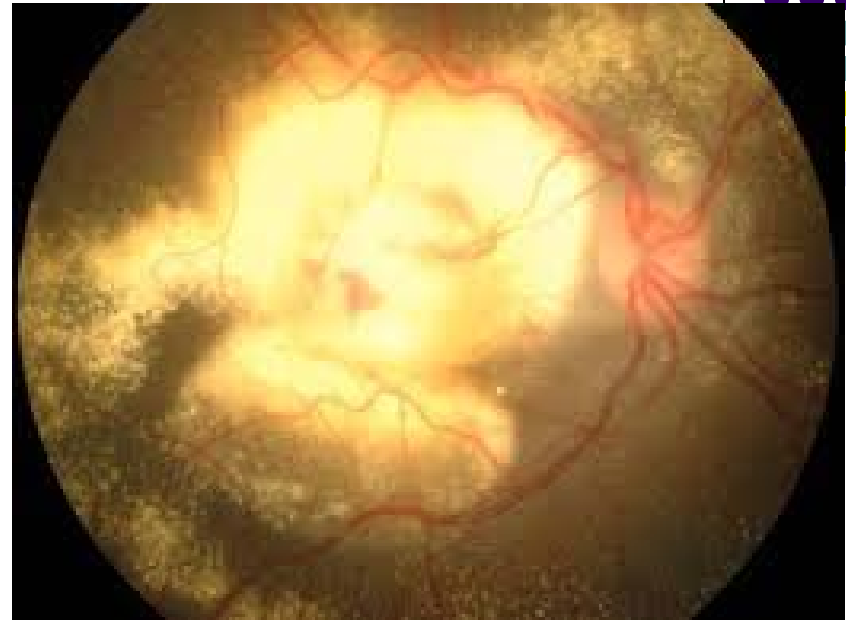
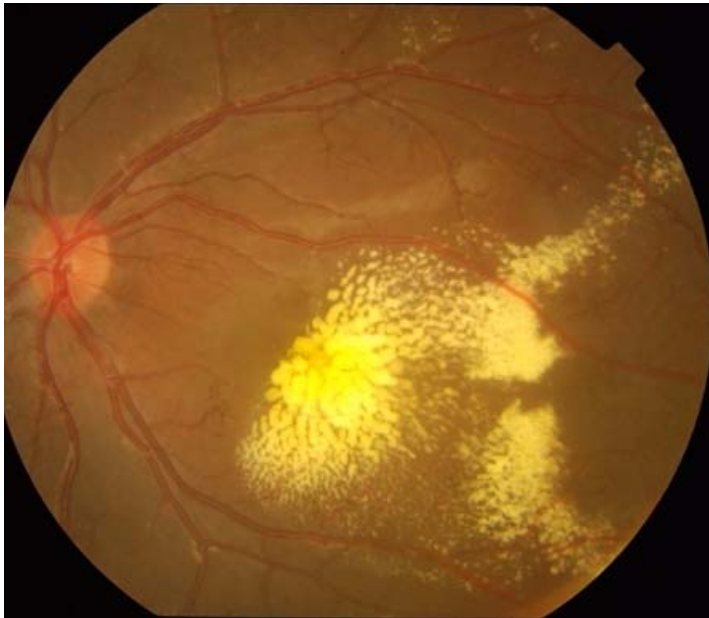
Coats disease

Classic retinal finding?

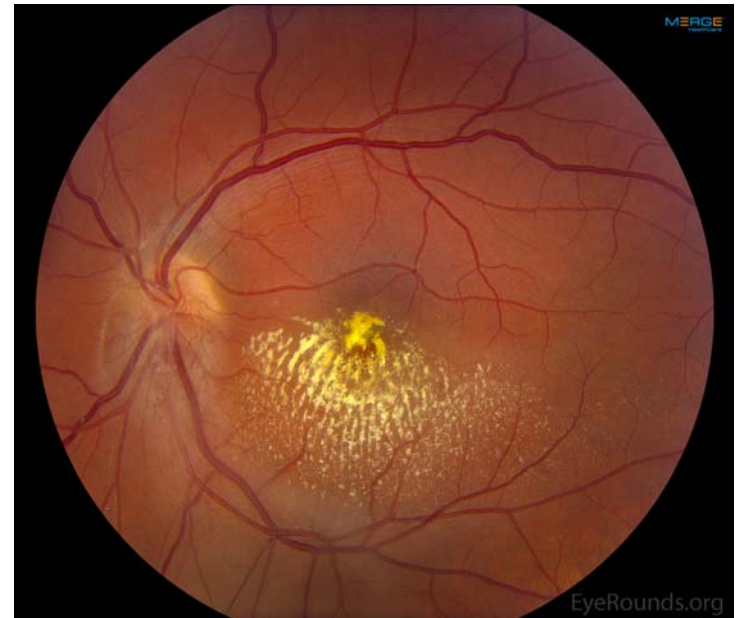


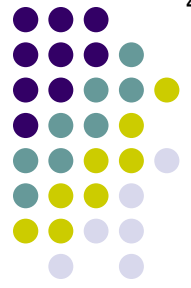
Coats disease

White-yellow subretinal exudates

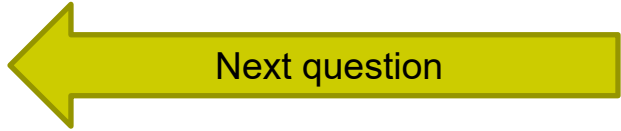


Coats dz





Gender predilection?



