Retinal Vasculitis

Primarily

Both and

Primarily

Per Stephen Foster MD: When confronted with a retinal vasculitis, the first step is to determine to which of these categories it belongs.
Per Stephen Foster MD: When confronted with a retinal vasculitis, the first step is to determine to which of these categories it belongs.
Retinal Vasculitis

Both Arterial and Venous

Primarily Arterial

Primarily Venous

(Note: The BCSC Retina book asserts that simultaneous involvement of both retinal arterioles and venules is the rule, and that isolated disease of either is distinctly uncommon)
Retinal Vasculitis

Primarily Arterial:
Think of these 3 diseases:

- ?
- ?
- ?

Both Arterial and Venous

Primarily Venous

Retinal Vasculitis
Retinal Vasculitis

Primarily Arterial:

Think of these 3 diseases:
- SLE (systemic lupus erythematosus)
- PAN (polyarteritis nodosa)
- Churg-Strauss

Both Arterial and Venous

Primarily Venous
Retinal Vasculitis

Primarily Arterial:
Think of these 2 diseases:

- SLE
- PAN

Primarily Venous

Both Arterial and Venous

Neither the *Retina* nor *Uveitis* book addresses Churg-Strauss, so with all due respect to Dr. Foster, we will not consider it further. Just file it away as a very rare cause of retinal arteritis.
Retinal Vasculitis

Primarily Arterial:
Think of these **2** diseases:
- SLE
- PAN

Both Arterial and Venous

Primarily Venous:
Think of these **3** diseases:
- ?
- ?
- ?

Retinal Vasculitis
Retinal Vasculitis

Primarily Arterial:
Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous

Primarily Venous:
Think of these 3 diseases:
- Sarcoid
- Toxoplasmosis
- Birdshot
Retinal Vasculitis

Primarily Arterial:
Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous

Primarily Venous:
Think of these 3 diseases:
- Sarcoid
- Toxoplasmosis
- Birdshot

The Retina nor Uveitis books only briefly mention the vasculitic component of toxo and birdshot, so with respect again, we will not consider them further. Just remember that vasculitis is a part of these conditions.
Retinal Vasculitis

Primarily Arterial:
Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous:
Think of these 3 diseases:
- ?
- ?
- ?

Primarily Venous:
Think of these 1 diseases:
- Sarcoid
Retinal Vasculitis

Primarily Arterial:
Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous:
Think of these 3 diseases:
- Behçet’s
- Wegener’s
- Multiple sclerosis

Primarily Venous:
Think of these 1 disease:
- Sarcoid
Primarily Venous:
Think of these 3 diseases:

Primarily Arterial:
Think of these 2 diseases:

Both Arterial and Venous:
Think of these 2 diseases:

SLE
PAN

Behçet’s
Wegener’s
Multiple sclerosis

Other than mentioning that it is associated with “periphlebitis,” neither the Retina nor Uveitis book addresses MS in the context of vasculitis. Again, file it away.
Primarily Venous:
Think of these 3 diseases:

Primary Arterial:
Think of these 2 diseases:

Both Arterial and Venous:
Think of these 2 diseases:

Primarily Venous:
Think of this 1 disease:

- Behçet’s
- Wegener’s
- PAN
- SLE
- Sarcoid

The term ‘Wegener’s granulomatosis’ has fallen out of favor. What term is preferred in its place?
Primarily Venous:
Think of these 3 diseases:

Retinal Vasculitis

Both Arterial and Venous:
Think of these 2 diseases:

Primarily Arterial:
Think of these 2 diseases:

SLE
PAN

Behçet’s
Granulomatosis with polyangiitis

The term ‘Wegener’s granulomatosis’ has fallen out of favor.
What term is preferred in its place?
‘Granulomatosis with polyangiitis’
Primarily Venous:
Think of these 3 diseases:

Primarily Arterial:
Think of these 3 diseases:

Both Arterial and Venous:
Think of these 3 diseases:

SLE
PAN

Behçet’s
Granulomatosis with polyangiitis

Sarcoid

The term ‘Wegener’s granulomatosis’ has fallen out of favor.

Why is the name ‘Wegener’s granulomatosis’ no longer preferred?
Primarily Venous:
Think of these 3 diseases:

Primarily Arterial:
Think of these 3 diseases:

Both Arterial and Venous:
Think of these 2 diseases:

The term ‘Wegener’s granulomatosis’ has fallen out of favor.
What is the preferred name?
Why is the name ‘Wegener’s granulomatosis’ no longer preferred?
Because Dr. Wegener was a Nazi
Primarily Venous:

Think of these 3 diseases:
- Sarcoid
- Retinal Vasculitis
- PAN

Primarily Arterial:

Think of these 3 diseases:
- SLE
- PAN
- Both Arterial and Venous

Who is the classic lupus pt?

A woman of childbearing age

Is there a racial predilection?

Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifest retinal findings?

About 5-10%

Why is lupus-associated retinal arteritis such an ominous finding?

It heralds CNS and/or renal involvement with the disease, and carries a high risk of mortality

Given its dire systemic significance, how should lupus-associated retinal arteritis be managed?

With the big dogs: Plasmapheresis + IV cyclophosphamide acutely

Retinal Vasculitis
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifest retinal findings?
About 5-10%

Why is lupus-associated retinal arteritis such an ominous finding?
It heralds CNS and/or renal involvement with the disease, and carries a high risk of mortality

Given its dire systemic significance, how should lupus-associated retinal arteritis be managed?
With the big dogs: Plasmapheresis + IV cyclophosphamide acutely

Primary Arterial

Primarily Venous

Think of these diseases:
Sarcoid
Birdshot
Behçet's
MS (multiple sclerosis)
Wegener's
Retinal Vasculitis

Primarily Arterial:
Think of these 3 diseases:
- PAN
- SLE
- MS

Both Arterial and Venous:
Think of these 3 diseases:
- SLE
- PAN
- Wegener's

Primarily Venous:
Think of these 3 diseases:
- Birdshot
- Behçet's
- MS

Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than white women

What proportion of lupus pts manifest retinal findings?
About 5-10%

Why is lupus-associated retinal arteritis such an ominous finding?
It heralds CNS and/or renal involvement with the disease, and carries a high risk of mortality

Given its dire systemic significance, how should lupus-associated retinal arteritis be managed?
With the big dogs: Plasmapheresis + IV cyclophosphamide acutely
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, Black and Hispanic women are at greater risk than are white women

Why is lupus-associated retinal arteritis such an ominous finding?
It heralds CNS and/or renal involvement with the disease, and carries a high risk of mortality

Given its dire systemic significance, how should lupus-associated retinal arteritis be managed?
With the big dogs: Plasmapheresis + IV cyclophosphamide acutely
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than are white women

Why is lupus-associated retinal arteritis such an ominous finding?
It heralds CNS and/or renal involvement with the disease, and carries a high risk of mortality.

Given its dire systemic significance, how should lupus-associated retinal arteritis be managed?
With the big dogs: Plasmapheresis + IV cyclophosphamide acutely.
Retinal Vasculitis

Lupus is a multisystem dz with protean manifestations. Which two are most common, found in up to 80% of pts?

Who is the classic lupus pt?
A woman of childbearing age

About 5-10% of lupus pts manifest retinal findings.

Why is lupus-associated retinal arteritis such an ominous finding?
It heralds CNS and/or renal involvement with the disease, and carries a high risk of mortality.

Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than are white women.

What proportion of lupus pts manifest retinal findings?
About 5-10%

Why is lupus-associated retinal arteritis such an ominous finding?
It heralds CNS and/or renal involvement with the disease, and carries a high risk of mortality.

Given its dire systemic significance, how should lupus-associated retinal arteritis be managed?
With the big dogs: Plasmapheresis + IV cyclophosphamide acutely.

Lupus is a multisystem dz with protean manifestations. Which two are most common, found in up to 80% of pts?

Arthralgias
Sjögren syndrome

Lupus is a multisystem dz with protean manifestations. Which two are most common, found in up to 80% of pts?

Arthralgias
Sjögren syndrome

Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than are white women.

What proportion of lupus pts manifest retinal findings?
About 5-10%

Why is lupus-associated retinal arteritis such an ominous finding?
It heralds CNS and/or renal involvement with the disease, and carries a high risk of mortality.

Given its dire systemic significance, how should lupus-associated retinal arteritis be managed?
With the big dogs: Plasmapheresis + IV cyclophosphamide acutely.

Lupus is a multisystem dz with protean manifestations. Which two are most common, found in up to 80% of pts?

Arthralgias
Sjögren syndrome

Lupus is a multisystem dz with protean manifestations. Which two are most common, found in up to 80% of pts?

Arthralgias
Sjögren syndrome

Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than are white women.

What proportion of lupus pts manifest retinal findings?
About 5-10%

Why is lupus-associated retinal arteritis such an ominous finding?
It heralds CNS and/or renal involvement with the disease, and carries a high risk of mortality.

Given its dire systemic significance, how should lupus-associated retinal arteritis be managed?
With the big dogs: Plasmapheresis + IV cyclophosphamide acutely.

Lupus is a multisystem dz with protean manifestations. Which two are most common, found in up to 80% of pts?

Arthralgias
Sjögren syndrome
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Lupus is a multisystem dz with protean manifestations. Which two are most common, found in up to 80% of pts?
--Skin lesions (eg, the classic malar rash)
--Arthralgias
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Lupus is a multisystem dz with protean manifestations. Which two are most common, found in up to 80% of pts?
- Skin lesions (eg, the classic malar rash)
- Arthralgias

What proportion of pts will manifest ophthalmic findings?
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Lupus is a multisystem dz with protean manifestations. Which two are most common, found in up to 80% of pts?
--Skin lesions (eg, the classic malar rash)
--Arthralgias

What proportion of pts will manifest ophthalmic findings?
About half
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Lupus is a multisystem dz with protean manifestations. Which two are most common, found in up to 80% of pts?
--Skin lesions (eg, the classic malar rash)
--Arthralgias

What proportion of pts will manifest ophthalmic findings?
About half

Lupus’ ophthalmic manifestations are protean. Which two are most common?
--
--
Who is the classic lupus pt?
A woman of childbearing age

Who is the classic lupus pt?
A woman of childbearing age

Retinal Vasculitis

Lupus is a multisystem dz with protean manifestations. Which two are most common, found in up to 80% of pts?
--Skin lesions (eg, the classic malar rash)
--Arthralgias

What proportion of pts will manifest ophthalmic findings?
About half

Lupus’ ophthalmic manifestations are protean. Which two are most common?
--Lid-skin involvement in a rash
--Sjögren syndrome
Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifest retinal findings?
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifest retinal findings?
About 3-30%
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifest retinal findings?
About 3-30%

This range represents a compromise between inconsistencies in the BCSC series:
--Rate of lupus retinopathy per the Retina book: 3-10%
--Rate per the Uveitis book: 3-29%
(I rounded to 30 to make it easier to remember)
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifest retinal findings?
About 3-30%

What retinal findings may occur?
Occlusive events: Asymptomatic cotton wool spots if ‘lucky,’ an infarcted macula if not

Given its dire systemic significance, how should lupus-associated retinal arteritis be managed?
With the big dogs: Plasmapheresis + IV cyclophosphamide acutely
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifests retinal findings?
About 3-30%

What retinal findings may occur?
Occlusive events: Asymptomatic cotton wool spots if ‘lucky,’ an infarcted macula if not

SLE
PAN
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifest retinal findings?
About 3-30%

CWS are the classic manifestation of lupus retinopathy!

Occlusive events: Asymptomatic cotton wool spots
if ‘lucky,’ an infarcted macula if not

(No question—proceed when ready)
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifests retinal findings?
About 3-30%

CWS are the classic manifestation of lupus retinopathy!

Occlusive events: Asymptomatic cotton wool spots if ‘lucky,’ an infarcted macula if not

Is macular infarction also a classic manifestation of lupus retinopathy?
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifests retinal findings?
About 3-30%

CWS are the classic manifestation of lupus retinopathy!

Occlusive events: Asymptomatic cotton wool spots if ‘lucky,’ and infarcted macula if not

Is macular infarction also a classic manifestation of lupus retinopathy?
Thankfully no—it is quite rare
Retinal Vasculitis

Primarily Arterial:
Think of these 3 diseases:
PAN
SLE
Both Arterial and Venous:
Think of these 3 diseases:
Sarcoid
Toxoplasmosis
Birdshot
Behçet’s
MS (multiple sclerosis)
Wegener’s

Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifest retinal findings?
About 3-30%

Why is lupus-associated retinal arteritis such an ominous finding?
It heralds CNS and/or renal involvement with the disease, and carries a high risk of mortality

Given its dire systemic significance, how should lupus-associated retinal arteritis be managed?
With the big dogs: Plasmapheresis + IV cyclophosphamide acutely

What retinal findings may occur?
Occlusive events: Asymptomatic cotton wool spots
If ‘lucky,’ an infarcted macula

Is macular infarction also a classic manifestation of lupus retinopathy?
Thankfully no—it is quite rare

CWS are the classic manifestation of lupus retinopathy!

What is the fundamental difference between the pathophysiology of CWS and macular infarction?
It’s the size of the vessel involved. CWS result from infarction of tiny end-arterioles of the arterial tree, whereas macular infarction involves the relatively ginormous central retinal artery, or an immediate branch thereof.

How does this explain the fact that CWS are vastly more common than macular infarction?
It’s because lupus is a microvasculopathy, and thus much more likely to affect end-arterioles.
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

What is the fundamental difference between the pathophysiology of CWS and macular infarction?
It's the size of the vessel involved. CWS result from infarction of tiny end-arterioles of the arterial tree, whereas macular infarction involves the relatively ginormous central retinal artery, or an immediate branch thereof.

CWS are the classic manifestation of lupus retinopathy!

Occlusive events: Asymptomatic cotton wool spots
if ‘lucky,’ an infarcted macula not

Is macular infarction also a classic manifestation of lupus retinopathy?
Thankfully no—it is quite rare
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

What is the fundamental difference between the pathophysiology of CWS and macular infarction? It's the size of the vessel involved. CWS result from infarction of tiny end-arterioles of the arterial tree, whereas macular infarction involves the relatively ginormous central retinal artery, or an immediate branch thereof.

How does this explain the fact that CWS are vastly more common than macular infarction?

CWS are the classic manifestation of lupus retinopathy!

Occlusive events: Asymptomatic cotton wool spots
If ‘lucky,’ an infarcted macula

Is macular infarction also a classic manifestation of lupus retinopathy?
Thankfully no—it is quite rare
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

What is the fundamental difference between the pathophysiology of CWS and macular infarction?
It’s the size of the vessel involved. CWS result from infarction of tiny end-arterioles of the arterial tree, whereas macular infarction involves the relatively ginormous central retinal artery, or an immediate branch thereof.

How does this explain the fact that CWS are vastly more common than macular infarction?
It’s because lupus is a microvasculopathy, and thus much more likely to affect end-arterioles

CWS are the classic manifestation of lupus retinopathy!

Occlusive events: Asymptomatic cotton wool spots
Infarcted macula

Is macular infarction also a classic manifestation of lupus retinopathy?
Thankfully no—it is quite rare
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifest retinal findings?
About 3-30%

Why is lupus-associated retinal arteritis an ominous finding?
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifest retinal findings?
About 3-30%

Why is lupus-associated retinal arteritis an ominous finding?
It heralds CNS and/or renal involvement with the disease, and carries a high risk of mortality
Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifest retinal findings?
About 3-30%

Why is lupus-associated retinal arteritis an ominous finding?
It heralds CNS and/or renal involvement with the disease, and carries a high risk of mortality

Given its dire systemic significance, how should lupus-associated retinal arteritis be managed?
Retinal Vasculitis

Who is the classic lupus pt?
A woman of childbearing age

Is there a racial predilection?
Yes, black and Hispanic women are at greater risk than are white women

What proportion of lupus pts manifest retinal findings?
About 3-30%

Why is lupus-associated retinal arteritis an ominous finding?
It heralds CNS and/or renal involvement with the disease, and carries a high risk of mortality

Given its dire systemic significance, how should lupus-associated retinal arteritis be managed?
With the big dogs: Plasmapheresis + IV cyclophosphamide acutely
Retinal Vasculitis

In a nutshell, what is the pathophysiology of PAN?

