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*What does it mean to say the corneal stroma is inflamed?*
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It means inflammatory cells are present in the interlamellar stroma.
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*So, there’s pus in the stroma?*
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*What does it mean to say the corneal stroma is inflamed?*

It means inflammatory cells are present in the interlamellar stroma.

*So, there’s pus in the stroma?*

No—IK is a nonsuppurative condition.
Interstitial keratitis is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal epithelium or endothelium.

Be sure to take note of this! This is why stromal inflammation resulting from, say, a corneal ulcer eating its way into stroma would not be classified as IK.
Interstitial keratitis is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal epithelium or endothelium.

What are the typical symptoms of IK?

What are the typical signs of IK, ie, what does it look like at the slit lamp?

Early IK is characterized by perilimbal injection, inflammation of the peripheral stroma, and possibly keratic precipitates. As the disease progresses, deep stromal vessels appear and make their way toward the central cornea.
*Interstitial keratitis* is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal epithelium or endothelium.

What are the typical symptoms of IK?

Tearing and photophobia
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**What are the typical symptoms of IK?**
Tearing and photophobia

**What are the typical signs of IK, ie, what does it look like at the slit lamp?**

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**With respect to IK, to what does the term salmon patch refer?**
Interstitial keratitis is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal epithelium or endothelium.

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Early IK is characterized by perilimbal injection, inflammation of the peripheral stroma, and possibly keratic precipitates. As the disease progresses, **deep stromal vessels appear and make their way toward the central cornea.**

With respect to IK, to what does the term **salmon patch** refer?
If the stromal vascularization is particularly dense and the blood flow is exuberant, the resulting color of the cornea has been likened to that of salmon flesh.
Salmon patch in IK
Interstitial keratitis is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal epithelium or endothelium.

IK represents a Type hypersensitivity reaction to antigens within the
Interstitial keratitis is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal epithelium or endothelium.

IK represents a Type IV hypersensitivity reaction to antigens within the corneal stroma.
**Interstitial keratitis** is an inflammatory condition of the corneal stroma in the absence of primary involvement of either the corneal epithelium or endothelium.

IK represents a Type IV hypersensitivity reaction to antigens within the corneal stroma.

*Speaking of hypersensitivity reactions…*
Speaking of hypersensitivity reactions…
How many types of ocular-surface hypersensitivity reactions are there?
### Types of Ocular-Surface Hypersensitivity Reactions

<table>
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<tr>
<th>Type I</th>
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**Speaking of hypersensitivity reactions…**

*How many types of ocular-surface hypersensitivity reactions are there?*
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- **Type I reactions involve**… [One word that captures the nature of this rxn]
- Type II reactions involve...
- Type III reactions involve...
- Type IV reactions involve...

**Speaking of hypersensitivity reactions…**

How many types of ocular-surface hypersensitivity reactions are there?
Anaphylaxis

**Type I** | **Type II** | **Type III** | **Type IV**
---|---|---|---
**Type I reactions involve...** | **Anaphylaxis** | **Type II reactions involve...** | **Type III reactions involve...** | **Type IV reactions involve...**

Speaking of hypersensitivity reactions…
How many types of ocular-surface hypersensitivity reactions are there?
**Anaphylaxis**

**Type I**  
Type reactions involve... Anaphylaxis

**Type II**  
Type II reactions involve... [Two words capturing this rxn]

**Type III**  
Type III reactions involve...

**Type IV**  
Type IV reactions involve...
Type I reactions involve...
Anaphylaxis

Type II reactions involve...
Cytotoxic antibodies

Type III reactions involve...
Immune-complex reactions

Type IV reactions involve...
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*IK? IDK IK! OMG!*
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‘Cell-mediated reaction’...Which sort of immune cell is doing the mediating?
Type I reactions involve…Anaphylaxis
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‘Cell-mediated reaction’…Which sort of immune cell is doing the mediating?
T-helper cells
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‘Cell-mediated reaction’...Which sort of immune cell is doing the mediating?
T-helper cells

In what way are T-helper cells mediating the reaction?
Type I reactions involve Anaphylaxis
Type II reactions involve Cytotoxic antibodies
Type III reactions involve Immune-complex reactions
Type IV reactions involve Cell-mediated reactions

‘Cell-mediated reaction’…Which sort of immune cell is doing the mediating?
T-helper cells

In what way are T-helper cells mediating the reaction?
In Type IV reactions, T-helpers interact with antigens, thereby becoming activated. Once activated, the T-helpers release chemotactic factors that recruit and activate macrophages.
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That’s a convoluted process. How long does it take to become clinically apparent?
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That’s a convoluted process. How long does it take to become clinically apparent? 24-72 hours, which is why this reaction is often referred to as delayed hypersensitivity.
Type I reactions involve Anaphylaxis.