**Coats
disease**

White-yellow subretinal exudates



Gender predilection? **Male**

**Coats
disease**

White-yellow subretinal exudates



Typical age at presentation?

Gender predilection? Male

Coats disease

White-yellow subretinal exudates

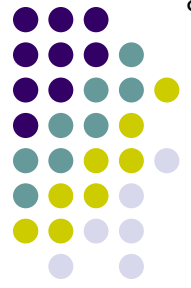


Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Coats disease

White-yellow subretinal exudates



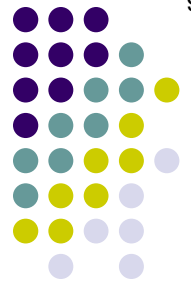
Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)?

Coats disease

White-yellow subretinal exudates



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Coats disease

White-yellow subretinal exudates



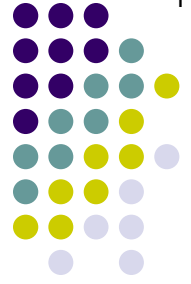
Typical age at presentation? 6-8 years

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Coats is a **disease** of young boys. It presents with unilateral, subretinal, white-yellow exudates.

No question—proceed when ready



Typical age at presentation? 6-8 years

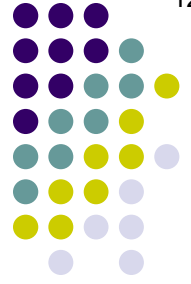
Gender predilection? **Male**

What proportion of cases are male?

Laterality (ie, bi- vs uni-)? **Unilateral**

**Coats
disease**

White-yellow subretinal exudates



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

What proportion of cases are male?
About 85%

Laterality (ie, bi- vs uni-)? **Unilateral**

**Coats
disease**

White-yellow subretinal exudates



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

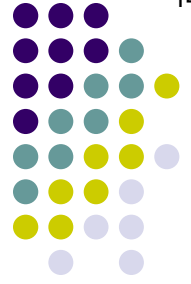
Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations?

Next question

**Coats
disease**

White-yellow subretinal exudates



Typical age at presentation? **6-8 years**

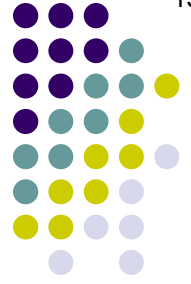
Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

**Coats
disease**

White-yellow subretinal exudates



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

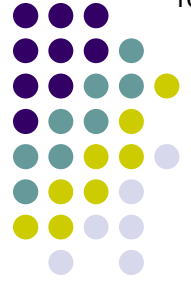
Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern?

**Coats
disease**

White-yellow subretinal exudates



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

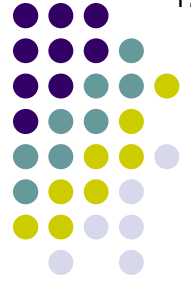
Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern? **None**

**Coats
disease**

White-yellow subretinal exudates



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern? **None**

Coats disease is sporadic, with no known systemic associations.

No question—proceed when ready



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

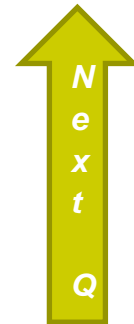
Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern? **None**

Characterized by the presence of abnormalities of the

two words



Coats disease

White-yellow subretinal exudates



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Characterized by the presence of abnormalities of the **retinal vasculature**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern? **None**

**Coats
disease**

White-yellow subretinal exudates



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern? **None**

Characterized by the presence of abnormalities of the **retinal vasculature**:

- ?
- ?
- ?
- ?

What retinal vasculature abnormalities are commonly present?

The vascular abnormalities lead to...

Coats disease

White-yellow subretinal exudates



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern? **None**

Characterized by the presence of abnormalities of the **retinal vasculature**:

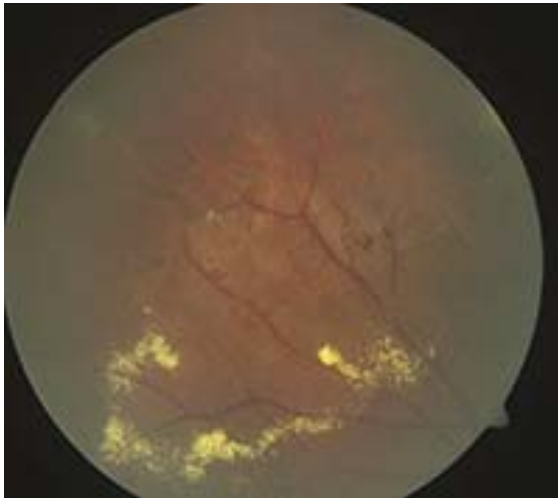
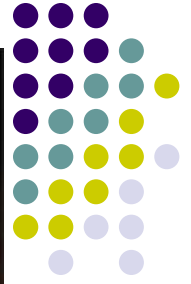
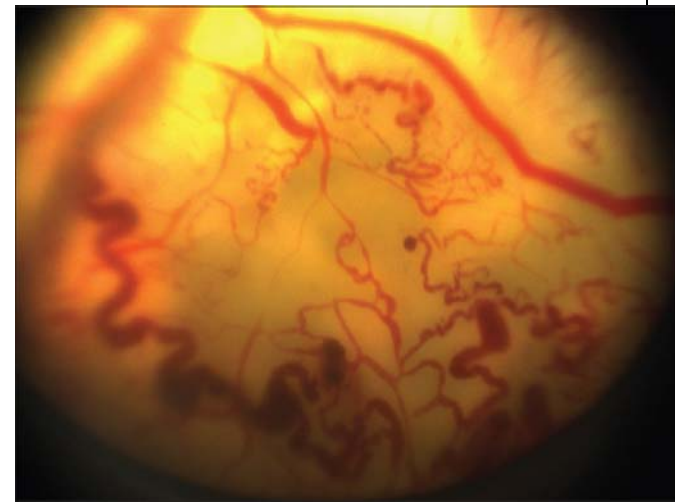
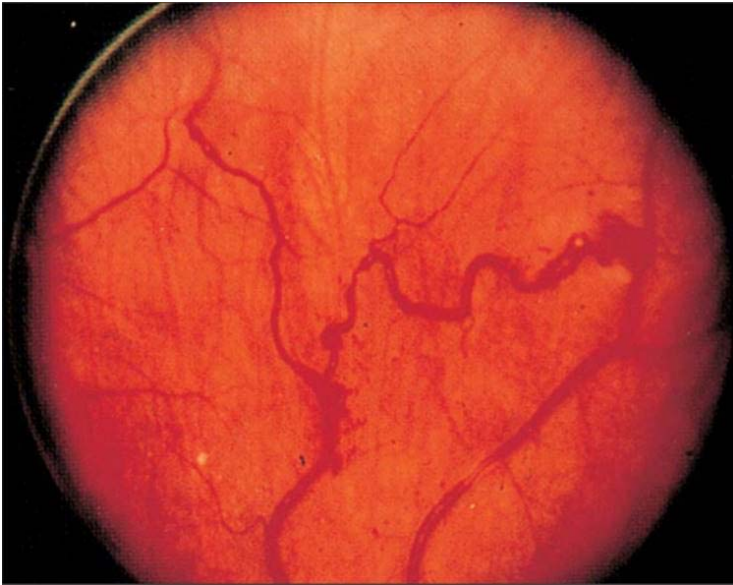
- Telangiectasias
- Venous dilation
- Microaneurysms
- Capillary dilation

What retinal vasculature abnormalities are commonly present?

The vascular abnormalities lead to...

Coats disease

White-yellow subretinal exudates



Coats: Telangiectasias, venous dilation, microaneurysms



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Characterized by the presence of abnormalities of the **retinal vasculature**:

- Telangiectasias
- Venous dilation
- Microaneurysms
- Capillary dilation

Systemic associations? **None**

Inheritance pattern? **None**

The retinal vascular abnormalities in Coats disease...

The vascular abnormalities lead to...

White-yellow subretinal exudates

No question—proceed when ready



Typical age at presentation? 6-8 years

Gender predilection? Male

Laterality (ie, bi- vs uni-)? Unilateral

Systemic associations? None

Inheritance pattern? None

Characterized by the presence of abnormalities of the **retinal vasculature**:

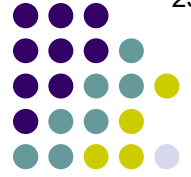
- Telangiectasias
- Venous dilation
- Microaneurysms
- Capillary dilation

The vascular abnormalities lead to...



The retinal vascular abnormalities in Coats disease...are responsible for the classic subretinal exudates

No question—proceed when ready



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance

Characterized by the presence of abnormalities of the retinal vasculature:

- Telangiectasias**
- Venous dilation**
- Microaneurysms**
- Capillary dilation**

There is a variant of Coats in which the retinal vasculature abnormalities are limited to the temporal macula. What is this condition called?

lead to...

xudates

disease



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance

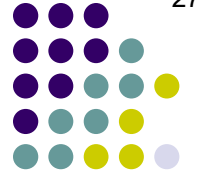
Characterized by the presence of abnormalities of the retinal vasculature:

- Telangiectasias
- Venous dilation
- Microaneurysms
- Capillary dilation

There is a variant of Coats in which the retinal vasculature abnormalities are limited to the temporal macula. What is this condition called?
Macular telangiectasia Type I (MacTel I)

lead to...

xudates



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Characterized by the presence of abnormalities of the retinal vasculature:

- Telangiectasias
- Venous dilation
- Microaneurysms
- Capillary dilation

There is a variant of Coats in which the retinal vasculature abnormalities are localized to the macula. This variant is called Macular telangiectasia type 1 (MacTel 1). There is a variant of Coats in which the retinal vasculature abnormalities are localized to the macula. This variant is called Macular telangiectasia type 1 (MacTel 1).