Subacute episodes of focal necrotizing inflammation of arteries

PAN is strongly associated with seropositivity for what virus?

Hepatitis B

Who is the typical PAN pt?

A male between 40 and 60 years old

Is there a racial predilection?

No

Primarily Arterial:

Think of these 3 diseases:

PAN, SLE, others

Primarily Venous:

Think of these 3 diseases:

Behçet's, MS, Wegener's

Arterial and Venous:

Think of these 3 diseases:

Sarcoid, PAN, Behçet's
In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries
Retinal Vasculitis

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

Once considered a single entity, PAN is now subdivided into two conditions—what are they?

Primarily Arterial:
Think of these 3 diseases:
PAN
SLE
Wegener’s

Primarily Venous:
Think of these 3 diseases:
Sarcoid
Birdshot
Behçet’s

PAN is strongly associated with seropositivity for what virus?
Hepatitis B

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

Is it a common, or uncommon condition?
Uncommon

Who is the typical PAN pt?
A male between 40 and 60 years old

Is there a racial predilection?
No

Once considered a single entity, PAN is now subdivided into two conditions—what are they?
'Classic' PAN, and microscopic polyangiitis (MP)

What is the difference between the two?
Classic PAN affects medium and small arteries, whereas MP affects smaller arteries
In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

Once considered a single entity, PAN is now subdivided into two conditions—what are they?
‘Classic’ PAN, and microscopic polyangiitis (MP)

Retinal Vasculitis
In a nutshell, what is the pathophysiology of PAN?

Subacute episodes of focal necrotizing inflammation of arteries

Once considered a single entity, PAN is now subdivided into two conditions—what are they?

‘Classic’ PAN, and microscopic polyangiitis (MP)

What is the difference between the two?
Retinal Vasculitis

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

Once considered a single entity, PAN is now subdivided into two conditions—what are they? ‘Classic’ PAN, and microscopic polyangiitis (MP)

What is the difference between the two? Classic PAN affects medium and small arteries, whereas MP affects smaller arteries
Retinal Vasculitis

**Primarily Arterial:**
Think of these 3 diseases:
- PAN
- SLE
- MS (multiple sclerosis)

**Primarily Venous:**
Think of these 3 diseases:
- Sarcoid
- Birdshot
- Behçet’s

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

Once considered a single entity, PAN is now subdivided into two conditions—what are they?
‘Classic’ PAN, and microscopic polyangiitis (MP)

What is the difference between the two?
Classic PAN affects medium and small arteries, whereas MP affects smaller arteries

What’s the difference between a ‘small’ artery and a ‘smaller’ artery?
Retinal Vasculitis

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

Once considered a single entity, PAN is now subdivided into two conditions—what are they?
‘Classic’ PAN, and microscopic polyangiitis (MP)

What is the difference between the two?
Classic PAN affects medium and small arteries, whereas MP affects smaller arteries

What’s the difference between a ‘small’ artery and a ‘smaller’ artery?
Rule of thumb: Classic PAN only affects arteries large enough to be named, whereas MP only affects vessels smaller than that
Retinal Vasculitis

Primarily Arterial: Think of these 3 diseases:
- PAN
- SLE
- MS (multiple sclerosis)

Primarily Venous: Think of these 3 diseases:
- Sarcoidosis
- Behçet's disease
- Wegener's granulomatosis

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

Is it a common, or uncommon condition?

Uncommon
In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

Is it a common, or uncommon condition?
Uncommon
In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

Is it a common, or uncommon condition?
Uncommon

Who is the typical PAN pt?
Retinal Vasculitis

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

Is it a common, or uncommon condition?
Uncommon

Who is the typical PAN pt?
A male between 40 and 60 years old
In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

Is it a common, or uncommon condition?
Uncommon

Who is the typical PAN pt?
A male between 40 and 60 years old

Is there a racial predilection?
Retinal Vasculitis

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

Is it a common, or uncommon condition?
Uncommon

Who is the typical PAN pt?
A male between 40 and 60 years old

Is there a racial predilection?
No
Retinal Vasculitis

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

Is it a common, or uncommon condition?
Uncommon

Who is the typical PAN pt?
A male between 40 and 60 years old

Is there a racial predilection?
No

PAN is strongly associated with seropositivity for what virus?

PAN
Primarily Arterial

Think of these 3 diseases:
PAN
SLE

40-60 yrs old

Primarily Venous

Think of these 3 diseases:
MS
Wegener's

Sarcoid
Behçet's
In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

Is it a common, or uncommon condition?
Uncommon

Who is the typical PAN pt?
A male between 40 and 60 years old

Is there a racial predilection?
No

PAN is strongly associated with seropositivity for what virus?
Hepatitis
Retinal Vasculitis

Primary Arterial:
Think of these 3 diseases:
- PAN
- SLE
- Both Arterial and Venous:
Think of these 3 diseases:
- Think of these 3 diseases:
- Primarily Venous:
Think of these 3 diseases:
- Behçet's
- MS
- Wegener's

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

Is it a common, or uncommon condition?
Uncommon

Who is the typical PAN pt?
A male between 40 and 60 years old

Is there a racial predilection?
No

PAN is strongly associated with seropositivity for what virus?
Hepatitis B
In a nutshell, what is the pathophysiology of PAN?

Subacute episodes of focal necrotizing inflammation of arteries

What is the typical presentation of PAN? (Note: It’s not ocular.)

Is there a racial predilection?
No

PAN is strongly associated with seropositivity for what virus?
Hepatitis B
In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

What is the typical presentation of PAN? (Note: It’s not ocular.)
Constitutional symptoms: Fever, fatigue, weight loss. Renal vasculitis resulting in secondary HTN is common.

Is there a racial predilection?
No

PAN is strongly associated with seropositivity for what virus?
Hepatitis B
Retinal Vasculitis

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

What is the typical presentation of PAN? (Note: It’s not ocular.)
Constitutional symptoms: Fever, fatigue, weight loss. Renal vasculitis resulting in secondary HTN is common.

What proportion of PAN pts develop ocular involvement?

Is there a racial predilection?
No

PAN is strongly associated with seropositivity for what virus?
Hepatitis B
**Retinal Vasculitis**

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

What is the typical presentation of PAN? (Note: It’s not ocular.)
Constitutional symptoms: Fever, fatigue, weight loss. Renal vasculitis resulting in secondary HTN is common.

What proportion of PAN pts develop ocular involvement?
About 20%

Is there a racial predilection?
No

PAN is strongly associated with seropositivity for what virus?
Hepatitis B
**Retinal Vasculitis**

**Primarily Arterial:**
Think of these 3 diseases:
- PAN
- SLE
- MS (multiple sclerosis)

**Primarily Venous:**
Think of these 3 diseases:
- Behçet's
- Wegener's
- Sarcoid

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

Is it a common, or uncommon condition?
Uncommon

Who is the typical PAN pt?
A male between 40 and 60 years old

Is there a racial predilection?
No

PAN is strongly associated with seropositivity for what virus?
Hepatitis B

What is the typical presentation of PAN? (Note: It’s not ocular.)
Constitutional symptoms: Fever, fatigue, weight loss. Renal vasculitis resulting in secondary HTN is common.

What proportion of PAN pts develop ocular involvement?
About 20%

What is the 5 year survival rate for untreated PAN?
A miserable 10%

What is the 5 year survival rate of treated PAN?
A robust 80%
In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

What is the typical presentation of PAN? (Note: It’s not ocular.)
Constitutional symptoms: Fever, fatigue, weight loss. Renal vasculitis resulting in secondary HTN is common.

What proportion of PAN pts develop ocular involvement?
About 20%

What is the 5 year survival rate for untreated PAN? A miserable 10%

PAN is strongly associated with seropositivity for what virus?
Hepatitis B
Retinal Vasculitis

Primarily Arterial: Think of these 3 diseases:
- PAN
- SLE
- Both

Arterial and Venous: Think of these 3 diseases:
- Think of these 3 diseases:
  - Sarcoid
  - Behçet’s
  - MS
  - Multiple sclerosis
  - Wegener’s

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

What is the typical presentation of PAN? (Note: It’s not ocular.)
Constitutional symptoms: Fever, fatigue, weight loss. Renal vasculitis resulting in secondary HTN is common.

What proportion of PAN pts develop ocular involvement?
About 20%

What is the 5 year survival rate for untreated PAN? A miserable 10%

What is the 5 year survival rate of treated PAN? A robust 80%

PAN is strongly associated with seropositivity for what virus?
Hepatitis B
Retinal Vasculitis

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

What is the typical presentation of PAN? (Note: It’s not ocular.)
Constitutional symptoms: Fever, fatigue, weight loss. Renal vasculitis resulting in secondary HTN is common.

What proportion of PAN pts develop ocular involvement?
About 20%

What is the 5 year survival rate for untreated PAN? A miserable 10%

What is the 5 year survival rate of treated PAN? A robust 80%

PAN is strongly associated with seropositivity for what virus?
Hepatitis B
Retinal Vasculitis

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

What is the typical presentation of PAN? (Note: It's not ocular.)
 Constitutional symptoms: Fever, fatigue, weight loss. Renal vasculitis resulting in secondary HTN is common.

What proportion of PAN pts develop ocular involvement?
About 20%

What is the typical ocular presentation of PAN? (Head’s up: It’s probably not what you think.)
Peripheral ulcerative keratitis (PUK). It can cause scleritis (both anterior and posterior) as well.

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

Is there a racial predilection?
No

PAN is strongly associated with seropositivity for what virus?
Hepatitis B

Who is the typical PAN pt?
A male between 40 and 60 years old
Retinal Vasculitis

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

What is the typical presentation of PAN? (Note: It’s not ocular.)
Constitutional symptoms: Fever, fatigue, weight loss. Renal vasculitis resulting in secondary HTN is common.

What proportion of PAN pts develop ocular involvement?
About 20%

What is the typical ocular presentation of PAN? (Head’s up: It’s probably not what you think.)
Peripheral ulcerative keratitis (PUK). It can cause scleritis (both anterior and posterior) as well.
Retinal Vasculitis

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

What is the typical presentation of PAN? (Note: It’s not ocular.)
Constitutional symptoms: Fever, fatigue, weight loss. Renal vasculitis resulting in secondary HTN is common.

What proportion of PAN pts develop ocular involvement?
About 20%

What is the typical ocular presentation of PAN? (Head’s up: It’s probably not what you think.)
Peripheral ulcerative keratitis (PUK). It can cause scleritis (both anterior and posterior) as well.

OK fine. What is the typical posterior-pole presentation of PAN?
Retinal Vasculitis

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

Is it a common, or uncommon condition?
Uncommon

Who is the typical PAN pt?
A male between 40 and 60 years old

Is there a racial predilection?
No

PAN is strongly associated with seropositivity for what virus?
Hepatitis B

What is the typical presentation of PAN? (Note: It’s not ocular.)
Constitutional symptoms: Fever, fatigue, weight loss. Renal vasculitis resulting in secondary HTN is common.

What proportion of PAN pts develop ocular involvement?
About 20%

What is the typical ocular presentation of PAN? (Head’s up: It’s probably not what you think.)
Peripheral ulcerative keratitis (PUK). It can cause scleritis (both anterior and posterior) as well.

OK fine. What is the typical posterior-pole presentation of PAN?
In a manner consistent with severe HTN
Retinal Vasculitis

Primarily Arterial:
Think of these 3 diseases:
- PAN
- SLE
- MS

Both Arterial and Venous:
Think of these 3 diseases:
- Behçet’s
- MS
- Wegener’s

Primarily Venous:
Think of these 3 diseases:
- Sarcoid
- Wegener’s
- PAN

In a nutshell, what is the pathophysiology of PAN?
Subacute episodes of focal necrotizing inflammation of arteries

What is the typical presentation of PAN? (Note: It’s not ocular.)
Constitutional symptoms: Fever, fatigue, weight loss. Renal vasculitis resulting in secondary HTN is common.

What proportion of PAN pts develop ocular involvement?
About 20%

What is the typical ocular presentation of PAN? (Head’s up: It’s probably not what you think.)
Peripheral ulcerative keratitis (PUK). It can cause scleritis (both anterior and posterior).

Advance to the next slide to see what this entails…

OK fine. What is the typical posterior-pole presentation of PAN?
In a manner consistent with severe HTN
What process mediates damage caused by acute, severe HTN?
Acute, severe HTN

What process mediates damage caused by acute, severe HTN?

Vasospasm
Of the retinal arterioles
Acute, severe HTN

What process mediates damage caused by acute, severe HTN?

Vasospasm
Of the retinal arterioles

What categories of pathology can result?
Acute, severe HTN

What process mediates damage caused by acute, severe HTN?

Vasospasm
Of the retinal arterioles

What categories of pathology can result?

Retinopathy  Choroidopathy  Optic Neuropathy
Acute, severe HTN

What process mediates damage caused by acute, severe HTN?

Vasospasm
Of the retinal arterioles

What categories of pathology can result?

Retinopathy
Choroidopathy
Optic Neuropathy
Acute, severe HTN

What process mediates damage caused by acute, severe HTN?

Vasospasm
Of the retinal arterioles

What categories of pathology can result?

Retinopathy
  - Cotton-wool spots
  - Retinal hemorrhages
  - Macular star

Choroidopathy

Optic Neuropathy
Acute, severe HTN

*What process mediates damage caused by acute, severe HTN?*

Vasospasm
Of the retinal arterioles

*What categories of pathology can result?*

Retinopathy
Choroidopathy
Optic Neuropathy

- Retinal hemorrhages
- Cotton-wool spots
- Macular star

Leads to…

Leads to…

?
Acute, severe HTN

What process mediates damage caused by acute, severe HTN?

Vasospasm
Of the retinal arterioles

What categories of pathology can result?

Retinopathy
- Cotton-wool spots
- Retinal hemorrhages
- Macular star

Choroidopathy
- Leads to...
- Choroidal infarction
  - Leads to...
  - Exudative RD

Optic Neuropathy
Acute, severe HTN

What process mediates damage caused by acute, severe HTN?

Vasospasm
   Of the retinal arterioles

What categories of pathology can result?

Retinopathy
   - Cotton-wool spots
   - Retinal hemorrhages
   - Macular star

Choroidopathy
   - Leads to...
   - Choroidal infarction
   - Leads to...
   - Exudative RD

Optic Neuropathy
   - Leads to...

Leads to...

Leads to...

Leads to...
What process mediates damage caused by acute, severe HTN?

Vasospasm
Of the retinal arterioles

What categories of pathology can result?

Retinopathy
- Cotton-wool spots
- Retinal hemorrhages
- Macular star

Choroidopathy
- Leads to...
- Choroidal infarction
- Leads to...
- Exudative RD

Optic Neuropathy
- Leads to...
- Disc edema, hemorrhages
Granulomatosis with polyangiitis

Retinal Vasculitis

Primarily Arterial:
Think of these 2 diseases:

- SLE
- PAN

Both Arterial and Venous:
Think of these 2 diseases:

- Behçet’s
- Granulomatosis

Primarily Venous:
Think of this 1 disease:

- Sarcoid

Who is the typical BD pt?
Retinal Vasculitis

Primarily Arterial: Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous: Think of these 2 diseases:
- Behçet’s
- Granulomatosis

Primarily Venous: Think of this 1 disease:
- Sarcoid

Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35
Retinal Vasculitis

Primarily Arterial:
Think of these 2 diseases:

- SLE
- PAN

Both Arterial and Venous:
Think of these 2 diseases:

- Behçet's
- Granulomatosis

Primarily Venous:
Think of this 1 disease:

- Sarcoid

Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35

What is was the Silk Road?