Type II reactions involve Cytotoxic antibodies.

Type III reactions involve Immune-complex reactions.

Type IV reactions involve Cell-mediated reactions.

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That’s a convoluted process. How long does it take to become clinically apparent? 24-72 hours, which is why this reaction is often referred to as delayed hypersensitivity.

\[ \text{Type IV reactions involve} \quad \text{Delayed hypersensitivity} \]

Note that if you remember Type IV as ‘delayed hypersensitivity’…
In what way are T-helper cells mediating the reaction?

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Note that if you remember Type IV as ‘delayed hypersensitivity’… the four forms can be remembered with the mnemonic **ACID**

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**Type I reactions involve...** Anaphylaxis
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Anaphylaxis

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Type I

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*For more on hypersensitivity reactions of the ocular surface, see slide-set K21*
The BCSC addresses IK four times in three volumes (twice in the Cornea book). The combined differential is listed below. It long. Let’s work through it...

The only cause to make all four lists
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Which one is described (by at least one BCSC book) as the “classic cause” of IK?
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Which is the most common cause of IK?
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--Onchocerca volvulus
--Acanthamoeba
--Mumps
--Sarcoid
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Which is the most common cause of IK? HSV (interesting that the most common cause is not considered the ‘classic’ cause!)
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Let’s review Chlamydial dz. Chlamydia causes three conditions—what are they?

--?
--?
--?

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**Is trachoma a serious ocular condition?**

Indeed it is—trachoma is a blinding condition. Where does it rank in terms of infectious causes of blindness? It is #1 cause worldwide.

IK? IDK IK! OMG!
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Is trachoma a serious ocular condition?
Mos def—it is a blinding condition

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- Atopic keratitis (ie, AKC)
- Vernal keratitis (ie, VKC)

Is adult inclusion conjunctivitis a serious ocular condition?

Nah—it is mild and transient

Does this bug have serious effects elsewhere?

Mos def—it is the cause of the classic chlamydial urethritis/cervicitis, ie, well-known STD manifestation...
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Let's review Chlamydial dz. Chlamydia causes three conditions—what are they?

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Does this bug have serious effects elsewhere? Mos def—it is the cause of the classic chlamydial urethritis/cervicitis, ie, the STD form of Chlamydia disease
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How does a sexually-transmitted dz cause conjunctivitis?
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Mos def—it is the cause of the classic chlamydial urethritis/cervicitis, ie, the STD form of Chlamydia disease

How does a sexually-transmitted dz cause conjunctivitis?
Um, ask your parents
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Is Chlamydia a sexually-transmitted dz cause conjunctivitis? Um, ask your parents

For completeness’ sake: The Cornea book lists five* sexually-transmitted causes of conjunctivitis.

*We’ll address what’s being asterisked** shortly

**Yes, asterisked is a word
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- Chlamydia
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Now, the asterisk: The book lists a sixth cause—___bug__—but acknowledges that it is vastly rarer than the others. Thus, it was left off the list here.

--- HSV
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Surely lymphogranuloma venereum is an STD as well? I mean, it has venere- in its name.
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Surely lymphogranuloma venereum is an STD as well? I mean, it has venere- in its name. It is an STD too, but it’s not ‘the’ chlamydial STD
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Surely lymphogranuloma venereum is an STD as well? I mean, it has venere- in its name.

It is an STD too, but it’s not ‘the’ chlamydial STD (and it doesn’t cause conjunctivitis, if you were wondering why it wasn’t on the just-discussed list)
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Let’s review Chlamydial dz. Chlamydia causes three conditions—what are they? What property of a Chlamydial bug determines which condition it will cause?

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*Let’s review Chlamydial dz. Chlamydia causes three conditions—what are they? What property of a Chlamydial bug determines which condition it will cause? Its serotype*

---

---Trachoma: Serotype

---Adult inclusion conjunctivitis: Serotype

---Lymphogranuloma venereum: Serotype

---Cogan syndrome

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*Which chlamydia serotypes produce each condition?*

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finally

-- C trachomatis

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Got a mnemonic for remembering these serotypes?

Try these:

- **Trachoma** is as simple as ABC
- Adult inclusion conjunctivitis is 'the' sexually-transmitted form of Chlamydia.
- Can you think of a sex-related word that starts with a D and ends with a K?
- As for the 'L' serotypes causing lymphogranuloma, I assume you got that one.