For more on MacTel, see slide-set R53

Inheritance

lead to...
xudates



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern? **None**

Characterized by the presence of abnormalities of the **retinal vasculature**:

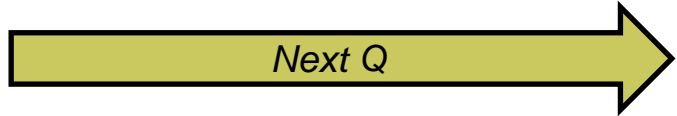
- Telangiectasias
- Venous dilation
- Microaneurysms
- Capillary dilation

Coats disease

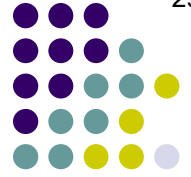
White-yellow subretinal exudates

The vascular abnormalities lead to...

If extensive, the exudates lead to...



two words



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern? **None**

Characterized by the presence of abnormalities of the **retinal vasculature**:

- Telangiectasias
- Venous dilation
- Microaneurysms
- Capillary dilation

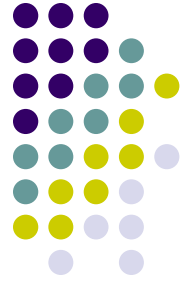
Coats disease

The vascular abnormalities lead to...

White-yellow subretinal exudates

If extensive, the exudates lead to...

Retinal detachment



Coats: RD



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern? **None**

Characterized by the presence of abnormalities of the **retinal vasculature**:

- Telangiectasias
- Venous dilation
- Microaneurysms
- Capillary dilation

Coats disease

The vascular abnormalities lead to...

White-yellow subretinal exudates

If extensive, the exudates lead to...

Retinal detachment

If massive, the RD can result in...

two words



Typical age at present



Inheritance pattern? **None**

Coats disease

The vasc

White-yellow subretinal exudates

If extensive, the exudates lead to...

Retinal detachment

If massive, the RD can result in...

Leukocoria or xanthocoria





Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern? **None**

Characterized by the presence of abnormalities of the **retinal vasculature**:

- Telangiectasias
- Venous dilation
- Microaneurysms
- Capillary dilation

Coats disease

The vascular abnormalities lead to...

White-yellow subretinal exudates

If extensive, the exudates lead to...

Retinal detachment

If massive, the RD can result in...

Leukocoria or xanthocoria

Leukocoria/xanthocoria place Coats on the DDx for...





Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern? **None**

Characterized by the presence of abnormalities of the **retinal vasculature**:

- Telangiectasias
- Venous dilation
- Microaneurysms
- Capillary dilation

Coats disease

The vascular abnormalities lead to...

White-yellow subretinal exudates

If extensive, the exudates lead to...

Retinal detachment

If massive, the RD can result in...

Leukocoria or xanthocoria

Leukocoria/xanthocoria place Coats on the DDx for...

Retinoblastoma



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern? **None**

Characterized by the presence of abnormalities of the **retinal vasculature**:

- Telangiectasias
- Venous dilation
- Microaneurysms
- Capillary dilation

When it manifests with leukocoria, **Coats disease** must be differentiated from retinoblastoma

The vascular abnormalities lead to...

White-yellow subretinal exudates

if extensive, can result in...

Retinal detachment

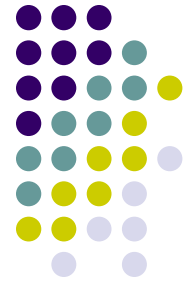
If massive, the RD can result in...