The Silk Road was an ancient trading route extending from the eastern Mediterranean to the Far East. It passed through regions such as the Middle East, Turkey, China, Korea, and Japan.
Retinal Vasculitis

Primarily Arterial: Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous: Think of these 2 diseases:
- Behçet's
- Granulomatosis

Primarily Venous: Think of this 1 disease:
- Sarcoid

Who is the typical BD pt?
An individual of 'Silk Road' descent age 25-35

What is/was the Silk Road?
An ancient trading route extending from the eastern Mediterranean to the Far East
Retinal Vasculitis

Primarily Arterial:
Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous:
Think of these 2 diseases:
- Behçet’s
- Granulomatosis

Primarily Venous:
Think of this 1 disease:
- Sarcoid

Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35

What is/was the Silk Road?
An ancient trading route extending from the eastern Mediterranean to the Far East

What regions/countries are found along the Silk Road?
Retinal Vasculitis

Primarily Arterial: Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous: Think of these 2 diseases:
- Behçet’s
- Granulomatosis

Primarily Venous: Think of this 1 disease:
- Sarcoid

Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35

What is/was the Silk Road?
An ancient trading route extending from the eastern Mediterranean to the Far East

What regions/countries are found along the Silk Road?
The Middle East; Turkey; China; Korea; Japan
Retinal Vasculitis

Primarily Arterial: Think of these 3 diseases:
- SLE
- PAN

Both Arterial and Venous: Think of these 2 diseases:
- Behçet’s
- Granulomatosis

Primarily Venous: Think of this 1 disease:
- Sarcoid

Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35

What is/was the Silk Road?

Which of these areas has the highest rate of BD?

What regions/countries are found along the Silk Road?
- The Middle East
- Turkey
- China
- Korea
- Japan
Retinal Vasculitis

Both Arterial and Venous: Think of these 2 diseases:
- Behçet’s
- Granulomatosis

Primarily Arterial: Think of these 2 diseases:
- SLE
- PAN

Primarily Venous: Think of this 1 disease:
- Sarcoid

Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35

What is/was the Silk Road?

Which of these areas has the highest rate of BD?
Turkey

What regions/countries are found along the Silk Road?
The Middle East, Turkey, China; Korea; Japan
Retinal Vasculitis

Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35

What the classic nonocular complaint in BD?
Retinal Vasculitis

- Primarily Arterial:
  Think of these 2 diseases:
  - SLE
  - PAN

- Both Arterial and Venous:
  Think of these 2 diseases:
  - Behçet’s
  - Granulomatosis

- Primarily Venous:
  Think of this 1 disease:
  - Sarcoid

Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35

What the classic nonocular complaint in BD?
Recurrent oral ulcers
Retinal Vasculitis

Primarily Arterial:
Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous:
Think of these 2 diseases:
- Behçet’s
- Granulomatosis

Primarily Venous:
Think of this 1 disease:
- Sarcoid

Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35

What the classic nonocular complaint in BD?
Recurrent oral ulcers

Are the oral ulcers painful?
Retinal Vasculitis

Primarily Arterial:
Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous:
Think of these 2 diseases:
- Behçet’s
- Granulomatosis

Primarily Venous:
Think of this 1 disease:
- Sarcoid

Who is the typical BD pt?
An individual of 'Silk Road' descent age 25-35

What is the classic nonocular complaint in BD?
Recurrent oral ulcers

Are the oral ulcers painful?
Yes, very
Retinal Vasculitis

- Primarily Arterial: Think of these 2 diseases:
  - SLE
  - PAN
- Both Arterial and Venous: Think of these 2 diseases:
  - Behçet's
  - Granulomatosis
- Primarily Venous: Think of this 1 disease:
  - Sarcoid

Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35

What the classic nonocular complaint in BD?
Recurrent oral ulcers

In addition to oral ulcers, what three other nonocular findings are common?
- 
- 
-
Retinal Vasculitis

Primarily Arterial: Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous: Think of these 2 diseases:
- Behçet’s
- Granulomatosis

Primarily Venous: Think of this 1 disease:
- Sarcoid

Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35

What the classic nonocular complaint in BD?
Recurrent oral ulcers

In addition to oral ulcers, what three other nonocular findings are common?
- Skin rash
- Genital ulcers
- Arthralgias
Retinal Vasculitis

Primarily Arterial:
Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous:
Think of these 2 diseases:
- Behçet's
- Granulomatosis

Primarily Venous:
Think of this 1 disease:
- Sarcoid

Who is the typical BD pt?
An individual of 'Silk Road' descent age 25-35

What the classic nonocular complaint in BD?
Recurrent oral ulcers

In addition to nonocular findings are common?
- Genital ulcers
- Arthralgias

What is the classic rash?
- Erythema nodosum
- The pre-tibial region
Retinal Vasculitis

Primarily Arterial:
- Think of these 2 diseases:
  - SLE
  - PAN

Both Arterial and Venous:
- Think of these 2 diseases:
  - Behçet’s
  - Granulomatosis

Primarily Venous:
- Think of this 1 disease:
  - Sarcoid

Who is the typical BD pt?
An individual of 'Silk Road' descent age 25-35

What the classic nonocular complaint in BD?
Recurrent oral ulcers

What is the classic rash?
Erythema nodosum

In addition to oral ulcers, three other nonocular findings are common:
- Genital ulcers
- Arthralgias
Retinal Vasculitis

Primarily Arterial:
Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous:
Think of these 2 diseases:
- Behçet’s
- Granulomatosis

Primarily Venous:
Think of this 1 disease:
- Sarcoid

Who is the typical BD pt?
An individual of 'Silk Road' descent age 25-35

What the classic nonocular complaint in BD?
Recurrent oral ulcers

In addition to nonocular findings are common?
- Skin rash
  Erythema nodosum
- Genital ulcers
- Arthralgias

What is the classic rash?
Erythema nodosum

Where is the classic location?
Retinal Vasculitis

Primarily Arterial: Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous: Think of these 2 diseases:
- Behçet’s
- Granulomatosis

Primarily Venous: Think of this 1 disease:
- Sarcoid

Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35

What is the classic nonocular complaint in BD?
Recurrent oral ulcers

In addition to oral ulcers, what are three other nonocular findings common?

What is the classic rash?
Erythema nodosum

Skin rash

Where is the classic location?
The pre-tibial region
Retinal Vasculitis

Primarily Arterial: Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous: Think of these 2 diseases:
- Behçet's
- Granulomatosis

Primarily Venous: Think of this 1 disease:
- Sarcoid

Who is the typical BD pt?
An individual of 'Silk Road' descent age 25-35

What is the cause of BD?
It is unknown at this time

What the classic nonocular complaint in BD?
Recurrent oral ulcers

In addition to oral ulcers, what three other nonocular findings are common?
--Skin rash
--Genital ulcers
--Arthralgias
Retinal Vasculitis

Primarily Arterial:
Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous:
Think of these 2 diseases:
- Behçet’s
- Granulomatosis

Primarily Venous:
Think of this 1 disease:
- Sarcoid

Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35

What is the classic nonocular complaint in BD?
Recurrent oral ulcers

In addition to oral ulcers, what three other nonocular findings are common?
--Skin rash
--Genital ulcers
--Arthralgias

What is the cause of BD?
It is unknown at this time
Granulomatosis Retinal Vasculitis

Primarily Arterial: Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous: Think of these 2 diseases:
- Behçet’s
- Granulomatosis

Primarily Venous: Think of this 1 disease:
- Sarcoid

Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35

What is the classic nonocular complaint in BD?
Recurrent oral ulcers

In addition to oral ulcers, what three other nonocular findings are common?
- Skin rash
- Genital ulcers
- Arthralgias

Is ocular involvement common in BD?
Yes; estimates of ocular involvement run as high as 70%

Does BD pose a significant threat to long-term ocular health, and/or vision?
Mos def--severe vision loss results in as many as 25% of ocular BD cases
Retinal Vasculitis

- Primarily Arterial: Think of these 3 diseases:
  - PAN
  - SLE
  - Behçet’s

- Both Arterial and Venous: Think of these 2 diseases:
  - Wegener’s
  - Granulomatosis

- Primarily Venous: Think of this 1 disease:
  - Sarcoid

Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35

What is the classic nonocular complaint in BD?
Recurrent oral ulcers

In addition to oral ulcers, what three other nonocular findings are common?
-- Skin rash
-- Genital ulcers
-- Arthralgias

Is ocular involvement common in BD?
Yes; estimates of ocular involvement run as high as 70%
Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35

What is the classic nonocular complaint in BD?
Recurrent oral ulcers

In addition to oral ulcers, what three other nonocular findings are common?
--Skin rash
--Genital ulcers
--Arthralgias

Is ocular involvement common in BD?
Yes; estimates of ocular involvement run as high as 70%

Does BD pose a significant threat to long-term ocular health, and/or vision?

Retinal Vasculitis

- Primarily Arterial: Think of these 2 diseases:
  - SLE
  - PAN

- Primarily Venous: Think of these 2 diseases:
  - Behçet’s
  - Granulomatosis

- Both Arterial and Venous: Think of these 2 diseases:
  - PAN
  - SLE
Retinal Vasculitis

Primarily Arterial: Think of these 3 diseases:
- PAN
- SLE
- Behçet’s

Both Arterial and Venous: Think of these 2 diseases:
- Granulomatosis
- Sarcoid

Primarily Venous: Think of this 1 disease:
- Wegener’s

Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35

What the classic nonocular complaint in BD?
Recurrent oral ulcers

In addition to oral ulcers, what three other nonocular findings are common?
--Skin rash
--Genital ulcers
--Arthralgias

Does BD pose a significant threat to long-term ocular health, and/or vision?
Yes; estimates of ocular involvement run as high as 70%

Mos def--severe vision loss results in as many as 25% of ocular BD cases
Retinal Vasculitis

Primarily Arterial:
Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous:
Think of these 2 diseases:
- Behçet’s
- Granulomatosis

Primarily Venous:
Think of this 1 disease:
- Sarcoid

Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35

What is the most common form of ocular involvement? (It’s not retinal vasculitis.)

What the Recurrence?
- SLE
- PAN

Does BD pose a significant threat to long-term ocular health, and/or vision?
- Mos def--severe vision loss results in as many as 25% of ocular BD cases

In addition to oral ulcers, what three other nonocular findings are common?
--Skin rash
--Genital ulcers
--Arthralgias
Granulomatosis Retinal Vasculitis

Primarily Arterial: Think of these 2 diseases:
- PAN
- SLE

Both Arterial and Venous: Think of these 2 diseases:
- Behçet's
- Wegener's

Primarily Venous: Think of this 1 disease:
- Sarcoid

What is the most common form of ocular involvement? (It’s not retinal vasculitis.)
- Acute nongranulomatous anterior uveitis, often with a hypopyon

Does BD pose a significant threat to long-term ocular health, and/or vision?
- Mos def--severe vision loss results in as many as 25% of ocular BD cases

In addition to oral ulcers, what three other nonocular findings are common?
- Skin rash
- Genital ulcers
- Arthralgias
Retinal Vasculitis

Primarily Arterial:
Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous:
Think of these 2 diseases:
- Behçet’s
- Granulomatosis

Primarily Venous:
Think of this 1 disease:
- Sarcoid

What is the most common form of ocular involvement? (It’s not retinal vasculitis.)
Acute nongranulomatous anterior uveitis, often with a hypopyon

Does BD pose a significant threat to long-term ocular health, and/or vision?
Most def--severe vision loss results in as many as 25% of ocular BD cases

In addition to oral ulcers, what three other nonocular findings are common?
-- Skin rash
-- Genital ulcers
-- Arthralgias
Retinal Vasculitis

Primarily Arterial: Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous: Think of these 2 diseases:
- Behçet’s
- Granulomatosis

Primarily Venous: Think of this 1 disease:
- Sarcoid

Is ocular involvement common in BD?

What is the most common form of ocular involvement? (It’s not retinal vasculitis.)
Acute nongranulomatous anterior uveitis, often with a hypopyon

Does BD pose a significant threat to long-term ocular health, and/or vision?
Mos def--severe vision loss results in as many as 25% of ocular BD cases

In addition to oral ulcers, what three other nonocular findings are common?

Can BD retinal vasculitis lead to retinal ischemia with subsequent neovascularization?
Retinal Vasculitis

Primarily Arterial: Think of these 2 diseases:
- PAN
- SLE

Both Arterial and Venous: Think of these 2 diseases:
- Behçet’s
- Granulomatosis

Primarily Venous: Think of this 1 disease:
- Sarcoid

What is the most common form of ocular involvement? (It’s not retinal vasculitis.)
Acute nongranulomatous anterior uveitis, often with a hypopyon

Does BD pose a significant threat to long-term ocular health, and/or vision?
- Mos def--severe vision loss results in as many as 25% of ocular BD cases

Can BD retinal vasculitis lead to retinal ischemia with subsequent neovascularization?
- Yes--it is an occlusive vasculitis, so ischemia is a common occurrence, and a significant cause of ocular morbidity and vision loss
Retinal Vasculitis

Both **Arterial** and **Venous**:

Think of these 2 diseases:

- SLE
- PAN

- Granulomatosis

- Behçet’s

Primarily **Arterial**:

Think of these 2 diseases:

- PAN
- SLE

Primarily **Venous**:

Think of this 1 disease:

- Sarcoid

Is ocular involvement common in BD?

What is the most common form of ocular involvement? (It’s not retinal vasculitis.)

Acute nongranulomatous anterior uveitis, often with a hypopyon

How is the diagnosis of BD made?

In addition to oral ulcers, what three other nonocular findings are common?

- Skin rash
- Genital ulcers
- Arthralgias

Can BD retinal vasculitis lead to retinal ischemia with subsequent neovascularization?