---

**IK? IDK IK! OMG!**
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Can you think of a sex-related word that starts with a D and ends with a K?

As for the ‘L’ serotypes causing lymphogranuloma, I assume you got that one.

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A

Got a mnemonic for remembering these serotypes? Try these:

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--- Adult inclusion conjunctivitis: Serotypes…**D-K**
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**Finally: Take note that it is the lymphogranuloma venereum serotypes which are associated with IK!**
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Because HSV is the most common cause of IK...

(No question—proceed when ready)
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Because HSV is the most common cause of IK... and syphilis is its ‘classic’ cause...

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Because HSV is the most common cause of IK... and syphilis is its ‘classic’ cause...
it should come as no surprise that the BCSC addresses them in depth—and thus, so shall we.

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Cogan syndrome
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Cogan syndrome

Let’s start with luetic (ie, syphilitic) IK…
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  T
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  T
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Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is late teens to early 20s
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is late teens to early 20s  **F**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease **T**
- Symptoms include tearing and photophobia **T**
- Usual age of presentation is **F**

*Note:* The options for the usual age of presentation are not clearly listed in the provided text. However, based on the context, it seems to be incorrect.
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is late teens to early 20s  **F**

**Rule of thumb regarding congenital syphilis manifestations and age:**
---Manifestations presenting within the first two years of life are secondary to..
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is late teens to early 20s  **F**

Rule of thumb regarding congenital syphilis manifestations and age:
--- Manifestations presenting within the first two years of life are secondary to... **active infection**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is late teens to early 20s  **F**

Rule of thumb regarding congenital syphilis manifestations and age:

-- Manifestations presenting **within the first two years of life** are secondary to **active infection**
-- Manifestations presenting **later in life** are secondary to **an immune-mediated process**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **True**
- Symptoms include tearing and photophobia  **True**
- Usual age of presentation is late teens to early 20s  **False**

Rule of thumb regarding congenital syphilis manifestations and age:
--Manifestations presenting within the first two years of life are secondary to... active infection
--Manifestations presenting later in life are secondary to... an immune-mediated process
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  \textit{T}  
- Symptoms include tearing and photophobia  \textit{T}  
- Usual age of presentation is late teens to early 20s  \textit{F}  
- Treatment is topical steroids and cycloplegia
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is **nine years**  **F**
- Treatment is topical steroids and cycloplegia  **T**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is late teens to early 20s  **F**
- Treatment is topical steroids and cycloplegia  **T**
- Most patients have bilateral disease
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease: **T**
- Symptoms include tearing and photophobia: **T**
- Usual age of presentation is late teens to early 20s: **F**
- Treatment is topical steroids and cycloplegia: **T**
- Most patients have bilateral disease: **T**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  T
- Symptoms include tearing and photophobia  T
- Usual age of presentation is late teens to early 20s  F
- Treatment is topical steroids and cycloplegia  T
- Most patients have bilateral disease  T

Re bilateral IK, do both eyes always present simultaneously?
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**  
- Usual age of presentation is late teens to early 20s  **F**  
- Treatment is topical steroids and cycloplegia  **T**  
- **Most patients have bilateral disease**  **T**

Re bilateral IK, do both eyes always present simultaneously?  
No
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  T
- Symptoms include tearing and photophobia  T
- Usual age of presentation is late teens to early 20s  F
- Treatment is topical steroids and cycloplegia  T
- Most patients have bilateral disease  T

Re bilateral IK, do both eyes always present simultaneously?  
No

Is the extent of involvement always equal between the eyes?
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease: T
- Symptoms include tearing and photophobia: T
- Usual age of presentation is late teens to early 20s: F
- Treatment is topical steroids and cycloplegia: T
- Most patients have bilateral disease: T

Re bilateral IK, do both eyes always present simultaneously?
No

Is the extent of involvement always equal between the eyes?
No, involvement can be asymmetric
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease
- Symptoms include tearing and photophobia
- Usual age of presentation is late teens to early 20s
- Treatment is topical steroids and cycloplegia
- Most patients have bilateral disease
- About 50% of congenital syphilis cases manifest IK
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease: **True**
- Symptoms include tearing and photophobia: **True**
- Usual age of presentation is late teens to early 20s: **False**
- Treatment is topical steroids and cycloplegia: **True**
- Most patients have bilateral disease: **True**
- About 50% of congenital syphilis cases manifest IK: **False**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is late teens to early 20s  **F**
- Treatment is topical steroids and cycloplegia  **T**
- Most patients have bilateral disease  **T**
- About 10% of congenital syphilis cases manifest IK  **F**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease **T**
- Symptoms include tearing and photophobia **T**
- Usual age of presentation is late teens to early 20s **F**
- Treatment is topical steroids and cycloplegia **T**
- Most patients have bilateral disease **T**
- About 50% of congenital syphilis cases manifest IK **T**

What is the natural course of syphilitic IK if it goes untreated?