Leukocoria or xanthocoria

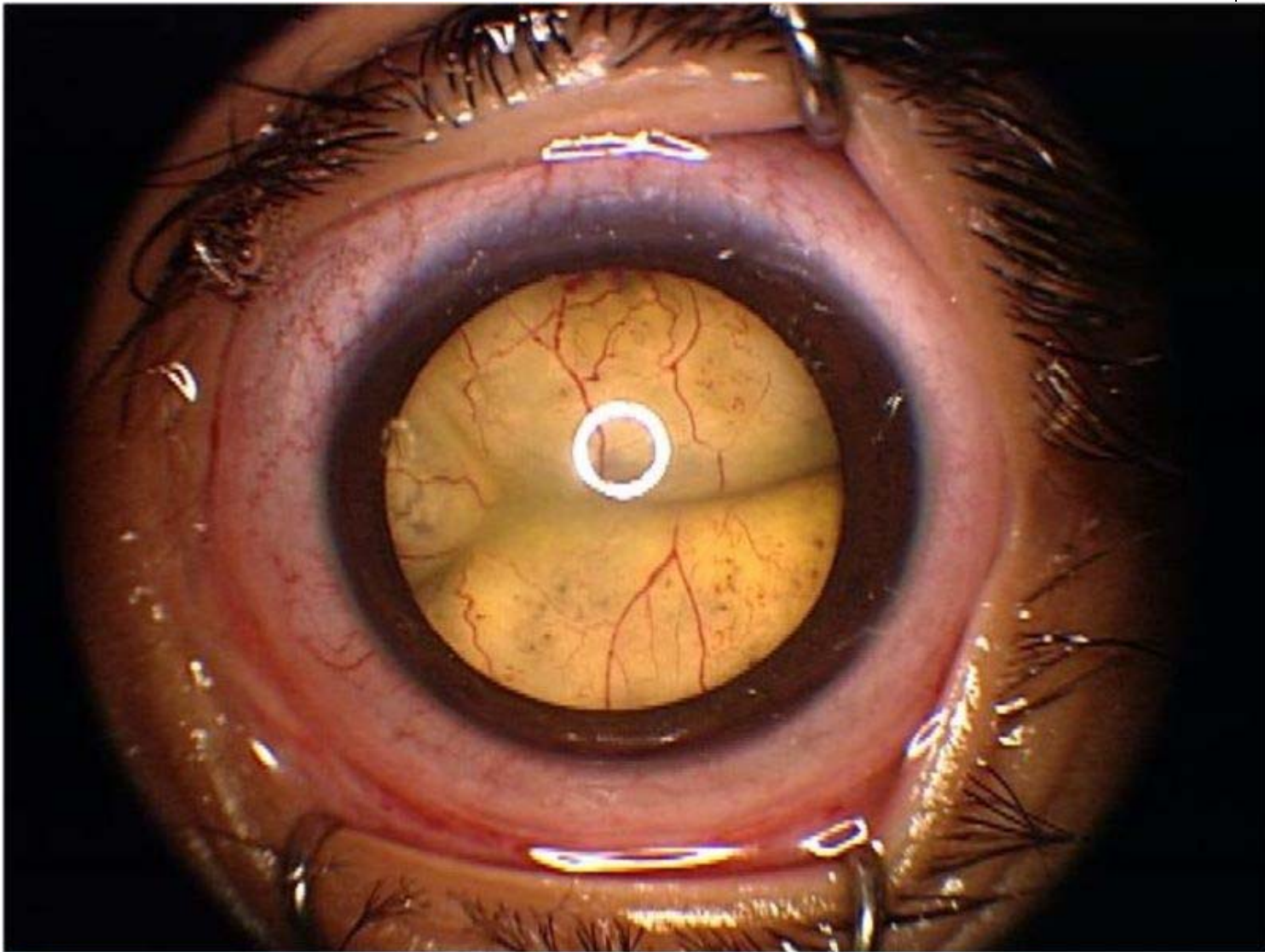
Retinoblastoma

Leukocoria/xanthocoria place Coats on the DDX for...