Yes--it is an occlusive vasculitis, so ischemia is a common occurrence, and a significant cause of ocular morbidity and vision loss.
Granulomatosis Retinal Vasculitis

Primarily Arterial: Think of these 3 diseases:
- PAN
- SLE
- Behçet’s

Both Arterial and Venous: Think of these 2 diseases:
- Wegener’s
- Sarcoid

Primarily Venous: Think of this 1 disease:
- Retinal Vasculitis

What is the most common form of ocular involvement? (It’s not retinal vasculitis.)
Acute nongranulomatous anterior uveitis, often with a hypopyon

How is the diagnosis of BD made?
It is a clinical diagnosis--there are no specific tests for it

Can BD retinal vasculitis lead to retinal ischemia with subsequent neovascularization?
Yes--it is an occlusive vasculitis, so ischemia is a common occurrence, and a significant cause of ocular morbidity and vision loss

Who is the typical BD pt?
An individual of ‘Silk Road’ descent age 25-35

What is the classic nonocular complaint in BD?
Recurrent oral ulcers

In addition to oral ulcers, what three other nonocular findings are common?
---Skin rash
---Genital ulcers
---Arthralgias

Is ocular involvement common in BD?
Yes; estimates of ocular involvement run as high as 70%

Does BD pose a significant threat to long-term ocular health, and/or vision?
Mos def--severe vision loss results in as many as 25% of ocular BD cases

What is the HLA association for BD?
There are several; HLA-B51 is associated with ocular BD
Granulomatosis Retinal Vasculitis

Primarily Arterial:
Think of these 3 diseases:
- PAN
- SLE
- Behçet's

Both Arterial and Venous:
Think of these 2 diseases:
- Wegener's
- Sarcoid

Primarily Venous:
Think of this 1 disease:
- Sarcoid

Who is the typical BD pt?
An individual of 'Silk Road' descent age 25-35

What is the classic nonocular complaint in BD?
Recurrent oral ulcers

In addition to oral ulcers, what three other nonocular findings are common?
- Skin rash
- Genital ulcers
- Arthralgias

Is ocular involvement common in BD?
Yes; estimates of ocular involvement run as high as 70%

Does BD pose a significant threat to long-term ocular health, and/or vision?
Mos def--severe vision loss results in as many as 25% of ocular BD cases

What is the most common form of ocular involvement? (It's not retinal vasculitis.)
Acute nongranulomatous anterior uveitis, often with a hypopyon

How is the diagnosis of BD made?
It is a clinical diagnosis--there are no specific tests for it

What is the HLA association for BD?
There are several; HLA-B51 is associated with ocular BD

Both Arterial and Venous:
Think of these 3 diseases:
- Sarcoid
- Behçet's
- PAN

Can BD retinal vasculitis lead to retinal ischemia with subsequent neovascularization?
Yes--it is an occlusive vasculitis, so ischemia is a common occurrence, and a significant cause of ocular morbidity and vision loss

Retinal Vasculitis
Retinal Vasculitis

- Primarily Arterial: Think of these 3 diseases:
  - SLE
  - PAN
  - Behçet’s

- Primarily Venous: Think of these 3 diseases:
  - Sarcoid
  - Granulomatosis
  - Retinal Vasculitis

Both Arterial and Venous: Think of these 2 diseases:
- PAN
- SLE

Who is the typical BD pt?
- An individual of ‘Silk Road’ descent age 25-35

What is the classic nonocular complaint in BD?
- Recurrent oral ulcers

In addition to oral ulcers, what three other nonocular findings are common?
- Skin rash
- Genital ulcers
- Arthralgias

Is ocular involvement common in BD?
- Yes; estimates of ocular involvement run as high as 70%

Does BD pose a significant threat to long-term ocular health, and/or vision?
- Mos def--severe vision loss results in as many as 25% of ocular BD cases

What is the most common form of ocular involvement? (It’s not retinal vasculitis.)
- Acute nongranulomatous anterior uveitis, often with a hypopyon

How is the diagnosis of BD made?
- It is a clinical diagnosis--there are no specific tests for it

What is the HLA association for BD?
- There are several; HLA-B51 is associated with ocular BD

Can BD retinal vasculitis lead to retinal ischemia with subsequent neovascularization?
- Yes--it is an occlusive vasculitis, so ischemia is a common occurrence, and a significant cause of ocular morbidity and vision loss
Retinal Vasculitis

Primarily Arterial:
Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous:
Think of these 2 diseases:
- Behcet’s
- Granulomatosis with polyangiitis

Primarily Venous:
Think of this 1 disease:
- Sarcoid

What is the classic triad of granulomatosis with polyangiitis (GPA)?

--
--
--
Retinal Vasculitis

Both **Arterial** and **Venous**: Think of these 2 diseases:

- SLE
- PAN

**Granulomatosis with polyangiitis**

Primarily **Venous**: Think of this 1 disease:

- Sarcoid

Primarily **Arterial**: Think of these 2 diseases:

- Behçet’s

What is the classic triad of granulomatosis with polyangiitis (GPA)? Necrotizing vasculitis of:

--the upper and lower respiratory tract
--the kidneys
--small and medium-sized arteries and veins
Retinal Vasculitis

Primarily Arterial:
Think of these 3 diseases:

Primarily Venous:
Think of these 3 diseases:

Both Arterial and Venous:
Think of these 2 diseases:

What is the classic presentation of upper respiratory tract involvement?

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys
--small and medium-sized arteries and veins

Behçet's
Granulomatosis with polyangiitis
Sarcoid
Retinal Vasculitis

Primarily Arterial:
Think of these 3 diseases:

- PAN
- SLE
- Behçet's

Both Arterial and Venous:
Think of these 2 diseases:

- Granulomatosis with polyangiitis
- Sarcoid

Primarily Venous:
Think of this 1 disease:

- Behçet's

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
-- the upper and lower respiratory tract
-- the kidneys
-- small and medium-sized arteries and veins
Retinal Vasculitis

Primarily Arterial: Think of these 3 diseases:
- PAN
- SLE
- Behçet’s

Both Arterial and Venous: Think of these 2 diseases:
- Granulomatosis with polyangiitis
- Sarcoid

Primarily Venous: Think of this 1 disease:

What is the classic presentation of upper respiratory tract involvement? Sinusitis with bloody discharge

What is the classic triad of granulomatosis with polyangiitis (GPA)? Necrotizing vasculitis of:
-- the upper and lower respiratory tract
-- the kidneys
-- small and medium-sized arteries and veins
Retinal Vasculitis

Primarily Arterial:
Think of these 3 diseases:

- PAN
- SLE
- Behçet's

Primarily Venous:
Think of this 1 disease:
- Sarcoid

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys
--small and medium-sized arteries and veins

What is the classic presentation of lower respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

Granulomatosis with polyangiitis
Retinal Vasculitis

Primarily Arterial:
Think of these 3 diseases:

- PAN
- SLE
- Behçet's

Both Arterial and Venous:
Think of these 3 diseases:

- Granulomatosis with polyangiitis
- Sarcoid

Primarily Venous:
Think of this 1 disease:

- Behçet's

What is the classic presentation of lower respiratory tract involvement? A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What is the classic presentation of upper respiratory tract involvement? Sinusitis with bloody discharge

What is the classic triad of granulomatosis with polyangiitis (GPA)? Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys
--small and medium-sized arteries and veins
Retinal Vasculitis

Primarily Arterial:
Think of these 3 diseases:

- PAN
- SLE
- Behçet’s

Primarily Venous:
Think of this 1 disease:
- Sarcoid

What is the classic presentation of lower respiratory tract involvement?
A variety of pulmonary S/S: Cough ( +/- hemoptysis), wheezing, etc

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys
--small and medium-sized arteries and veins

What specific pathologic renal condition is caused by GPA?
Retinal Vasculitis

Primarily Arterial:
Think of these 3 diseases:
- PAN
- SLE
- Behçet’s

Primarily Venous:
Think of this 1 disease:
- Sarcoid

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
- the upper and lower respiratory tract
- the kidneys
- small and medium-sized arteries and veins

What is the classic presentation of lower respiratory tract involvement?
A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What specific pathologic renal condition is caused by GPA?
Glomerulonephritis
Primarily Arterial: Think of these 3 diseases:
- PAN
- SLE
- Behçet’s

Primarily Venous: Think of this 1 disease:
- Sarcoid

What is the classic presentation of lower respiratory tract involvement? A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What is the classic triad of granulomatosis with polyangiitis (GPA)? Necrotizing vasculitis of:
- the upper and lower respiratory tract
- the kidneys
- small and medium-sized arteries and veins

What is the classic presentation of upper respiratory tract involvement? Sinusitis with bloody discharge

What is the classic presentation of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What is the classic triad of granulomatosis with polyangiitis (GPA)? Necrotizing vasculitis of:
- the upper and lower respiratory tract
- the kidneys
- small and medium-sized arteries and veins

What specific pathologic renal condition is caused by GPA? Glomerulonephritis

Retinal Vasculitis

Of the three, which does the Uveitis book describe as “the most characteristic clinical feature” of GPA?
Retinal Vasculitis

Of the three, which does the Uveitis book describe as "the most characteristic clinical feature" of GPA?
- Sinus dz

Primarily Arterial:
Think of these 3 diseases:
- PAN
- SLE
- Behçet's

Primarily Venous:
Think of this 1 disease:
- Sarcoid

What is the classic presentation of upper respiratory tract involvement?
- Sinusitis

What is the classic presentation of lower respiratory tract involvement?
- Granulomatosis with polyangiitis

What is the classic triad of granulomatosis with polyangiitis (GPA)?
- Necrotizing vasculitis of:
  - the upper and lower respiratory tract
  - the kidneys
  - small and medium-sized arteries and veins

What specific pathologic renal condition is caused by GPA?
- Glomerulonephritis
Retinal Vasculitis

Arterial:
Think of these 3 diseases:
- PAN
- SLE
- Behçet’s

What is the classic presentation of lower respiratory tract involvement?
A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

Venous:
Think of this 1 disease:
Sarcoid

Granulomatosis with polyangiitis

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys
--small and medium-sized arteries and veins

What specific pathologic renal condition is caused by GPA?
Glomerulonephritis
Retinal Vasculitis

Primarily Arterial:

Think of these 3 diseases:
- PAN
- SLE
- Behçet’s

Primarily Venous:

Think of these 3 diseases:
- Sarcoid
- Granulomatosis with polyangiitis

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
- the upper and lower respiratory tract
- the kidneys
- small and medium-sized arteries and veins

What specific pathologic renal condition is caused by GPA?
Glomerulonephritis

What is the classic presentation of lower respiratory tract involvement?
A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic finding on CT?
Bony destruction of the sinuses

Retinal Vasculitis
Retinal Vasculitis

**Primarily Arterial:**
Think of these 3 diseases:
- PAN
- SLE
- Behçet’s

**Primarily Venous:**
Think of this 1 disease:
- Sarcoid

**What is the classic finding on CT?**
- Bony destruction of the sinuses

---

**What is the classic presentation of lower respiratory tract involvement?**
- A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

---

**What is the classic presentation of upper respiratory tract involvement?**
- Sinusitis with bloody discharge

---

**What is the classic triad of granulomatosis with polyangiitis (GPA)?**
- Necrotizing vasculitis of:
  - the upper and lower respiratory tract
  - the kidneys
  - small and medium-sized arteries and veins

---

**What specific pathologic renal condition is caused by GPA?**
- Glomerulonephritis
Retinal Vasculitis

What is the classic finding on CT? Cavitary lung lesions

What is the classic finding on CT? Bony destruction of the sinuses

What is the classic presentation of lower respiratory tract involvement? A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What is the classic presentation of upper respiratory tract involvement? Sinusitis with bloody discharge

Behçet’s

Granulomatosis with polyangiitis

What is the classic triad of granulomatosis with polyangiitis (GPA)? Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys
--small and medium-sized arteries and veins

What specific pathologic renal condition is caused by GPA? Glomerulonephritis

Primarily Arterial:
Think of these 3 diseases:
PAN
SLE
Behçet’s

Primarily Venous:
Think of this 1 disease:
Sarcoid
Retinal Vasculitis

**Retinal**

**What is the classic finding on CT?**

Cavitary lung lesions

---

**What is the classic presentation of upper respiratory tract involvement?**

Sinusitis with bloody discharge

---

**What is the classic presentation of lower respiratory tract involvement?**

A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

---

**What is the classic triad of granulomatosis with polyangiitis (GPA)?**

Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys
--small and medium-sized arteries and veins

---

**What specific pathologic renal condition is caused by GPA?**

Glomerulonephritis

---

**What lab findings result?**

Hematuria and proteinuria

---

**Primarily Arterial:**

Think of these 3 diseases:
- PAN
- Behçet's
- Granulomatosis with polyangiitis

---

**Primarily Venous:**

Think of this 1 disease:
- Sarcoid

---

**What is the classic finding on CT?**

Bony destruction of the sinuses

---

**Behçet’s**
Retinal Vasculitis

Primarily Arterial:
Think of these 3 diseases:
- PAN
- SLE
- Behçet's

Both Arterial and Venous:
Think of these 3 diseases:
- Granulomatosis with polyangiitis

Primarily Venous:
Think of this 1 disease:
- Sarcoid

What is the classic finding on CT?
Retinal Vasculitis
- Cavitary lung lesions

What is the classic finding on CT?
Bony destruction of the sinuses

What is the classic presentation of lower respiratory tract involvement?
- A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What is the classic presentation of upper respiratory tract involvement?
- Sinusitis with bloody discharge

What is the classic triad of granulomatosis with polyangiitis (GPA)?
- Necrotizing vasculitis of:
  - the upper and lower respiratory tract
  - the kidneys
  - small and medium-sized arteries and veins

What lab findings result?
- Hematuria and proteinuria

What specific pathologic renal condition is caused by GPA?
- Glomerulonephritis
Retinal Vasculitis

What is the classic finding on CT?
- Cavitary lung lesions

What is the classic finding on CT?
- Bony destruction of the sinuses

What is the classic presentation of upper respiratory tract involvement?
- Sinusitis with bloody discharge
- Granulomatosis with polyangiitis

What is the classic presentation of lower respiratory tract involvement?
- A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc
- Behçet’s

What is the classic triad of granulomatosis with polyangiitis (GPA)?
- Necrotizing vasculitis of:
  - the upper and lower respiratory tract
  - the kidneys

What specific pathologic renal condition is caused by GPA?
- Glomerulonephritis

What lab findings result?
- Hematuria and proteinuria

Two other manifestations are common as well—what are they?
- Retinal Vasculitis
- Sarcoid
Retinal Vasculitis

**Arterial:**
Think of these 3 diseases:
- PAN
- SLE
- Behçet's

**Both Arterial and Venous:**
Think of these 3 diseases:
- Granulomatosis with polyangiitis
- Sarcoid
- PAN

**Primarily Venous:**
Think of this 1 disease:
- Sarcoid

---

**What is the classic finding on CT?**
- Cavitary lung lesions

**What is the classic presentation of lower respiratory tract involvement?**
- A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

**What is the classic presentation of upper respiratory tract involvement?**
- Sinusitis with bloody discharge

**What is the classic triad of granulomatosis with polyangiitis (GPA)?**
- Necrotizing vasculitis of:
  - the upper and lower respiratory tract
  - the kidneys

**What specific pathologic renal condition is caused by GPA?**
- Glomerulonephritis

**What lab findings result?**
- Hematuria and proteinuria

**What is the classic finding on CT?**
- Bony destruction of the sinuses

**What is the classic triad of granulomatosis with polyangiitis (GPA)?**
- Necrotizing vasculitis of:
  - the upper and lower respiratory tract
  - the kidneys

**Two other manifestations are common as well—what are they?**
- Rash
- Arthralgias
Retinal Vasculitis

What proportion of GPA pts have ophthalmic involvement?

Think of these 3 diseases:
- PAN
- SLE
- Behçet's

Both Arterial and Venous:
Think of these 3 diseases:
- Sarcoidosis
- Granulomatosis with polyangiitis

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
- the upper and lower respiratory tract
- the kidneys

What specific pathologic renal condition is caused by GPA?
Glomerulonephritis

What is the classic finding on CT?
- Bony destruction of the sinuses
- Cavitary lung lesions

What lab findings result?
- Hematuria and proteinuria

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of lower respiratory tract involvement?
A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What proportion of GPA pts have ophthalmic involvement?
About half

What is the most common manifestation of that involvement? (It's not retinal.)
Orbital inflammation

What is the next most common manifestation? (Still not retinal.)
Scleritis (including PUK)

Retinal Vasculitis

Two other manifestations are common as well—what are they?
- Rash
- Arthralgias
**Retinal Vasculitis**

What proportion of GPA pts have ophthalmic involvement? About half

What is the classic presentation of upper respiratory tract involvement? Sinusitis with bloody discharge

What is the classic triad of granulomatosis with polyangiitis (GPA)? Necrotizing vasculitis of:

- the upper and lower respiratory tract
- the kidneys

What specific pathologic renal condition is caused by GPA? Glomerulonephritis

What lab findings result? Hematuria and proteinuria

Two other manifestations are common as well—what are they?

- Rash
- Arthralgias
What proportion of GPA pts have ophthalmic involvement? About half

What is the most common manifestation of that involvement? (It’s not retinal.)