- It tends to burn itself out in a matter of weeks to months

Irrespective of whether it was treated, what are the common corneal stigmata of resolved IK that may be seen at the slit lamp?

- Formerly-perfused, now-empty stromal blood vessels (aka ghost vessels)
- Corneal scarring may produce visually significant haze and/or astigmatism

About 50% of congenital syphilis cases manifest IK **F**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  
  - True
- Symptoms include tearing and photophobia  
  - True
- Usual age of presentation is late teens to early 20s  
  - False
- Treatment is topical steroids and cycloplegia  
  - True
- Most patients have bilateral disease  
  - True

What is the natural course of syphilitic IK if it goes untreated?
- It tends to burn itself out in a matter of weeks to months

About 50% of congenital syphilis cases manifest IK  
- False
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is late teens to early 20s  **F**
- Treatment is topical steroids and cycloplegia  **T**
- Most patients have bilateral disease  **T**
- About 50% of congenital syphilis cases manifest IK  **T**

What is the natural course of syphilitic IK if it goes untreated?
- It tends to burn itself out in a matter of weeks to months

Irrespective of whether it was treated, what are the common corneal stigmata of resolved IK that may be seen at the slit lamp?

About 50% of congenital syphilis cases manifest IK  **F**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  T
- Symptoms include tearing and photophobia  T
- Usual age of presentation is late teens to early 20s  F
- Treatment is topical steroids and cycloplegia  T
- Most patients have bilateral disease  T
- About 50% of congenital syphilis cases manifest IK  F

What is the natural course of syphilitic IK if it goes untreated?
It tends to burn itself out in a matter of weeks to months

Irrespective of whether it was treated, what are the common corneal stigmata of resolved IK that may be seen at the slit lamp?
- Formerly-perfused, now-empty stromal blood vessels (aka ghost vessels)
- Corneal scarring may produce visually significant haze and/or astigmatism

About 30% of congenital syphilis cases manifest IK  F
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease **T**
- Symptoms include tearing and photophobia **T**
- Usual age of presentation is late teens to early 20s **F**
- Treatment is topical steroids and cycloplegia **T**
- Most patients have bilateral disease **T**

What is the natural course of syphilitic IK if it goes untreated?
It tends to burn itself out in a matter of weeks to months

Irrespective of whether it was treated, what are the common corneal stigmata of resolved IK that may be seen at the slit lamp?

- Formerly-perfused, now-empty stromal blood vessels (aka **ghost vessels**)
- 

About 90% of congenital syphilis cases manifest IK **F**
Ghost vessels

Congenital syphilis: Interstitial keratitis
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is late teens to early 20s  **F**
- Treatment is topical steroids and cycloplegia  **T**
- Most patients have bilateral disease  **T**
- About 50% of congenital syphilis cases manifest IK  **F**

What is the natural course of syphilitic IK if it goes untreated?
It tends to burn itself out in a matter of weeks to months

Irrespective of whether it was treated, what are the common corneal stigmata of resolved IK that may be seen at the slit lamp?
- Formerly-perfused, now-empty stromal blood vessels (aka **ghost vessels**)
- Corneal scarring may produce visually significant _haze_ and/or _astigmatism_ one word

About 90% of congenital syphilis cases manifest IK  **F**
Regarding luetic interstitial keratitis (IK), which are true?

- Most cases are secondary to congenital disease  **T**
- Symptoms include tearing and photophobia  **T**
- Usual age of presentation is late teens to early 20s  **F**
- Treatment is topical steroids and cycloplegia  **T**
- Most patients have bilateral disease  **T**
- About 50% of congenital syphilis cases manifest IK  **F**

**What is the natural course of syphilitic IK if it goes untreated?**
It tends to burn itself out in a matter of weeks to months

**Irrespective of whether it was treated, what are the common corneal stigmata of resolved IK that may be seen at the slit lamp?**
--Formerly-perfused, now-empty stromal blood vessels (aka **ghost vessels**)
--Corneal scarring may produce visually significant **haze** and/or **astigmatism**

**About 50% of congenital syphilis cases manifest IK? IDK IK! OMG!**
Congenital syphilis: Corneal scarring/haze after active IK
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

IK? IDK IK! OMG!
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- **Circumoral scars**
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

What is the formal term for these circumoral scars?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- **Circumoral scars**
  What is the formal term for these circumoral scars?
  ‘Rhagades’
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness
Congenital syphilis: Rhagades
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- **Hutchinson teeth**
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

What is the classic description of Hutchinson teeth?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- **Hutchinson teeth**
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

What is the classic description of Hutchinson teeth?