No question—proceed when ready

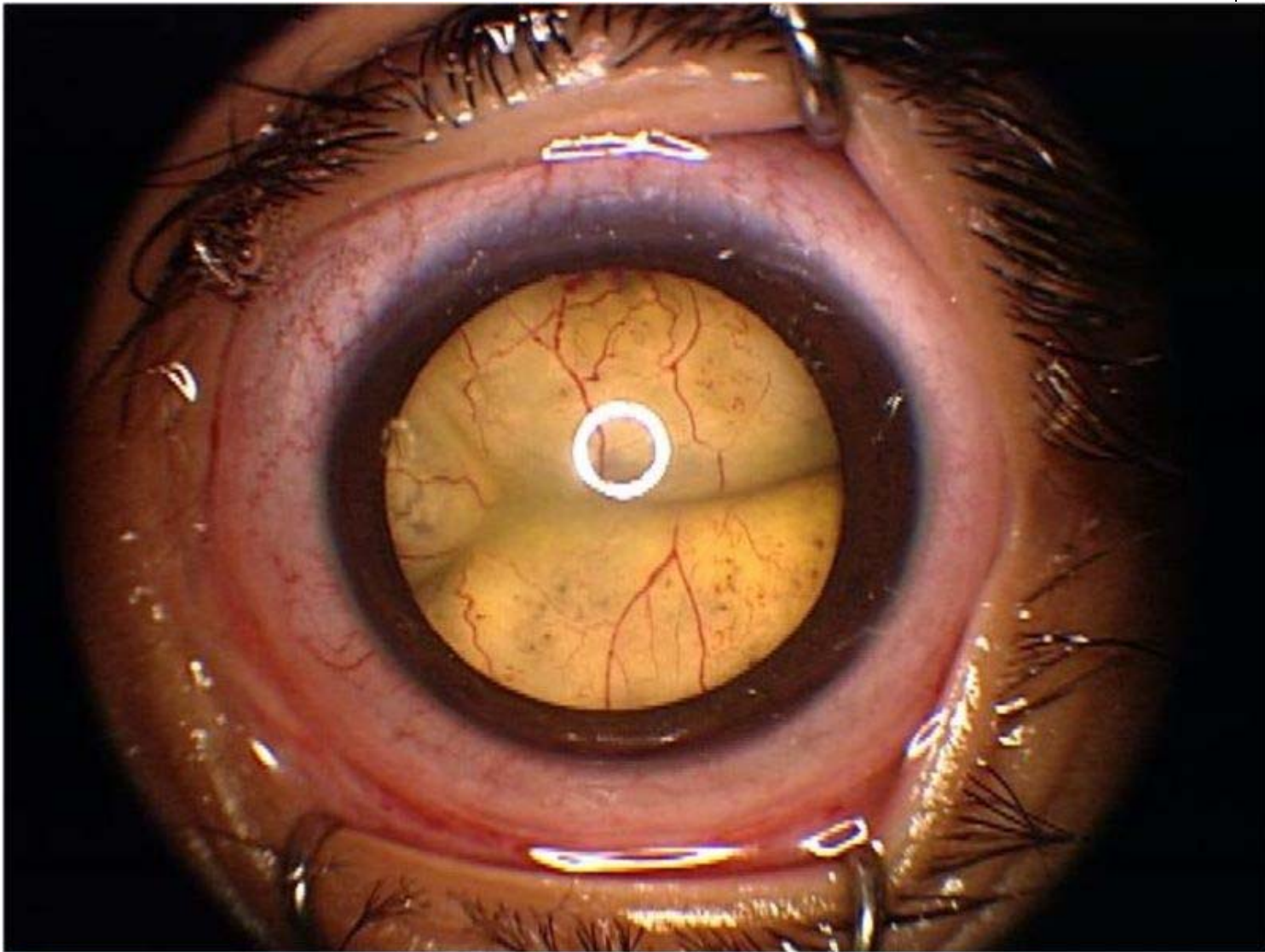


One child has Coats, the other Rb. Which is which?



Medscape

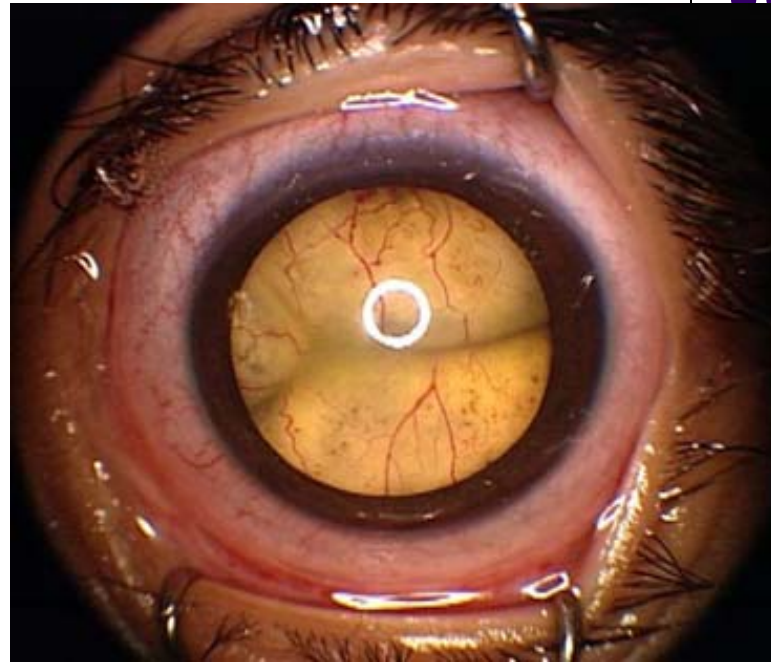
Is it Coats, or Rb?



Medscape

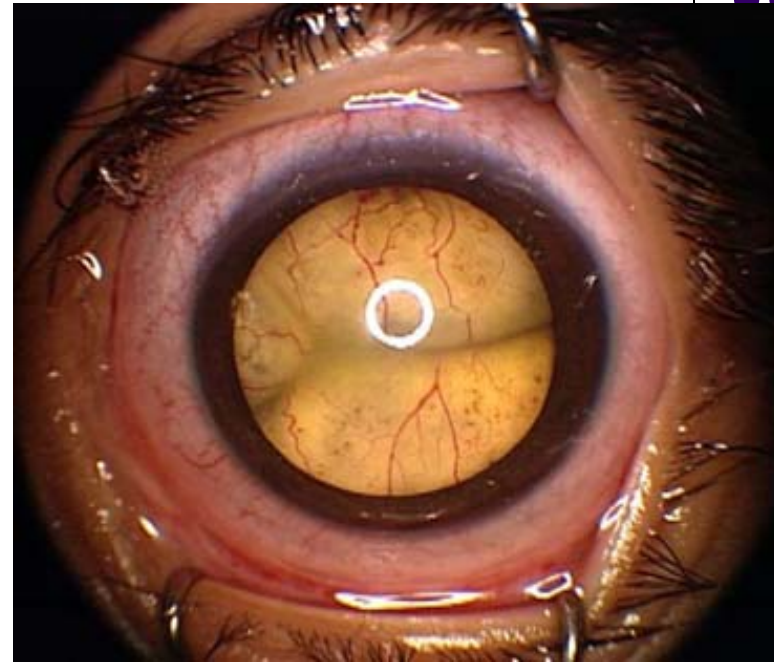
To figure it out, look at the vasculature

In Coats, the retinal vessels are dilated, with microaneurysms and telangiectasias. (Further, the appearance often has a yellow hue.)