What is the classic presentation of upper respiratory tract involvement? Sinusitis with bloody discharge

What is the classic presentation of lower respiratory tract involvement? A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What specific pathologic renal condition is caused by GPA? Glomerulonephritis

What lab findings result? Hematuria and proteinuria

Two other manifestations are common as well—what are they? --Rash
--Arthralgias

What is the classic triad of granulomatosis with polyangiitis (GPA)? Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

Retinal Vasculitis

Primarily Arterial:
Think of these 3 diseases:
PAN
SLE
Behçet’s
Both Arterial and Venous:
Think of these 3 diseases:
Primerly Venous:
Think of these 3 diseases:
Sarcoid granulomatosis with polyangiitis

What is the classic triad of granulomatosis with polyangiitis (GPA)? Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

Retinal Vasculitis
What proportion of GPA pts have ophthalmic involvement? About half

What is the most common manifestation of that involvement? (It’s not retinal.) Orbital inflammation

What is the classic presentation of upper respiratory tract involvement? Sinusitis with bloody discharge

What is the classic triad of granulomatosis with polyangiitis (GPA)? Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

What specific pathologic renal condition is caused by GPA? Glomerulonephritis

What lab findings result? Hematuria and proteinuria

What proportion of GPA pts have ophthalmic involvement? About half

What is the most common manifestation of that involvement? (It’s not retinal.) Orbital inflammation

What is the classic presentation of upper respiratory tract involvement? Sinusitis with bloody discharge

What is the classic triad of granulomatosis with polyangiitis (GPA)? Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

Two other manifestations are common as well—what are they?
--Rash
--Arthralgias
What proportion of GPA pts have ophthalmic involvement? About half

What is the most common manifestation of that involvement? (It's not retinal.) Orbital inflammation

What is the next most common manifestation? (Still not retinal.)

What is the classic presentation of upper respiratory tract involvement? Sinusitis with bloody discharge

What is the classic triad of granulomatosis with polyangiitis (GPA)? Necrotizing vasculitis of:
--- the upper and lower respiratory tract
--- the kidneys

What specific pathologic renal condition is caused by GPA? Glomerulonephritis

What lab findings result? Hematuria and proteinuria

Two other manifestations are common as well—what are they?
--- Rash
--- Arthralgias

Retinal Vasculitis

PAN
SLE
Behçet's

Primarily Arterial:

Think of these 3 diseases:

Primarily Venous:

Think of these 3 diseases:

Sarcoid is 1 disease:

What is the classic finding on CT? Bony destruction of the sinuses

Cavitary lung lesions

What specific pathologic renal condition is caused by GPA? Glomerulonephritis

What lab findings result? Hematuria and proteinuria

Two other manifestations are common as well—what are they?
--- Rash
--- Arthralgias

Retinal Vasculitis
Retinal Vasculitis

What proportion of GPA pts have ophthalmic involvement?
About half

What is the most common manifestation of that involvement? (It’s not retinal.)
Orbital inflammation

What is the next most common manifestation? (Still not retinal.)
Scleritis (including PUK)

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

What specific pathologic renal condition is caused by GPA?
Glomerulonephritis

What lab findings result?
Hematuria and proteinuria

Two other manifestations are common as well—what are they?
--Rash
--Arthralgias
Retinal Vasculitis

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of lower respiratory tract involvement?
A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What specific pathologic renal condition is caused by GPA?
Glomerulonephritis

What lab findings result?
Hematuria and proteinuria

What proportion of GPA pts manifest vasculitis?
About 10%

How does retinal vasculitis manifest?
As CWS, or arterial occlusions (branch or central)

OK then, what proportion of GPA pts manifest vasculitis?
About half

What is the next most common manifestation? (Still not retinal.)
Scleritis (including PUK)

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

Two other manifestations are common as well—what are they?
--Rash
--Arthralgias

What is the classic finding on CT?
Bony destruction of the sinuses

What is the classic finding on CT?
Cavitary lung lesions

What is the classic finding on CT?
Bony destruction of the sinuses

What is the classic finding on CT?
Bony destruction of the sinuses
**Retinal Vasculitis**

What is the classic triad of granulomatosis with polyangiitis (GPA)?

- Necrotizing vasculitis of:
  - the upper and lower respiratory tract
  - the kidneys

What lab findings result?

- Hematuria and proteinuria

What specific pathologic renal condition is caused by GPA?

- Glomerulonephritis

OK then, what proportion of GPA pts manifest vasculitis?

- About 10%

What is the classic presentation of upper respiratory tract involvement?

- Sinusitis with bloody discharge

What is the classic presentation of lower respiratory tract involvement?

- A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc.

What is the classic finding on CT?

- Bony destruction of the sinuses
- Cavitary lung lesions

What is the classic finding on CT?

- Bony destruction of the sinuses
- Cavitary lung lesions

What is the classic finding on CT?

- Bony destruction of the sinuses
- Cavitary lung lesions

What is the classic triad of granulomatosis with polyangiitis (GPA)?

- Necrotizing vasculitis of:
  - the upper and lower respiratory tract
  - the kidneys

What is the classic triad of granulomatosis with polyangiitis (GPA)?

- Necrotizing vasculitis of:
  - the upper and lower respiratory tract
  - the kidneys

What is the classic triad of granulomatosis with polyangiitis (GPA)?

- Necrotizing vasculitis of:
  - the upper and lower respiratory tract
  - the kidneys

What is the classic triad of granulomatosis with polyangiitis (GPA)?

- Necrotizing vasculitis of:
  - the upper and lower respiratory tract
  - the kidneys

What proportion of GPA pts have ophthalmic involvement?

- About half

What is the most common manifestation of that involvement?

- (It’s not retinal.) Orbital inflammation

What is the next most common manifestation? (Still not retinal.)

- Scleritis (including PUK)

What is the classic triad of granulomatosis with polyangiitis (GPA)?

- Necrotizing vasculitis of:
  - the upper and lower respiratory tract
  - the kidneys

What proportion of GPA pts manifest vasculitis?

- About 10%

How does retinal vasculitis manifest?

- As CWS, or arterial occlusions (branch or central)

What is the classic presentation of upper respiratory tract involvement?

- Sinusitis with bloody discharge

What is the classic presentation of lower respiratory tract involvement?

- A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc.

What is the classic triad of granulomatosis with polyangiitis (GPA)?

- Necrotizing vasculitis of:
  - the upper and lower respiratory tract
  - the kidneys

What lab findings result?

- Hematuria and proteinuria

Two other manifestations are common as well—what are they?

- Rash
- Arthralgias

What is the next most common manifestation? (Still not retinal.)

- Scleritis (including PUK)
Retinal Vasculitis

OK then, what proportion of GPA pts manifest vasculitis?
About 10%

How does retinal vasculitis manifest?

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

What specific pathologic renal condition is caused by GPA?
Glomerulonephritis

What is the classic finding on CT?
Bony destruction of the sinuses

What is the classic finding on CT?
Cavitary lung lesions

What lab findings result?
Hematuria and proteinuria

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of lower respiratory tract involvement?
A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What is the next most common manifestation? (Still not retinal.)
Scleritis (including PUK)

What proportion of GPA pts have ophthalmic involvement?
About half

What is the most common manifestation of that involvement? (It's not retinal.)
Orbital inflammation

What is the next most common manifestation? (Still not retinal.)
Scleritis (including PUK)

OK then, what proportion of GPA pts manifest vasculitis?
About 10%

How does retinal vasculitis manifest?

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

What specific pathologic renal condition is caused by GPA?
Glomerulonephritis

What is the classic finding on CT?
Bony destruction of the sinuses

What is the classic finding on CT?
Cavitary lung lesions

What lab findings result?
Hematuria and proteinuria

Two other manifestations are common as well—what are they?
--Rash
--Arthralgias
Retinal Vasculitis

**OK then, what proportion of GPA pts manifest vasculitis?**
About 10%

**How does retinal vasculitis manifest?**
As CWS, or arterial occlusions (branch or central)

(It’s not retinal.)

**What is the classic triad of granulomatosis with polyangiitis (GPA)?**
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

**What is the classic presentation of upper respiratory tract involvement?**
Sinusitis with bloody discharge

**What is the classic presentation of lower respiratory tract involvement?**
A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

**What specific pathologic renal condition is caused by GPA?**
Glomerulonephritis

**What lab findings result?**
Hematuria and proteinuria

**What is the classic finding on CT?**
Bony destruction of the sinuses

**What is the classic finding on CT?**
Cavitary lung lesions

Two other manifestations are common as well—what are they?
--Rash
--Arthralgias

About half of GPA pts have ophthalmic involvement.

The most common manifestation of that involvement is:
Orbital inflammation

The next most common manifestation is:
Scleritis (including PUK)

OK then, what proportion of GPA pts manifest vasculitis?
About 10%

What lab findings result?
Hematuria and proteinuria

What specific pathologic renal condition is caused by GPA?
Glomerulonephritis

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys
Retinal Vasculitis

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of lower respiratory tract involvement?
A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

Two other manifestations are common as well—what are they?
--Rash
--Arthralgias

What specific pathologic renal condition is caused by GPA?
Glomerulonephritis

What lab findings result?
Hematuria and proteinuria

What is the classic finding on CT?
Bony destruction of the sinuses

What is the classic finding on CT?
Cavitary lung lesions

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

What is the next most common manifestation of GPA?
Scleritis (including PUK)

What proportion of GPA pts have ophthalmic involvement?
About half

What is the most common manifestation of that involvement? (It’s not retinal.)
Orbital inflammation

What is the next most common manifestation? (Still not retinal.)
Scleritis (including PUK)

What is the prognosis for untreated GPA?
Dismal—the 1-yr mortality rate is 80%

What is the treatment of choice?
Steroids + cyclophosphamide
Retinal Vasculitis

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

What specific pathologic renal condition is caused by GPA?
Glomerulonephritis

What is the classic finding on CT?
Bony destruction of the sinuses

What is the classic finding on CT?
Cavitary lung lesions

What lab findings result?
Hematuria and proteinuria

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of lower respiratory tract involvement?
A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

What is the classic finding on CT?
Bony destruction of the sinuses

What is the classic finding on CT?
Cavitary lung lesions

What lab findings result?
Hematuria and proteinuria

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of lower respiratory tract involvement?
A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What proportion of GPA pts have ophthalmic involvement?
About half

What is the next most common manifestation? (Still not retinal.)
Scleritis (including PUK)

What is the classic finding on CT?
Bony destruction of the sinuses

What is the classic finding on CT?
Cavitary lung lesions

What lab findings result?
Hematuria and proteinuria

Two other manifestations are common as well—what are they?
--Rash
--Arthralgias

What is the most common manifestation of that involvement? (It’s not retinal.)
Orbital inflammation

What is the next most common manifestation? (Still not retinal.)
Scleritis (including PUK)

OK then, what proportion of GPA pts manifest vasculitis?
About 10%

How does retinal vasculitis manifest?
As CWS, or arterial occlusions (branch or central)

(It’s not retinal.)
Orbital inflammation

What is the prognosis for untreated GPA?
Dismal—the 1-yr mortality rate is 80%

What is the treatment of choice?
Steroids + cyclophosphamide
Retinal Vasculitis

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of lower respiratory tract involvement?
A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What specific pathologic renal condition is caused by GPA?
Glomerulonephritis

What is the treatment of choice?
Steroids + cyclophosphamide

What is the prognosis for untreated GPA?
Dismal—the 1-yr mortality rate is 80%

What is the classic finding on CT?
Bony destruction of the sinuses

Cavitary lung lesions

Hematuria and proteinuria

Rash

What is the next most common manifestation of GPA?
Scleritis (including PUK)

OK then, what proportion of GPA pts manifest vasculitis?
About 10%

How does retinal vasculitis manifest?
As CWS, or arterial occlusions (branch or central)
(It’s not retinal.)

Orbital inflammation

What lab findings result?

What is the classic finding on CT?

Bony destruction of the sinuses

Cavitary lung lesions

What proportion of GPA pts have ophthalmic involvement?
About half

What is the most common manifestation of that involvement?
Orbital inflammation

What is the next most common manifestation? (Still not retinal.)
Scleritis (including PUK)

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

Two other manifestations are common as well—what are they?
--Rash
--Arthralgias
Retinal Vasculitis

OK then, what proportion of GPA pts manifest vasculitis?
About 10%

How does retinal vasculitis manifest?
As CWS, or arterial occlusions (branch or central)
(It’s not retinal.)

Orbital inflammation

What is the classic triad of granulomatosi with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys
--small and medium-sized arteries and veins

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of lower respiratory tract involvement?
A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What specific pathologic renal condition is caused by GPA?
Glomerulonephritis

What is the classic finding on CT?
Bony destruction of the sinuses

What lab findings result?
Hematuria and proteinuria

Two other manifestations are common as well—what are they?
--Rash
--Arthralgias

What is the prognosis for untreated GPA?
Dismal—the 1-yr mortality rate is 80%

What is the treatment of choice?
Steroids + cyclophosphamide

What is the next most common manifestation?
Scleritis (including PUK)

Behçet’s

Granulomatosis with polyangiitis

Sarcoid

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

What is the classic finding on CT?
Cavitary lung lesions

What lab findings result?
Hematuria and proteinuria

What specific pathologic renal condition is caused by GPA?
Glomerulonephritis
Retinal Vasculitis

OK then, what proportion of GPA pts manifest vasculitis?
About 10%

What lab findings result?
Hematuria and proteinuria

Cyclophosphamide is an extremely harsh drug—why not tx with steroids alone?

Steroid monotherapy?

Granulomatosis with polyangiitis

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys

What specific pathologic renal condition is caused by GPA?
Glomerulonephritis

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of lower respiratory tract involvement?
A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What is the classic finding on CT?
Bony destruction of the sinuses

What is the classic finding on CT?
Cavitary lung lesions

What is the classic triad of GPA?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys
--small and medium-sized arteries and veins

What is the classic finding on CT?
Bony destruction of the sinuses

What is the classic finding on CT?
Cavitary lung lesions

What is the classic finding on CT?
Bony destruction of the sinuses

What is the classic finding on CT?
Cavitary lung lesions

What is the classic triad of GPA?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys
--small and medium-sized arteries and veins

What is the classic triad of GPA?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys
--small and medium-sized arteries and veins

What proportion of GPA pts have ophthalmic involvement?
About half

What is the next most common manifestation of GPA (not retinal)?
Scleritis (including PUK)

What is the most common manifestation of GPA (not retinal)?
Orbital inflammation

How does retinal vasculitis manifest?
As CWS, or arterial occlusions (branch or central)

(It’s not retinal.)

Orbital inflammation

Sinusitis with bloody discharge

A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What is the prognosis for untreated GPA?
Dismal—the 1-yr mortality rate is 80%

What is the treatment of choice?
Steroids + cyclophosphamide

Cyclophosphamide is an extremely harsh drug—why not tx with steroids alone?

Steroid monotherapy?

Behavior

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presenta
Retinal Vasculitis

OK then, what proportion of GPA pts manifest vasculitis?
About 10%

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys
--small and medium-sized arteries and veins

What is the classic finding on CT?
Bony destruction of the sinuses

What is the classic finding on CT?
Cavitary lung lesions

What lab findings result?
Hematuria and proteinuria

Two other manifestations are common as well—what are they?
--Rash
--Arthralgias

What is the classic presentation of upper respiratory tract involvement?
Sinusitis with bloody discharge

What is the classic presentation of lower respiratory tract involvement?
A variety of pulmonary S/S: Cough (+/- hemoptysis), wheezing, etc

What specific pathologic renal condition is caused by GPA?
Glomerulonephritis

What is the classic triad of granulomatosis with polyangiitis (GPA)?
Necrotizing vasculitis of:
--the upper and lower respiratory tract
--the kidneys
--small and medium-sized arteries and veins

What is the most common manifestation of GPA ophthalmic involvement? (It’s not retinal.)
Orbital inflammation

What is the next most common manifestation? (Still not retinal.)
Scleritis (including PUK)

What is the prognosis for untreated GPA?
Dismal—the 1-yr mortality rate is 80%

What is the treatment of choice?
Steroids + cyclophosphamide

Steroid monotherapy? No!
Cyclophosphamide is an extremely harsh drug—why not tx with steroids alone?
Because steroid monotherapy for GPA is associated with an increased risk of mortality

What proportion of GPA pts have ophthalmic involvement?
About half
In broadest terms, how would you describe sarcoid?

Primarily Venous: Think of these 1 diseases:

Sarcoid

In broadest terms, how would you describe sarcoid?

Primarily Venous: Think of these 1 diseases:

Sarcoid
In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What is the cause? As of this writing, it is unknown.

What organ/system is most commonly involved in sarcoid? The lungs.