'Peg-shaped'
Congenital syphilis: Teephus
abnormal teeth...

Speaking of congenital syphilis: What are the classic signs (other than IK…, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- ?
- ?
- ?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti
abnormal teeth...

Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
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- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

---

- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the non-eponymous name of this syndrome?

Familial adenomatous polyposis

Is it common, or rare?

Rare

What is the main issue facing these pts? (It's not ophthalmic.)

They develop innumerable colonic polyps at a young age, and are at extremely high risk of developing colon cancer by age 40 or so

Why are we talking about it, ie, what is its ocular involvement?

Pts have CHRPE-like lesions in their retina

(For more on Gardner’s, see slide-set P3)
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

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- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?
Familial adenomatous polyposis

(Want to know more about Gardner’s, see slide-set P3)
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

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- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

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Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

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- Hutchinson teeth
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- Cognitive impairment
- CN8 deafness

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- **Gardner syndrome**
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?

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Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

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- **Gardner syndrome**
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?

Familial adenomatous polyposis

Is it common, or rare?

Rare

What is the main issue facing these pts? (It’s not ophthalmic.)

Innumerable colonic polyps at a young age, and are at extremely high risk of developing colon cancer by age 40 or so.
When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?
Familial adenomatous polyposis

Is it common, or rare?
Rare

What is the main issue facing these pts? (It's not ophthalmic.)
They develop innumerable at a young age
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?
Familial adenomatous polyposis

Is it common, or rare?
Rare

What is the main issue facing these pts? (It’s not ophthalmic.)
They develop innumerable colonic polyps at a young age
When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?
Familial adenomatous polyposis

Is it common, or rare?
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What is the main issue facing these pts? (It’s not ophthalmic.)
They develop innumerable colonic polyps at a young age, and are at extremely high risk of developing colon cancer by age 40 or so.
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?
Familial adenomatous polyposis

Is it common, or rare?
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When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- **Gardner syndrome**
- Axenfeld-Reiger
- Incontinentia pigmenti

---

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Is it common, or rare?
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What is the main issue facing these pts? (It’s not ophthalmic.)
They develop innumerable colonic polyps at a young age, and are at extremely high risk of developing colon cancer by age 40 or so

Why are we talking about it, ie, what is its ocular involvement?
abnormal teeth...

Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

--Congenital syphilis
--Gardner syndrome
--Axenfeld-Reiger
--Incontinentia pigmenti

What is the noneponymous name of this syndrome?
Familial adenomatous polyposis

Is it common, or rare?
Rare

What is the main issue facing these pts? (It’s not ophthalmic.)
They develop innumerable colonic polyps at a young age, and are at extremely high risk of developing colon cancer by age 40 or so

Why are we talking about it, ie, what is its ocular involvement?
Pts have something-like lesions in their retina
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?
Familial adenomatous polyposis

Is it common, or rare?
Rare

What is the main issue facing these pts? (It’s not ophthalmic.)
They develop innumerable colonic polyps at a young age, and are at extremely high risk of developing colon cancer by age 40 or so

Why are we talking about it, ie, what is its ocular involvement?
Pts have CHRPE-like lesions in their retina
abnormal teeth...

Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?
Familial adenomatous polyposis

Is it common, or rare?
Rare

What is the main issue facing these pts? (It’s not ophthalmic.)
They develop innumerable colonic polyps at a young age, and are at extremely high risk of developing colon cancer by age 40 or so

Why are we talking about it, ie, what is its ocular involvement?
Pts have CHRPE-like lesions in their retina

What does CHRPE stand for here?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?
Familial adenomatous polyposis

Is it common, or rare?
Rare

What is the main issue facing these pts? (It’s not ophthalmic.)
They develop innumerable colonic polyps at a young age, and are at extremely high risk of developing colon cancer by age 40 or so.

Why are we talking about it, ie, what is its ocular involvement?
Pts have CHRPE-like lesions in their retina

What does CHRPE stand for here?
Congenital hyperplasia of the RPE
CHRPE-like lesions of Gardner syndrome
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?
- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?
Familial adenomatous polyposis

Is it common, or rare?
Rare

What is the main issue facing these pts? (It’s not ophthalmic.)
They develop innumerable colonic polyps at a young age, and are at extremely high risk of developing colon cancer by age 40 or so.