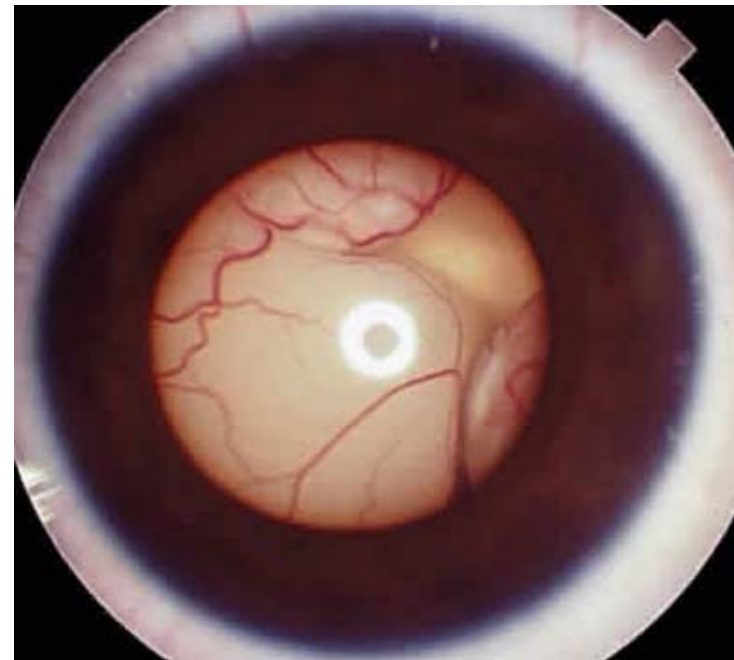


No question—proceed when ready

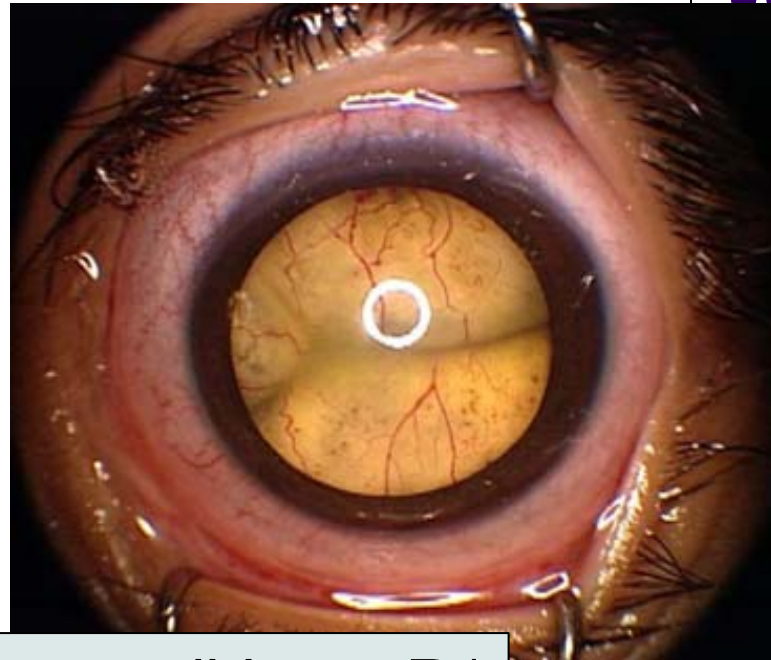
In Coats, the retinal vessels are dilated, with microaneurysms and telangiectasias. (Further, the appearance often has a yellow hue.)



Contrast with Rb, in which the retinal vessels are *normal* in appearance. (And the hue tends to be white.)

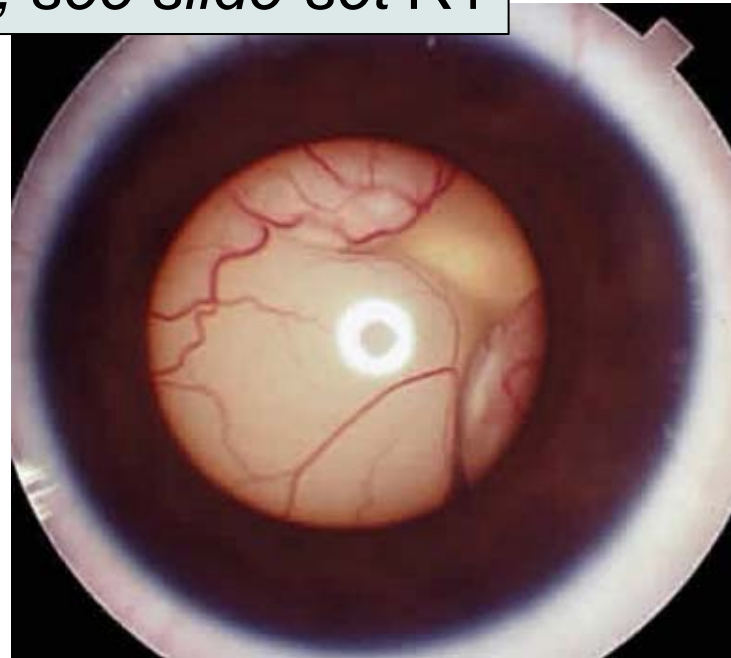


In Coats, the retinal vessels are dilated, with microaneurysms and telangiectasias. (Further, the appearance often has a yellow hue.)



For more on Coats vs Rb, see slide-set R1

Contrast with Rb, in which the retinal vessels are *normal* in appearance. (And the hue tends to be white.)





Typical age at presentation? **6-8 years**

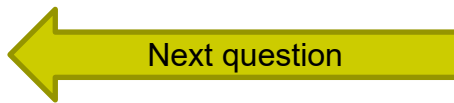
Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern? **None**

Management?



Coats disease

Characterized by the presence of abnormalities of the **retinal vasculature**:

- Telangiectasias
- Venous dilation
- Microaneurysms
- Capillary dilation

The vascular abnormalities lead to...