Which other organ systems can be involved? Pretty much all of them.

What percentage of sarcoid pts have ocular involvement? About 50.

Who is the typical sarcoid pt in the US? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.
Retinal Vasculitis

In broadest terms, how would you describe sarcoid?
It is a multi-organ disease characterized by the presence of noncaseating granulomas.
Retinal Vasculitis

In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What is the cause?

As of this writing, it is unknown.

What organ/system is most commonly involved in sarcoid?
The lungs.

Which other organ systems can be involved?
Pretty much all of them.

What percentage of sarcoid pts have ocular involvement?
About 50.

Who is the typical sarcoid pt in the US?
An African-American.

During what age-range does dz onset typically occur?
Usually 20 to 50.

Primarily Venous:
Think of these 3 diseases:

Sarcoid
Retinal Vasculitis

- Primarily Arterial: Think of these 3 diseases: PAN, SLE, Behçet’s
- Primarily Venous: Think of these 3 diseases: Wegener’s, Sarcoid
- Both Arterial and Venous: Think of these 3 diseases:

In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What is the cause? As of this writing, it is unknown.

What organ/system is most commonly involved in sarcoid? The lungs.

Which other organ systems can be involved? Pretty much all of them.

What percentage of sarcoid pts have ocular involvement? About 50.

Who is the typical sarcoid pt in the US? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.
In broadest terms, how would you describe sarcoid?
It is a multi-organ disease characterized by the presence of noncaseating granulomas

What is the cause?
As of this writing, it is unknown

What organ/system is most commonly involved in sarcoid?

Primarily venous: Think of these 1 disease:

Sarcoid
In broadest terms, how would you describe sarcoid?
It is a multi-organ disease characterized by the presence of noncaseating granulomas

What is the cause?
As of this writing, it is unknown

What organ/system is most commonly involved in sarcoid?
The lungs
In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What is the cause? As of this writing, it is unknown.

What organ/system is most commonly involved in sarcoid? The lungs.

Which other organ systems can be involved?
In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What is the cause? As of this writing, it is unknown.

What organ/system is most commonly involved in sarcoid? The lungs.

Which other organ systems can be involved? Pretty much all of them.
Retinal Vasculitis

In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What is the cause? As of this writing, it is unknown.

What organ/system is most commonly involved in sarcoid? The lungs.

Which other organ systems can be involved? Pretty much all of them.

What percentage of sarcoid pts have ocular involvement? About 50.

In the US, the typical sarcoid pt is an African-American. During what age-range does dz onset typically occur? Usually 20 to 50.

Primary Venous: Think of these 3 diseases: Sarcoid.
Retinal Vasculitis

In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What is the cause? As of this writing, it is unknown.

What organ/system is most commonly involved in sarcoid? The lungs.

Which other organ systems can be involved? Pretty much all of them.

What percentage of sarcoid pts have ocular involvement? About 50.
In broadest terms, how would you describe sarcoid?
It is a multi-organ disease characterized by the presence of noncaseating granulomas

What is the cause?
As of this writing, it is unknown

What organ/system is most commonly involved in sarcoid?
The lungs

Which other organ systems can be involved?
Pretty much all of them

What percentage of sarcoid pts have ocular involvement?
About 50

Who is the typical sarcoid pt in the US?
In broadest terms, how would you describe sarcoid?
It is a multi-organ disease characterized by the presence of noncaseating granulomas

What is the cause?
As of this writing, it is unknown

What organ/system is most commonly involved in sarcoid?
The lungs

Which other organ systems can be involved?
Pretty much all of them

What percentage of sarcoid pts have ocular involvement?
About 50

Who is the typical sarcoid pt in the US?
An African-American
In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What is the cause? As of this writing, it is unknown.

What organ/system is most commonly involved in sarcoid? The lungs.

Which other organ systems can be involved? Pretty much all of them.

What percentage of sarcoid pts have ocular involvement? About 50.

Who is the typical sarcoid pt in the US? An African-American.

How about world-wide? Which ethnic group has the highest prevalence of sarcoid?
Retinal Vasculitis

In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What is the cause? As of this writing, it is unknown.

What organ/system is most commonly involved in sarcoid? The lungs.

Which other organ systems can be involved? Pretty much all of them.

What percentage of sarcoid pts have ocular involvement? About 50.

Who is the typical sarcoid pt in the US? An African-American.

How about world-wide? Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Primarily Arterial: Think of these 3 diseases: PAN, SLE, Behçet’s.

Venous: Think of these 3 diseases: Wegener’s, Sarcoid, 1.

Sarcoid
Retinal Vasculitis

In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What is the cause? As of this writing, it is unknown.

What organ/system is most commonly involved in sarcoid? Pretty much all of them. The lungs.


What percentage of sarcoid pts have ocular involvement? Pretty much all of them.

Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

World-wide? Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Who is the typical sarcoid pt worldwide? Who is the typical sarcoid pt in the US? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What organ/system is most commonly involved in sarcoid? The lungs. What is the cause? As of this writing, it is unknown.

What is sarcoid? In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What percentage of sarcoid pts have ocular involvement? About 50.

Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Who is the typical sarcoid pt worldwide? An African-American.

What is the cause? As of this writing, it is unknown.

What organ/system is most commonly involved in sarcoid? Pretty much all of them. The lungs.

Who is the typical sarcoid pt in the US? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What organ/system is most commonly involved in sarcoid? The lungs. What is the cause? As of this writing, it is unknown.

What is sarcoid? In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What percentage of sarcoid pts have ocular involvement? About 50.

Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Who is the typical sarcoid pt worldwide? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What organ/system is most commonly involved in sarcoid? The lungs. What is the cause? As of this writing, it is unknown.

What is sarcoid? In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What percentage of sarcoid pts have ocular involvement? About 50.

Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Who is the typical sarcoid pt in the US? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What organ/system is most commonly involved in sarcoid? The lungs. What is the cause? As of this writing, it is unknown.

What is sarcoid? In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What percentage of sarcoid pts have ocular involvement? About 50.

Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Who is the typical sarcoid pt worldwide? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What organ/system is most commonly involved in sarcoid? The lungs. What is the cause? As of this writing, it is unknown.

What is sarcoid? In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What percentage of sarcoid pts have ocular involvement? About 50.

Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Who is the typical sarcoid pt in the US? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What organ/system is most commonly involved in sarcoid? The lungs. What is the cause? As of this writing, it is unknown.

What is sarcoid? In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What percentage of sarcoid pts have ocular involvement? About 50.

Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Who is the typical sarcoid pt worldwide? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What organ/system is most commonly involved in sarcoid? The lungs. What is the cause? As of this writing, it is unknown.

What is sarcoid? In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What percentage of sarcoid pts have ocular involvement? About 50.

Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Who is the typical sarcoid pt in the US? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What organ/system is most commonly involved in sarcoid? The lungs. What is the cause? As of this writing, it is unknown.

What is sarcoid? In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What percentage of sarcoid pts have ocular involvement? About 50.

Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Who is the typical sarcoid pt worldwide? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What organ/system is most commonly involved in sarcoid? The lungs. What is the cause? As of this writing, it is unknown.

What is sarcoid? In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What percentage of sarcoid pts have ocular involvement? About 50.

Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Who is the typical sarcoid pt in the US? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What organ/system is most commonly involved in sarcoid? The lungs. What is the cause? As of this writing, it is unknown.

What is sarcoid? In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What percentage of sarcoid pts have ocular involvement? About 50.

Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Who is the typical sarcoid pt worldwide? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What organ/system is most commonly involved in sarcoid? The lungs. What is the cause? As of this writing, it is unknown.

What is sarcoid? In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What percentage of sarcoid pts have ocular involvement? About 50.

Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Who is the typical sarcoid pt in the US? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What organ/system is most commonly involved in sarcoid? The lungs. What is the cause? As of this writing, it is unknown.

What is sarcoid? In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What percentage of sarcoid pts have ocular involvement? About 50.

Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Who is the typical sarcoid pt worldwide? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What organ/system is most commonly involved in sarcoid? The lungs. What is the cause? As of this writing, it is unknown.

What is sarcoid? In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What percentage of sarcoid pts have ocular involvement? About 50.

Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Who is the typical sarcoid pt in the US? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What organ/system is most commonly involved in sarcoid? The lungs. What is the cause? As of this writing, it is unknown.

What is sarcoid? In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What percentage of sarcoid pts have ocular involvement? About 50.

Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Who is the typical sarcoid pt worldwide? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What organ/system is most commonly involved in sarcoid? The lungs. What is the cause? As of this writing, it is unknown.

What is sarcoid? In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What percentage of sarcoid pts have ocular involvement? About 50.

Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Who is the typical sarcoid pt in the US? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What organ/system is most commonly involved in sarcoid? The lungs. What is the cause? As of this writing, it is unknown.

What is sarcoid? In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What percentage of sarcoid pts have ocular involvement? About 50.

Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Who is the typical sarcoid pt worldwide? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What organ/system is most commonly involved in sarcoid? The lungs. What is the cause? As of this writing, it is unknown.

What is sarcoid? In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What percentage of sarcoid pts have ocular involvement? About 50.

Which ethnic group has the highest prevalence of sarcoid? Whites residing in Northern Europe.

Who is the typical sarcoid pt in the US? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What organ/system is most commonly involved in sar
Retinal Vasculitis

In broadest terms, how would you describe sarcoid?
It is a multi-organ disease characterized by the presence of noncaseating granulomas

What is the cause?
As of this writing, it is unknown

What organ/system is most commonly involved in sarcoid?
The lungs

Which other organ systems can be involved?
Pretty much all of them

What percentage of sarcoid pts have ocular involvement?
About 50

Who is the typical sarcoid pt in the US?
An African-American

During what age-range does dz onset typically occur?
Retinal Vasculitis

In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What is the cause? As of this writing, it is unknown.

What organ/system is most commonly involved in sarcoid? The lungs.

Which other organ systems can be involved? Pretty much all of them.

What percentage of sarcoid pts have ocular involvement? About 50.

Who is the typical sarcoid pt in the US? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

Primarily Venous:
Think of these 3 diseases:

PAN
SLE
Wegener’s

Sarcoid
Retinal Vasculitis

In broadest terms, how would you describe sarcoid?
It is a multi-organ disease characterized by the presence of noncaseating granulomas

What is the cause?
As of this writing, it is unknown

What organ/system is most commonly involved in sarcoid?
The lungs

Which other organ systems can be involved?
Pretty much all of them

What percentage of sarcoid pts have ocular involvement?
About 50

Who is the typical sarcoid pt in the US?
An African-American

During what age-range does dz onset typically occur?
Usually 20 to 50

What is the single-best screening test for sarcoid?
Chest X-ray

What is the classic CXR finding?
Bilateral hilar adenopathy

If CXR is read as normal, but clinical suspicion for sarcoidosis remains high, what other imaging modality should be considered?
Thin cut CT of the chest

What is the only way to definitively diagnose sarcoidosis?
Via biopsy demonstrating the presence of noncaseating granulomas

Primarily Arterial:
Think of these 3 diseases:
PAN
SLE
Behçet's

Both Arterial and Venous:
Think of these 3 diseases:
Wegener's

Primarily Venous:
Think of these 3 diseases:
Sarcoid
In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What is the cause? As of this writing, it is unknown.

What organ/system is most commonly involved in sarcoid? The lungs.

Which other organ/systems can be involved? Pretty much all of them.

What percentage of sarcoid pts have ocular involvement? About 50.

Who is the typical sarcoid pt in the US? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What is the single-best screening test for sarcoid? Chest X-ray.

What is the classic CXR finding? Bilateral hilar adenopathy.

If CXR is read as normal, but clinical suspicion for sarcoidosis remains high, what other imaging modality should be considered? Thin cut CT of the chest.

What is the only way to definitively diagnose sarcoidosis? Via biopsy demonstrating the presence of noncaseating granulomas.
Retinal Vasculitis

In broadest terms, how would you describe sarcoid?  
It is a multi-organ disease characterized by the presence of noncaseating granulomas

What is the cause?  
As of this writing, it is unknown

What organ/system is most commonly involved in sarcoid?  
The lungs

Which other organ systems can be involved?  
Pretty much all of them

What percentage of sarcoid pts have ocular involvement?  
About 50

Who is the typical sarcoid pt in the US?  
An African-American

During what age-range does dz onset typically occur?  
Usually 20 to 50

What is the single-best screening test for sarcoid?  
Chest X-ray

What is the classic CXR finding?  
Bilateral hilar adenopathy

If CXR is read as normal, but clinical suspicion for sarcoidosis remains high, what other imaging modality should be considered?  
Thin cut CT of the chest

What is the only way to definitively diagnose sarcoidosis?  
Via biopsy demonstrating the presence of noncaseating granulomas
Retinal Vasculitis

In broadest terms, how would you describe sarcoid?
It is a multi-organ disease characterized by the presence of noncaseating granulomas

What is the cause?
As of this writing, it is unknown

What organ/system is most commonly involved in sarcoid?
The lungs

Which other organ/systems can be involved?
Pretty much all of them

What percentage of sarcoid pts have ocular involvement?
About 50

Who is the typical sarcoid pt in the US?
An African-American

During what age-range does dz onset typically occur?
Usually 20 to 50

What is the single-best screening test for sarcoid?
Chest X-ray

What is the classic CXR finding?
Bilateral hilar adenopathy

In broadest terms, how would you describe sarcoid?
It is a multi-organ disease characterized by the presence of noncaseating granulomas

What is the cause?
As of this writing, it is unknown

What organ/system is most commonly involved in sarcoid?
The lungs

Which other organ/systems can be involved?
Pretty much all of them

What percentage of sarcoid pts have ocular involvement?
About 50

Who is the typical sarcoid pt in the US?
An African-American

During what age-range does dz onset typically occur?
Usually 20 to 50

What is the single-best screening test for sarcoid?
Chest X-ray

What is the classic CXR finding?
Bilateral hilar adenopathy
Retinal Vasculitis

In broadest terms, how would you describe sarcoid?
It is a multi-organ disease characterized by the presence of noncaseating granulomas

What is the cause?
As of this writing, it is unknown

What organ/system is most commonly involved in sarcoid?
The lungs

What percentage of sarcoid pts have ocular involvement?
About 50

Who is the typical sarcoid pt in the US?
An African-American

During what age-range does dz onset typically occur?
Usually 20 to 50

What is the single-best screening test for sarcoid?
Chest X-ray

What is the classic CXR finding?
Bilateral hilar adenopathy

If CXR is read as normal, but clinical suspicion for sarcoidosis remains high, what other imaging modality should be considered?
Thin cut CT of the chest

Via biopsy demonstrating the presence of noncaseating granulomas

Primarily Venous:
Think of these 3 diseases:
Wegener's
Sarcoid
1

Primarily Arterial:
Think of these 3 diseases:
PAN
SLE
Behçet's
2

Both Arterial and Venous:
Think of these 3 diseases:
1
Retinal Vasculitis

PAN

SLE

Behçet's

Think of these 3 diseases:

Primarily Arterial:

Wegener’s

Primarily Venous:

Sarcoid

Think of these 1 diseases:

In broadest terms, how would you describe sarcoid?
It is a multi-organ disease characterized by the presence of noncaseating granulomas

What is the cause?
As of this writing, it is unknown

What organ/system is most commonly involved in sarcoid?
The lungs

Which other organ/systems can be involved?
Pretty much all of them

What percentage of sarcoid pts have ocular involvement?
About 50

Who is the typical sarcoid pt in the US?
An African-American

During what age-range does dz onset typically occur?
Usually 20 to 50

What is the single-best screening test for sarcoid?
Chest X-ray

What is the classic CXR finding?
Bilateral hilar adenopathy

If CXR is read as normal, but clinical suspicion for sarcoidosis remains high, what other imaging modality should be considered?
Thin cut CT of the chest

The lungs

Sarcoid
In broadest terms, how would you describe sarcoid? It is a multi-organ disease characterized by the presence of noncaseating granulomas.

What is the cause? As of this writing, it is unknown.