Why are we talking about it, ie, what is its ocular involvement?
Pts have CHRPE-like lesions in their retina

(For more on Gardner’s, see slide-set P3)
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the non-epithelial name of this syndrome?

In three words, what sort of condition is A-R?

Rare

What is the main issue facing these pts? (It’s not ophthalmic.)

They develop innumerable colonic polyps at a young age, and are at extremely high risk of developing colon cancer by age 40 or so

Why are we talking about it, ie, what is its ocular involvement?

Pts have CHRPE-like lesions in their retina

(For more on Gardner’s, see slide-set P3)
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?

In three words, what sort of condition is A-R?

An anterior segment dysgenesis

(for more on A-R, see slide-set FELT7)

What is the main issue facing these pts? (It’s not ophthalmic.)

They develop innumerable colonic polyps at a young age, and are at extremely high risk of developing colon cancer by age 40 or so.

Why are we talking about it, ie, what is its ocular involvement?

Pts have CHRPE-like lesions in their retina

(For more on Gardner’s, see slide-set P3)
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?

P3

In three words, what sort of condition is A-R?

What is the main issue facing these pts? (It’s not ophthalmic.) They develop innumerable colon polyps at a young age, and are at extremely high risk of developing colon cancer by age 40 or so.

Why are we talking about it, ie, what is its ocular involvement? Pts have CHRPE-like lesions in their retina.

(For more on Gardner’s, see slide-set P3)
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?

In three words, what sort of condition is A-R?

In one word, what sort of condition is IP?

A phakomatosis

What is the main issue facing these pts? (It’s not ophthalmic.)

They develop innumerable colonic polyps at a young age, and are at extremely high risk of developing colon cancer by age 40 or so.

Why are we talking about it, ie, what is its ocular involvement?

Pts have CHRPE-like lesions in their retina.

(For more on Gardner’s, see slide-set P3)
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?

In three words, what sort of condition is A-R?

In one word, what sort of condition is IP?

Briefly, what is a phakomatosi?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?

In three words, what sort of condition is A-R?

In one word, what sort of condition is IP?

A phakomatosis

Briefly, what is a phakomatosis?

A congenital condition involving hamartomatous lesions of multiple organ systems, usually including the CNS, eyes, and skin.

What is the hallmark skin finding in IP?

Widespread erythema and bullous changes described as 'splashed paint'.
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

-- Congenital syphilis
-- Gardner syndrome
-- Axenfeld-Reiger
-- Incontinentia pigmenti

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When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?

- Familial adenomatous polyposis

Is it common, or rare?

- Rare

What is the main issue facing these pts? (It's not ophthalmic.)

- They develop innumerable colonic polyps at a young age, and are at extremely high risk of developing colon cancer by age 40 or so

Why are we talking about it, ie, what is its ocular involvement?

- Pts have CHRPE-like lesions in their retina

In three words, what sort of condition is A-R?

- An anterior segment dysgenesis

In one word, what sort of condition is IP?

- A phakomatosis

Briefly, what is a phakomatosis?

- A congenital condition involving hamartomatous lesions of multiple organ systems, usually including the CNS, eyes and skin

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- Widespread erythema and bullous changes described as 'splashed paint'
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--Congenital syphilis
--Gardner syndrome
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- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?

In three words, what sort of condition is A-R?

In one word, what sort of condition is IP?

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A congenital condition involving hamartomatous lesions of multiple organ systems, usually including the CNS, eyes and skin

What is the hallmark skin finding in IP?

Widespread erythema and bullous changes described as ‘splashed paint’
Incontinentia pigmenti: Splashed-paint appearance
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Abnormal teeth...

When a pt has dental issues, several conditions should spring immediately to mind. One is congenital syphilis; what are the other three?

- Congenital syphilis
- Gardner syndrome
- Axenfeld-Reiger
- Incontinentia pigmenti

What is the noneponymous name of this syndrome?

In three words, what sort of condition is A-R?

In one word, what sort of condition is IP?

A phakomatosis

Briefly, what is a phakomatosis?

A congenital condition involving hamartomatous lesions of multiple organ systems, usually including the CNS, eyes and skin

What is the hallmark skin finding in IP?