White-yellow subretinal exudates

If extensive, the exudates lead to...

Retinal detachment

If massive, the RD can result in...

Leukocoria or xanthocoria

Leukocoria/xanthocoria place Coats on the DDx for...

Retinoblastoma



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern? **None**

Management? Obliterate the vascular anomalies with or

Characterized by the presence of abnormalities of the **retinal vasculature**:

- Telangiectasias
- Venous dilation
- Microaneurysms
- Capillary dilation

Coats disease

The vascular abnormalities lead to...

White-yellow subretinal exudates

If extensive, the exudates lead to...

Retinal detachment

If massive, the RD can result in...

Leukocoria or xanthocoria

Retinoblastoma

Leukocoria/xanthocoria place Coats on the DDx for...



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern? **None**

Management? Obliterate the vascular anomalies with **cryo** or **photocoagulation**

Characterized by the presence of abnormalities of the **retinal vasculature**:

- Telangiectasias
- Venous dilation
- Microaneurysms
- Capillary dilation

Coats disease

The vascular abnormalities lead to...

White-yellow subretinal exudates

If extensive, the exudates lead to...

Retinal detachment

If massive, the RD can result in...

Leukocoria or xanthocoria

Leukocoria/xanthocoria place Coats on the DDx for...

Retinoblastoma



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern? **None**

Management? Obliterate the vascular anomalies with **cryo** or **photocoagulation**

Characterized by the presence of abnormalities of the **retinal vasculature**:

- Telangiectasias
- Venous dilation
- Microaneurysms
- Capillary dilation

The vascular abnormalities lead to...



White-yellow subretinal exudates

can be halted by treating the abnormal vessels



Retinal detachment

If massive, the RD can result in...



Leukocoria or xanthocoria

Retinoblastoma

Leukocoria/xanthocoria place Coats on the DDx for...

No question—proceed when ready

Progression of the exudates in **Coats disease**



Coats s/p laser



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern? **None**

Characterized by the presence of abnormalities of the **retinal vasculature**:

- Telangiectasias
- Venous dilation
- Microaneurysms
- Capillary dilation

Coats disease

The vascular abnormalities lead to...

White-yellow subretinal exudates

If extensive, the exudates lead to...

Retinal detachment

If extensive, the RD can result in...

**amblyopia or
anopia**

Management? Obliterate the vascular anomalies with *intravitreal anti-VEGF therapy?*

What about intravitreal anti-VEGF injections—are they appropriate?



Typical age at presentation? **6-8 years**

Gender predilection? **Male**

Laterality (ie, bi- vs uni-)? **Unilateral**

Systemic associations? **None**

Inheritance pattern? **None**

Characterized by the presence of abnormalities of the **retinal vasculature**:

- Telangiectasias
- Venous dilation
- Microaneurysms
- Capillary dilation

Coats disease

The vascular abnormalities lead to...

White-yellow subretinal exudates

If extensive, the exudates lead to...

Retinal detachment

If extensive, the RD can result in...

Strabismic amblyopia or anisometropia

Management? Obliterate the vascular anomalies with intravitreal anti-VEGF therapy?

What about intravitreal anti-VEGF injections—are they appropriate? The BCSC is unclear on this score. The *Retina* book says it “may be a useful adjunctive treatment,” but the *Peds* book pointedly does **not** endorse it, cautioning it was “associated with a higher incidence” of complications in one study. Caveat emptor.

Coats Disease: TLDR



No question—proceed when ready

Coats Disease: TLDR



- Coats is a disease of demographic (two words). It presents with unilateral , subretinal , two-words exudates.

Coats Disease: TLDR



- Coats is a disease of **young boys**. It presents with unilateral, subretinal, **white-yellow** exudates.

Coats Disease: TLDR



- Coats is a disease of **young boys**. It presents with unilateral, subretinal, **white-yellow** exudates.
- It is , with systemic associations

Coats Disease: TLDR



- Coats is a disease of **young boys**. It presents with unilateral, subretinal, **white-yellow** exudates.
- It is **sporadic**, with **no** systemic associations

Coats Disease: TLDR



- Coats is a disease of **young boys**. It presents with unilateral, subretinal, **white-yellow** exudates.
- It is **sporadic**, with **no** systemic associations
- The **three words** in Coats disease are responsible for the classic subretinal exudates

Coats Disease: TLDR



- Coats is a disease of **young boys**. It presents with unilateral, subretinal, **white-yellow** exudates.
- It is **sporadic**, with **no** systemic associations
- The **retinal vascular abnormalities** in Coats disease are responsible for the classic subretinal exudates

Coats Disease: TLDR



- Coats is a disease of **young boys**. It presents with unilateral, subretinal, **white-yellow** exudates.
- It is **sporadic**, with **no** systemic associations
- The **retinal vascular abnormalities** in Coats disease are responsible for the classic subretinal exudates
- When it manifests with **finding**, Coats must be differentiated from **disease**

Coats Disease: TLDR



- Coats is a disease of **young boys**. It presents with unilateral, subretinal, **white-yellow** exudates.
- It is **sporadic**, with **no** systemic associations
- The **retinal vascular abnormalities** in Coats disease are responsible for the classic subretinal exudates
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