What organ/system is most commonly involved in sarcoid? The lungs.

Which other organs/systems can be involved? Pretty much all of them.

What percentage of sarcoid pts have ocular involvement? About 50.

Who is the typical sarcoid pt in the US? An African-American.

During what age-range does dz onset typically occur? Usually 20 to 50.

What is the single-best screening test for sarcoid? Chest X-ray.

What is the classic CXR finding? Bilateral hilar adenopathy.

If CXR is read as normal, but clinical suspicion for sarcoidosis remains high, what other imaging modality should be considered? Thin cut CT of the chest.

What is the only way to definitively diagnose sarcoidosis? Via biopsy demonstrating the presence of noncaseating granulomas.
**Retinal Vasculitis**

---

**Primarily Arterial:**
- Think of these 3 diseases:
  - PAN
  - SLE
  - Behçet’s

**Arterial and Venous:**
- Think of these 3 diseases:
  - Wegener’s

**Primarily Venous:**
- Think of these 3 diseases:
  - Sarcoid

---

**In broadest terms, how would you describe sarcoid?**
- It is a multi-organ disease characterized by the presence of **noncaseating granulomas**

**What is the cause?**
- As of this writing, it is unknown

**What organ/system is most commonly involved in sarcoid?**
- The lungs

**Which other organ/systems are typically involved?**
- Pretty much all of them

**What percentage of sarcoid pts have ocular involvement?**
- About 50

**Who is the typical sarcoid pt in the US?**
- An African-American

**During what age-range does dz onset typically occur?**
- Usually 20 to 50

**What is the single-best screening test for sarcoid?**
- Chest X-ray

**What is the classic CXR finding?**
- Bilateral hilar adenopathy

**If CXR is read as normal, but clinical suspicion for sarcoidosis remains high, what other imaging modality should be considered?**
- Thin cut CT of the chest

**What is the only way to definitively diagnose sarcoidosis?**
- Via biopsy demonstrating the presence of noncaseating granulomas
Retinal Vasculitis

Primarily Arterial: Think of these 3 diseases:
- SLE
- PAN
- Behçet’s
- Granulomatosis with polyangiitis

Both Arterial and Venous: Think of these 2 diseases:
- PAN
- SLE
- Behçet’s
- Granulomatosis with polyangiitis

Primarily Venous: Think of these 1 disease:
- Sarcoid

What percentage of sarcoid uveitis pts have posterior manifestations?
Retinal Vasculitis

Primarily Arterial:
Think of these 3 diseases:
- SLE
- PAN

Both Arterial and Venous:
Think of these 3 diseases:
- Behçet’s
- Granulomatosis with polyangiitis

Primarily Venous:
Think of these 1 disease:
- Sarcoid

What percentage of sarcoid uveitis pts have posterior manifestations?
About 20
Retinal Vasculitis

Primarily Arterial: Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous: Think of these 2 diseases:
- Behçet’s
- Granulomatosis with polyangiitis

Primarily Venous: Think of these 1 disease:
- Sarcoid

What percentage of sarcoid uveitis pts have posterior manifestations?
About 20

What are the two most common posterior manifestations?
--
--
Retinal Vasculitis

Primarily Arterial: Think of these 2 diseases:
- SLE
- PAN

Both Arterial and Venous: Think of these 2 diseases:
- Behçet’s
- Granulomatosis with polyangiitis

Primarily Venous: Think of these 1 diseases:
- Sarcoid

What percentage of sarcoid uveitis pts have posterior manifestations? About 20

What are the two most common posterior manifestations?
--Granulomas of the [ ] and/or [ ]
--Retinal [ ]
Retinal Vasculitis

Primarily Arterial: Think of these 3 diseases:
- SLE
- PAN
- Behçet’s
- Granulomatosis with polyangiitis

Both Arterial and Venous: Think of these 2 diseases:

Primarily Venous: Think of these 1 diseases:
- Sarcoid

What percentage of sarcoid uveitis pts have posterior manifestations? About 20

What are the two most common posterior manifestations?
--Granulomas of the choroid, retina and/or optic nerve
--Retinal vasculitis
Retinal Vasculitis

Primarily Arterial:
Think of these 3 diseases:
- PAN
- SLE
- Behçet’s

Both Arterial and Venous:
Think of these 3 diseases:
- Wegener’s

Primarily Venous:
Think of these 1 disease:
- Sarcoid

What percentage of sarcoid uveitis pts have posterior manifestations?
About 20

What are the two most common posterior manifestations?
- Granulomas of the choroid, retina, and/or optic nerve
- Retinal vasculitis

Is the vasculitis primarily an arteritis, a phlebitis, or both?
Sarcoid tends to cause a phlebitis (more specifically, a periphlebitis)

What is the classic appearance of sarcoid periphlebitis?
Small yellowish-white nodular granulomas accumulate along venules in a pattern referred to as candle-wax drippings

What French term for candle-wax drippings is encountered frequently in the ophthalmic literature?
Taches de bougie
Retinal Vasculitis

Primary

Both Arterial

Is the vasculitis primarily an arteritis, a phlebitis, or both?
Sarcoid tends to cause a phlebitis (more specifically, a periphlebitis).

Primarily Venous:

Think of these 3 diseases:

1. PAN
2. SLE
3. Behçet's

Both Arterial and Venous:

Think of these 3 diseases:

1. Wegener's
2. Sarcoid
3. Is 1

What percentage of sarcoid uveitis pts have posterior manifestations?
About 20%

What are the two most common posterior manifestations?
--Granulomas of the choroid, retina, and/or optic nerve
--Retinal vasculitis
Retinal Vasculitis

Primarily Arterial:
Think of these 3 diseases:
- PAN
- SLE
- Behçet’s

Both Arterial and Venous:
Think of these 3 diseases:
- Wegener’s
- Sarcoid
- Lupus

Primarily Venous:
Think of these 1 disease:
- Sarcoid

What is the classic appearance of sarcoid periphlebitis?
Small yellowish-white nodular granulomas accumulate along venules in a pattern referred to as "candle-wax drippings."

What French term for candle-wax drippings is encountered frequently in the ophthalmic literature?
"Taches de bougie"

What percentage of sarcoid uveitis pts have posterior manifestations?
About 20%

What are the two most common posterior manifestations?
--Granulomas of the choroid, retina and/or optic nerve
--Retinal vasculitis

Is the vasculitis primarily an arteritis, a phlebitis, or both?
Sarcoid tends to cause a phlebitis (more specifically, a periphlebitis).
Retinal Vasculitis

Is the vasculitis primarily an arteritis, a phlebitis, or both?
Sarcoid tends to cause a phlebitis (more specifically, a periphlebitis).

What is the classic appearance of sarcoid periphlebitis?
Small yellowish-white nodular granulomas accumulate along venules in a pattern referred to as candle-wax drippings.

What French term for candle-wax drippings is encountered frequently in the ophthalmic literature?
Taches de bougie

What percentage of sarcoid uveitis pts have posterior manifestations?
About 20%

What are the two most common posterior manifestations?
--Granulomas of the choroid, retina and/or optic nerve
--Retinal vasculitis
Retinal Vasculitis

Is the vasculitis primarily an arteritis, a phlebitis, or both?
Sarcoid tends to cause a phlebitis (more specifically, a periphlebitis).

What is the classic appearance of sarcoid periphlebitis?
Small yellowish-white nodular granulomas accumulate along venules in a pattern referred to as candle-wax drippings.

What is the French term for candle-wax drippings encountered frequently in the ophthalmic literature?
Taches de bougie

What percentage of sarcoid uveitis patients have posterior manifestations?
About 20%

What are the two most common posterior manifestations?
--Granulomas of the choroid, retina, and/or optic nerve
--Retinal vasculitis

Primarily Arterial:
Think of these 3 diseases:
- PAN
- SLE
- Behçet's

Both Arterial and Venous:
Think of these 3 diseases:
- Wegener's
- Sarcoid
- 1

Primarily Venous:
Think of these 1 diseases:
- Sarcoid
Retinal Vasculitis

Primarily Arterial:

Think of these 3 diseases:
- PAN
- SLE
- Behçet’s

Both Arterial and Venous:

Think of these 3 diseases:
- Wegener’s

Primarily Venous:

Think of these 1 disease:
- Sarcoid

What percentage of sarcoid uveitis pts have posterior manifestations?
About 20%

What are the two most common posterior manifestations?
--Granulomas of the choroid, retina, and/or optic nerve
--Retinal vasculitis

Is the vasculitis primarily an arteritis, a phlebitis, or both?
Sarcoid tends to cause a phlebitis (more specifically, a periphlebitis)

What is the classic appearance of sarcoid periphlebitis?
Small yellowish-white nodular granulomas accumulate along venules in a pattern referred to as candle-wax drippings

What French term for candle-wax drippings is encountered frequently in the ophthalmic literature?
Taches de bougie

Retinal Vasculitis
Retinal Vasculitis

Primarily Arterial:
Think of these 3 diseases:
- PAN
- SLE
- Behçet's

Both Arterial and Venous:
Think of these 3 diseases:
- Wegener's

Primarily Venous:
Think of these 1 diseases:
- Sarcoid

What percentage of sarcoid uveitis pts have posterior manifestations?
About 20%

What are the two most common posterior manifestations?
--Granulomas of the choroid, retina, and/or optic nerve
--Retinal vasculitis

Is the vasculitis primarily an arteritis, a phlebitis, or both?
Sarcoid tends to cause a phlebitis (more specifically, a periphlebitis).

What is the classic appearance of sarcoid periphlebitis?
Small yellowish-white nodular granulomas accumulate along venules in a pattern referred to as candle-wax drippings.

What French term for candle-wax drippings is encountered frequently in the ophthalmic literature?
Taches de bougie

What are the two most common posterior manifestations?
--Granulomas of the choroid, retina, and/or optic nerve

Retinal vasculitis
Retinal Vasculitis

Primarily Arterial: Think of these 3 diseases:
- PAN
- SLE
- Behçet's

Both Arterial and Venous: Think of these 3 diseases:
- Wegener's
- Sarcoid
- 1

Primarily Venous: Think of these 1 diseases:
- Sarcoid

Is the vasculitis primarily an arteritis, a phlebitis, or both? Sarcoid tends to cause a phlebitis (more specifically, a **periphlebitis**).

What is the classic appearance of sarcoid periphlebitis? Small yellowish-white nodular granulomas accumulate along venules in a pattern referred to as **candle-wax drippings**.

What French term for candle-wax drippings is encountered frequently in the ophthalmic literature? **Taches de bougie**.

What are the two most common posterior manifestations?--Granulomas of the choroid, retina, and/or optic nerve.

What percentage of sarcoid uveitis pts have posterior manifestations? About 20.

--Granulomas of the choroid, retina, and/or optic nerve.
Primarily Arterial:
Think of these 3 diseases:
PAN
SLE
Behçet's

Arterial and Venous:
Think of these 3 diseases:
Wegener's
Retinal Vasculitis

Primarily Venous:
Think of these 3 diseases:
Sarcoid

What is the first-line med for sarcoid uveitis?

Steroids: Topical, periocular or systemic?

Yes

What other treatment is important to include, and why?
Cycloplegia (if there is a significant anterior component), both for comfort and to prevent synechiae

If steroid therapy fails to yield adequate control, what is the next step?
Immunomodulatory therapy (eg, methotrexate, azathioprine or cyclosporine)

What about biologics—are they useful in controlling sarcoid uveitis?
Yes, specifically with infliximab (Remicade)
Primarily Arterial: Think of these 3 diseases: PAN, SLE, Behçet's

Arterial and Venous: Think of these 3 diseases: Wegener's, Retinal Vasculitis, Sarcoid

Primarily Venous: Think of these 3 diseases: Sarcoid

What is the first-line med for sarcoid uveitis? Steroids

Topical, periocular or systemic?

Yes

What other treatment is important to include, and why? Cycloplegia (if there is a significant anterior component), both for comfort and to prevent synechiae

If steroid therapy fails to yield adequate control, what is the next step? Immunomodulatory therapy (eg, methotrexate, azathioprine or cyclosporine)

What about biologics--are they useful in controlling sarcoid uveitis? Yes, specifically with infliximab (Remicade)
Primarily Arterial:
Think of these 3 diseases:
PAN
SLE
Behçet’s

Both Arterial and Venous:
Think of these 3 diseases:
2 Wegener’s
Retinal Vasculitis
193
Primarily Venous:
Think of these 1 diseases:
Sarcoid

What is the first-line med for sarcoid uveitis?
Steroids

Topical, periocular or systemic?

If steroid therapy fails to yield adequate control, what is the next step?
Immunomodulatory therapy (eg, methotrexate, azathioprine or cyclosporine)

What about biologics—are they useful in controlling sarcoid uveitis?
Yes, specifically with infliximab (Remicade)
**Primarily Arterial:**

Think of these 3 diseases:
- PAN
- SLE
- Behçet's

**Arterial and Venous:**

Think of these 3 diseases:
- Wegener's
- Retinal Vasculitis

**Primarily Venous:**

Think of these 3 diseases:
- Sarcoid

---

**What is the first-line med for sarcoid uveitis?**

Steroids

**Topical, periocular or systemic?**

Yes

---

If steroid therapy fails to yield adequate control, what is the next step?

Immunomodulatory therapy (eg, methotrexate, azathioprine or cyclosporine)

---

What about biologics--are they useful in controlling sarcoid uveitis?

Yes, specifically with infliximab (Remicade)
Primarily Arterial:
Think of these 3 diseases:
- PAN
- SLE
- Behçet's

Arterial and Venous:
Think of these 3 diseases:
- Wegener's
- Retinal Vasculitis
- Sarcoid

What is the first-line med for sarcoid uveitis?
Steroids

Topical, periocular or systemic?
Yes

What other treatment is important to include, and why?
Cycloplegia (if there is a significant anterior component), both for comfort and to prevent synechiae

If steroid therapy fails to yield adequate control, what is the next step?
Immunomodulatory therapy (eg, methotrexate, azathioprine or cyclosporine)

What about biologics--are they useful in controlling sarcoid uveitis?
Yes, specifically with infliximab (Remicade)
Primarily Arterial: Think of these 3 diseases: PAN, SLE, Behçet’s.

Arterial and Venous: Think of these 3 diseases: Wegener’s, Retinal Vasculitis.

Primarily Venous: Think of these 3 diseases: Sarcoid.

What is the first-line med for sarcoid uveitis?
Steroids

Topical, periocular or systemic? Yes

What other treatment is important to include, and why? Cycloplegia (if there is a significant anterior component), both for comfort and to prevent synechiae.

If steroid therapy fails to yield adequate control, what is the next step?
Immunomodulatory therapy (eg, methotrexate, azathioprine or cyclosporine).