Widespread erythema and bullous changes described as 'splashed paint'

(For more on IP, see slide-set P10)
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

Speaking of saddle-nose deformity... If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

Speaking of saddle-nose deformity…If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider? Relapsing polychondritis (RP), and granulomatosis with polyangiitis (formerly known as **two words**).
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

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Speaking of saddle-nose deformity…If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider?
Relapsing polychondritis (RP), and granulomatosis with polyangiitis (formerly known as Wegener’s granulomatosis)

Why formerly? Why is the term Wegener’s no longer preferred?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?
- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

Speaking of saddle-nose deformity... If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider? Relapsing polychondritis (RP), and granulomatosis with polyangiitis (formerly known as Wegener’s granulomatosis).

Why formerly? **Why is the term Wegener’s no longer preferred?** Because Dr Wegener was a Nazi.
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

Speaking of saddle-nose deformity…If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider?

**Relapsing polychondritis** (RP), and **granulomatosis with polyangiitis** (formerly known as Wegener’s granulomatosis)

With respect to a saddle-nose pt with PUK, what would push you toward a dx of:

--RP?
--Granulomatosis with polyangiitis?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

Speaking of saddle-nose deformity...If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider?

- **Relapsing polychondritis** (RP), and **granulomatosis with polyangiitis** (formerly known as Wegener’s granulomatosis)

With respect to a saddle-nose pt with PUK, what would push you toward a dx of:

--RP? The presence of ear-cartilage inflammation and/or deformity
--Granulomatosis with polyangiitis?
Auricular damage in RP

Acute inflammation

Post-inflammation deformity

IK? IDK IK! OMG!
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

Speaking of saddle-nose deformity...If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider?

- **Relapsing polychondritis** (RP), and **granulomatosis with polyangiitis** (formerly known as Wegener’s granulomatosis).

With respect to a saddle-nose pt with PUK, what would push you toward a dx of:

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Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

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Speaking of saddle-nose deformity…If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider?

**Relapsing polychondritis** (RP), and **granulomatosis with polyangiitis** (formerly known as Wegener’s granulomatosis)

---

With respect to a saddle-nose pt with PUK, what would push you toward a dx of:

--**RP**? The presence of ear-cartilage inflammation and/or deformity

--**Granulomatosis with polyangiitis**? The presence of chronic
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

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**Relapsing polychondritis** (RP), and **granulomatosis with polyangiitis** (formerly known as Wegener's granulomatosis)

With respect to a saddle-nose pt with PUK, what would push you toward a dx of:

--**RP?** The presence of ear-cartilage inflammation and/or deformity

--**Granulomatosis with polyangiitis?** The presence of chronic sinusitis
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

Speaking of saddle-nose deformity…If a pt with it had peripheral ulcerative keratitis (PUK) rather than IK, what two diagnoses should you consider?

*Relapsing polychondritis* (RP), and *granulomatosis with polyangiitis* (formerly known as Wegener’s granulomatosis)

With respect to a saddle-nose pt with PUK, what would push you toward a dx of:

--RP? The presence of ear-cartilage inflammation and/or deformity
--Granulomatosis with polyangiitis? The presence of chronic sinusitis (especially if the nasal discharge is bloody)
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- **Saddle nose**

Speaking of saddle-nose deformity... If a pt with it had *peripheral ulcerative keratitis (PUK)* rather than IK, what two diagnoses should you consider?

- **Relapsing polychondritis (RP)**, and **granulomatosis with polyangiitis** (formerly known as Wegener’s granulomatosis)

With respect to a saddle-nose pt with PUK, what would push you toward a dx of:

--*RP*? The presence of ear-cartilage inflammation and/or deformity

--*Granulomatosis with polyangiitis*? The presence of chronic sinusitis (especially if the nasal discharge is **bloody**)

Saddle-nose deformity
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

In the present context, to what does the term Hutchinson’s triad refer?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?
- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

*In the present context, to what does the term Hutchinson’s triad refer? To the three stigmata of congenital syphilis that are especially common.*
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

Which three comprise Hutchinson’s triad?
--?
--?
--?

In the present context, to what does the term Hutchinson’s triad refer? To the three stigmata of congenital syphilis that are especially common.
Speaking of congenital syphilis: What are the classic signs (other than **IK**, duh)?

- Circumoral scars
- **Hutchinson teeth**
- Saddle nose
- Saber shins
- Cognitive impairment
- **CN8 deafness**

*In the present context, to what does the term Hutchinson’s triad refer? To the three stigmata of congenital syphilis that are especially common.*
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

What is the classic retinal finding in congenital lues?
Speaking of congenital syphilis: What are the classic signs (other than IK, duh)?