What about biologics—are they useful in controlling sarcoid uveitis?
Yes, specifically with infliximab (Remicade).
What is the first-line med for sarcoid uveitis? Steroids
Topical, periocular or systemic? Yes
What other treatment is important to include, and why? Cycloplegia (if there is a significant anterior component), both for comfort and to prevent synechiae
If steroid therapy fails to yield adequate control, what is the next step? Immunomodulatory therapy (eg, methotrexate, azathioprine or cyclosporine)
Yes, specifically with infliximab (Remicade)
What is the first-line med for sarcoid uveitis?
Steroids

Topical, periocular or systemic?
Yes

What other treatment is important to include, and why?
Cycloplegia (if there is a significant anterior component), both for comfort and to prevent synechiae

If steroid therapy fails to yield adequate control, what is the next step?
Immunomodulatory therapy (eg, methotrexate, azathioprine or cyclosporine)

Sarcoid
Primarily Arterial: Think of these 3 diseases:
- PAN
- SLE
- Behçet’s

Both Arterial and Venous: Think of these 3 diseases:
- Wegener’s
- Retinal Vasculitis

Primarily Venous: Think of these 3 diseases:
- Sarcoid

What is the first-line med for sarcoid uveitis?
Steroids

Topical, periocular or systemic?
Yes

What other treatment is important to include, and why?
Cycloplegia (if there is a significant anterior component), both for comfort and to prevent synechiae

If steroid therapy fails to yield adequate control, what is the next step?
Immunomodulatory therapy (eg, methotrexate, azathioprine or cyclosporine)

What about biologics--are they useful in controlling sarcoid uveitis?
What is the first-line med for sarcoid uveitis?
Steroids

Topical, periocular or systemic?
Yes

What other treatment is important to include, and why?
Cycloplegia (if there is a significant anterior component), both for comfort and to prevent synechiae

If steroid therapy fails to yield adequate control, what is the next step?
Immunomodulatory therapy (eg, methotrexate, azathioprine or cyclosporine)

What about biologics--are they useful in controlling sarcoid uveitis?
Yes, specifically with infliximab (Remicade)
Retinal Vasculitis

Two more conditions worth discussing (by way of a hint: both names are eponyms)

Primarily *Arterial*:
- Think of these 2 diseases:
  - SLE
  - PAN

Both *Arterial* and *Venous*:
- Think of these 2 diseases:
  - Behçet’s
  - Granulomatosis with polyangiitis

Primarily *Venous*:
- Think of these 1 diseases:
  - Sarcoid

??
Retinal Vasculitis

Primarily *Arterial*: Think of these 2 diseases:
- SLE
- PAN
- Susac syndrome

Both *Arterial* and *Venous*: Think of these 2 diseases:
- Behçet’s
- Granulomatosis with polyangiitis

Primarily *Venous*: Think of these 1 disease:
- Sarcoid
- Eales disease

Two more conditions worth discussing (by way of a hint: both names are eponyms)
Granulomatosis with polyangiitis

Retinal Vasculitis

Both Arterial and Venous:
Think of these 3 diseases:
SLE
Sarcoid
Toxoplasmosis

Primarily Arterial:
Think of these 3 diseases:

Primarily Venous:
Think of these 3 diseases:

What is Eales disease?
An obliterative retinal vasculopathy
Does it present unilaterally, or bilaterally?
Bilaterally
Who is the classic patient?
Young-adult male from India
What is the classic retinal finding?
Peripheral neovascularization
Classic association?
Tests positive for TB

What is Susac syndrome?
An obliterative retinal vasculopathy
Does it present unilaterally, or bilaterally?
Bilaterally
Who is the classic patient?
Young-adult female
What is the classic retinal finding?
Multiple BRAOs occurring at non-branch points
Classic association?
Sensorineural hearing loss

Susac syndrome

Eales disease
What is Susac syndrome? 
An obliterative retinal vasculitis

What is Eales disease? 
An obliterative retinal vasculopathy

Does it present unilaterally, or bilaterally? 
Bilaterally

Who is the classic patient? 
Young-adult female

What is the classic retinal finding? 
Multiple BRAOs occurring at non-branch points

Classic association? 
Sensorineural hearing loss

Retinal Vasculitis
Granulomatosis with polyangiitis

Behçet's

Retinal Vasculitis

Both Arterial and Venous:

Think of these 3 diseases:

- SLE
- PAN
- Sarcoid

Primarily Arterial:

Think of these 3 diseases:

- Toxoplasmosis

Primarily Venous:

Think of these 3 diseases:

- Susac syndrome
- Eales disease

What is Eales disease?

An obliterative retinal vasculopathy

Does it present unilaterally, or bilaterally?

Bilaterally

Who is the classic patient?

Young-adult male from India

What is the classic retinal finding?

Peripheral neovascularization

Classic association?

Tests positive for TB

What is Susac syndrome?

An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?

Bilaterally

Who is the classic patient?

Young-adult female

What is the classic retinal finding?

Multiple BRAOs occurring at non-branch points

Classic association?

Sensorineural hearing loss
Granulomatosis with polyangiitis

Behçet’s

Retinal Vasculitis

Both Arterial and Venous:

Think of these 3 diseases:

SLE

PAN

Sarcoid

Toxoplasmosis

Primarily Arterial:

Think of these 3 diseases:

Susac syndrome

Eales disease

Primarily Venous:

Think of these 3 diseases:

What is Eales disease?
An obliterative retinal vasculitis

What is Susac syndrome?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

Who is the classic patient?
Young-adult male from India

What is the classic retinal finding?
Peripheral neovascularization

Classic association?
Tests positive for TB

What is Susac syndrome?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

Who is the classic patient?
Young-adult female

What is the classic retinal finding?
Multiple BRAOs occurring at non-branch points

Classic association?
Sensorineural hearing loss

Retinal Vasculitis
Granulomatosis with polyangiitis

Retinal Vasculitis

What is Eales disease?
An obliterative retinal vasculitis

Susac syndrome

What is Susac syndrome?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?

Eales disease

What is Eales disease?
An obliterative retinal vasculitis

Primarily Arterial:
Think of these 3 diseases:
- SLE
- PAN
- Sarcoid

Primarily Venous:
Think of these 3 diseases:
- Toxoplasmosis
- Susac syndrome
- Eales disease

Retinal Vasculitis

What is Eales disease?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?

Bilaterally

What is Susac syndrome?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?

Bilaterally

Who is the classic patient?
Young-adult male from India

What is the classic retinal finding?
Peripheral neovascularization

Classic association?
Tests positive for TB

What is Eales disease?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?

Bilaterally

What is Susac syndrome?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?

Bilaterally

Who is the classic patient?
Young-adult female

What is the classic retinal finding?
Multiple BRAOs occurring at non-branch points

Classic association?
Sensorineural hearing loss
**What is Susac syndrome?**
An obliterative retinal vasculitis

**Does it present unilaterally, or bilaterally?**
Bilaterally

**Eales disease**

**What is Eales disease?**
An obliterative retinal vasculitis

**Bilaterally**

**Who is the classic patient?**
Young-adult female

**What is the classic retinal finding?**
Multiple BRAOs occurring at non-branch points

**Classic association?**
Sensorineural hearing loss
What is Susac syndrome?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

What is Eales disease?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

Susac syndrome

Eales disease
What is Susac syndrome? An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally? Bilaterally

What is Eales disease? An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally? Bilaterally

Susac syndrome

Eales disease
**Retinal Vasculitis**

**What is Susac syndrome?**
An obliterative retinal vasculitis

**Does it present unilaterally, or bilaterally?**
Bilaterally

**Who is the classic patient?**
Young-adult female

**What is Eales disease?**
An obliterative retinal vasculitis

**Does it present unilaterally, or bilaterally?**
Bilaterally

**Who is the classic patient?**
Young-adult male from India

---

**Susac syndrome**
*Who:*

---

**Eales disease**
**Granulomatosis with polyangiitis**

**Behçet’s**

**Retinal Vasculitis**

Both Arterial and Venous:

Think of these 3 diseases:

- SLE
- Sarcoid
- Toxoplasmosis

Primarily Arterial:

Think of these 3 diseases:

- Susac syndrome
- Eales disease
- Retinal Vasculitis

Primarily Venous:

Think of these 3 diseases:

- Susac syndrome
- Eales disease
- Retinal Vasculitis

**What is Susac syndrome?**
An obliterative retinal vasculitis

**Does it present unilaterally, or bilaterally?**
Bilaterally

**Who is the classic patient?**
Young-adult female

**What is Eales disease?**
An obliterative retinal vasculitis

**Does it present unilaterally, or bilaterally?**
Bilaterally

**Who is the classic patient?**
Young-adult male from India

**What is the classic retinal finding?**
Peripheral neovascularization

**Classic association?**
Tests positive for TB

**What is Susac syndrome?**
An obliterative retinal vasculitis

**Does it present unilaterally, or bilaterally?**
Bilaterally

**Who is the classic patient?**
Young-adult female

**What is the classic retinal finding?**
Multiple BRAOs occurring at non-branch points

**Classic association?**
Sensorineural hearing loss
Retinal Vasculitis

Susac syndrome
Who: Young adult females

Eales disease
Who: Young adult males

What is Susac syndrome?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

Who is the classic patient?
Young-adult female

What is Eales disease?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

Who is the classic patient?
Young-adult male from India

What is Eales disease?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

Who is the classic patient?
Young-adult female

What is the classic retinal finding?
Peripheral neovascularization

Classic association?
Tests positive for TB

What is Susac syndrome?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

Who is the classic patient?
Young-adult female

What is the classic retinal finding?
Multiple BRAOs occurring at non-branch points

Classic association?
Sensorineural hearing loss
What is Susac syndrome?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

Who is the classic patient?
Young-adult female

Susac syndrome
Who: Young adult females

What is Eales disease?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

Who is the classic patient?
Young-adult male from India

Eales disease
Who: Young adult males
Granulomatosis with polyangiitis (GPA)

Behçet's disease

Retinal Vasculitis

Both Arterial and Venous:

Think of these 3 diseases:

SLE
Sarcoid

Primarily Arterial:

Think of these 3 diseases:

Primarily Venous:

Think of these 3 diseases:

Who:
Young adult males

What:
Peripheral neo

Associated with:
TB positivity

Susac syndrome

Who: Young adult females

What:

Eales disease

Who: Young adult males

What is Susac syndrome?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

Who is the classic patient?
Young-adult female

What is the classic retinal finding?

What is Eales disease?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

Who is the classic patient?
Young-adult male from India

What is the classic retinal finding?

Peripheral neovascularization

Classic association?
Tests positive for TB

What is Susac syndrome?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

Who is the classic patient?
Young-adult female

What is the classic retinal finding?

Multiple BRAOs occurring at non-branch points

Classic association?
Sensorineural hearing loss
Retinal Vasculitis

**Susac syndrome**
- **Who:** Young adult females
- **What:** Multiple BRAOs

**Eales disease**
- **Who:** Young adult males

**What is Susac syndrome?**
An obliterative retinal vasculitis

**Does it present unilaterally, or bilaterally?**
Bilaterally

**Who is the classic patient?**
Young-adult female

**What is the classic retinal finding?**
Multiple BRAOs occurring at non-branch points

**What is Eales disease?**
An obliterative retinal vasculitis

**Does it present unilaterally, or bilaterally?**
Bilaterally

**Who is the classic patient?**
Young-adult male from India

**What is the classic retinal finding?**
Peripheral neovascularization

**Classic association?**
Tests positive for TB
Susac syndrome
Who: Young adult females
What: Multiple BRAOs

Eales disease
Who: Young adult males
What: An obliterative retinal vasculitis

What is Susac syndrome?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

Who is the classic patient?
Young-adult female

What is the classic retinal finding?
Multiple BRAOs occurring at non-branch points

What is Eales disease?
An obliterative retinal vasculitis

Does it present unilaterally, or bilaterally?
Bilaterally

Who is the classic patient?
Young-adult male from India

What is the classic retinal finding?
Peripheral neovascularization

Classic association?
Tests positive for TB
**Retinal Vasculitis**

- **Granulomatosis with polyangiitis (GPA)**
- **Behçet’s disease**
- **Susac syndrome**
- **Eales disease**

---

- **Susac syndrome**
  - **Who:** Young adult females
  - **What:** Multiple BRAOs

- **Eales disease**
  - **Who:** Young adult males
  - **What:** Peripheral neo

---

- **What is Susac syndrome?**
  - An obliterative retinal vasculitis

- **Does it present unilaterally, or bilaterally?**
  - Bilaterally

- **Who is the classic patient?**
  - Young-adult female

- **What is the classic retinal finding?**
  - Multiple BRAOs occurring at non-branch points

---

- **What is Eales disease?**
  - An obliterative retinal vasculitis

- **Does it present unilaterally, or bilaterally?**
  - Bilaterally

- **Who is the classic patient?**
  - Young-adult male from India

- **What is the classic retinal finding?**
  - Peripheral neovascularization

---

- **Primarily Arterial**
- **Think of these 3 diseases:**
  - SLE
  - Sarcoid
  - Toxoplasmosis

- **Primarily Venous**
- **Think of these 3 diseases:**
  - Retinal Vasculitis
  - Behçet’s disease
  - Granulomatosis with polyangiitis

---

- **Who:** Young adult males
  - **Associated with:** TB positivity
**Susac syndrome**
*Who:* Young adult females  
*What:* Multiple BRAOs  
*Associated with:*

**Eales disease**
*Who:* Young adult males  
*What:* Peripheral neo...
**Susac syndrome**

*Who:* Young adult females  
*What:* Multiple BRAOs  
*Associated with:* Hearing loss; encephalopathy

**Eales disease**

*Who:* Young adult males  
*What:* Peripheral neo

---

**Retinal Vasculitis**

**Think of these 3 diseases:**

- SLE  
- Sarcoid  
- Toxoplasmosis

**Primarily Arterial:**

**Think of these 3 diseases:**

- Behçet's
- Granulomatosis with polyangiitis

**Primarily Venous:**

**Think of these 3 diseases:**

- Retinal Vasculitis
- Both Arterial and Venous
- Think of these 2 diseases

---

**Who:** Young adult males  
**What:** Peripheral neo

**Classic association?**

Tests positive for TB

---

**Who:** Young adult females  
**What:** Multiple BRAOs

**Classic associations (Note: there are two)?**

Sensorineural hearing loss; encephalopathy

---

**What is Susac syndrome?**

An obliterative retinal vasculitis

**Does it present unilaterally, or bilaterally?**

Bilaterally

**Who is the classic patient?**

Young-adult female

**What is the classic retinal finding?**

Multiple BRAOs occurring at non-branch points

**Classic associations (Note: there are two)?**

Sensorineural hearing loss; encephalopathy
**Retinal Vasculitis**

**Susac syndrome**
- **Who:** Young adult females
- **What:** Multiple BRAOs
- **Associated with:** Hearing loss; encephalopathy

**Eales disease**
- **Who:** Young adult males
- **What:** Peripheral neo
- **Associated with:**

**What is Susac syndrome?**
An obliterative retinal vasculitis

**Does it present unilaterally, or bilaterally?**
Bilaterally

**Who is the classic patient?**
Young-adult female

**What is the classic retinal finding?**
Multiple BRAOs occurring at non-branch points

**Classic associations (Note: there are two)?**
Sensorineural hearing loss; encephalopathy

**What is Eales disease?**
An obliterative retinal vasculitis

**Does it present unilaterally, or bilaterally?**
Bilaterally

**Who is the classic patient?**
Young-adult male from India

**What is the classic retinal finding?**
Peripheral neovascularization

**Classic association?**
TB positivity
**Susac syndrome**
- **Who:** Young adult females
- **What:** Multiple BRAOs
- **Associated with:** Hearing loss; encephalopathy

**Eales disease**
- **Who:** Young adult males
- **What:** Peripheral neo
- **Associated with:** TB positivity

---

**Retinal Vasculitis**

**What is Susac syndrome?**
An obliterative retinal vasculitis

**Does it present unilaterally, or bilaterally?**
Bilaterally

**Who is the classic patient?**
Young-adult female

**What is the classic retinal finding?**
Multiple BRAOs occurring at non-branch points

**Classic associations (Note: there are two)?**
Sensorineural hearing loss; encephalopathy

**What is Eales disease?**
An obliterative retinal vasculitis

**Does it present unilaterally, or bilaterally?**
Bilaterally

**Who is the classic patient?**
Young-adult male from India

**What is the classic retinal finding?**
Peripheral neovascularization

**Classic association?**
Tests positive for TB
Retinal Vasculitis

Primarily **Arterial**: Think of these 2 diseases:
- SLE
- PAN

Both **Arterial** and **Venous**: Think of these 2 diseases:
- Behçet’s
- Granulomatosis with polyangiitis

Primarily **Venous**: Think of these 1 disease:
- Sarcoid

**Susac syndrome**
*Who*: Young adult *females*  
*What*: Multiple BRAOs  
*Associated with*: Hearing loss; encephalopathy

**Eales disease**
*Who*: Young adult *males*  
*What*: Peripheral neo  
*Associated with*: TB positivity

High-yield points to remember about these two conditions