- Circumoral scars
- Hutchinson teeth
- Saddle nose
- Saber shins
- Cognitive impairment
- CN8 deafness

What is the classic retinal finding in congenital lues? Salt-and-pepper retinitis
Congenital syphilis: Salt-and-pepper retinitis
Next we will turn our attention to HSV
1) Usually a unilateral blepharoconjunctivitis—presents with lid margin vesicles/ulcers and bulbar conj ulcers.

2) You should think of anterior HSV eye dz as having two very broad forms. What are they?
1) Primary ocular disease

You should think of anterior HSV eye dz as having two very broad forms. What are they?

2) Recurrent ocular disease
1) Primary ocular disease

2) Recurrent ocular disease

Does ‘recurrence’ mean the pt gets re-infected?
1) Primary ocular disease

2) Recurrent ocular disease

Does ‘recurrence’ mean the pt gets re-infected?
No! Remember, herpes virus infection is never cleared—rather, it becomes latent within the host. Thus, recurrence means the virus is reactivated, not re-acquired.
1) Primary ocular disease

2) Recurrent ocular disease

*Does ‘recurrence’ mean the pt gets re-infected?*

No! Remember, herpes virus infection is never cleared—rather, it becomes latent within the host. Thus, recurrence means the virus is reactivated, not re-acquired.

*Where in the body do herpesviruses establish their latency?*
1) Primary ocular disease

2) Recurrent ocular disease

Does ‘recurrence’ mean the pt gets re-infected?
No! Remember, herpes virus infection is never cleared—rather, it becomes latent within the host. Thus, recurrence means the virus is reactivated, not re-acquired.

Where in the body do herpesviruses establish their latency?
Different members of the herpesvirus family take up residence in different cell types. HSV-1 and HSV-2 hole up in sensory neural ganglia.
1) Primary ocular disease

2) Recurrent ocular disease

Does ‘recurrence’ mean the pt gets re-infected? No! Remember, herpes virus infection is never cleared—rather, it becomes latent within the host. Thus, recurrence means the virus is reactivated, not re-acquired.

*Where in the body do herpesviruses establish their latency?*
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Where in the body do herpesviruses establish their latency?
Different members of the herpesvirus family take up residence in different cell types. HSV-1 and HSV-2 hole up in sensory neural ganglia.

Which sensory ganglion harbors the virions responsible for recurrent ocular dz?
1) Primary ocular disease

2) Recurrent ocular disease

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Where in the body do herpesviruses establish their latency?
Different members of the herpesvirus family take up residence in different cell types.

HSV-1 and HSV-2 hole up in sensory neural ganglia

Which sensory ganglion harbors the virions responsible for recurrent ocular dz?
The trigeminal (CN5; ‘stellate’) ganglion
1) Primary ocular disease

2) Recurrent ocular disease

Does ‘recurrence’ mean the pt gets re-infected?
No! Remember, herpes virus infection is never cleared—rather, it becomes latent within the host. Thus, recurrence means the virus is reactivated, not re-acquired.

Where in the body do herpesviruses establish their latency?
Different members of the herpesvirus family take up residence in different cell types. HSV-1 and HSV-2 hole up in sensory neural ganglia.

Which sensory ganglion harbors the virions responsible for recurrent ocular dz?
The trigeminal (CN5; ‘stellate’) ganglion

The trigeminal nerve breaks into three ‘sub-nerves.’ What are they?
--?
--?
--?
1) Primary ocular disease

2) Recurrent ocular disease

Does ‘recurrence’ mean the pt gets re-infected?
No! Remember, herpes virus infection is never cleared—rather, it becomes latent within the host. Thus, recurrence means the virus is reactivated, not re-acquired.

Where in the body do herpesviruses establish their latency?
Different members of the herpesvirus family take up residence in different cell types. HSV-1 and HSV-2 hole up in sensory neural ganglia.

Which sensory ganglion harbors the virions responsible for recurrent ocular dz?
The trigeminal (CN5; ‘stellate’) ganglion

The trigeminal nerve breaks into three ‘sub-nerves.’ What are they?
--Ophthalmic
--Maxillary
--Mandibular
1) Primary ocular disease
   --Usually a *unilateral* blepharoconjunctivitis

2) Recurrent ocular disease
1) Primary ocular disease
--Usually a *unilateral* blepharoconjunctivitis

2) Recurrent ocular disease
1) Primary ocular disease
--Usually a *unilateral* blepharoconjunctivitis
--Presents with lid margin vesicles/ulcers and bulbar

2) Recurrent ocular disease
1) Primary ocular disease
   --Usually a unilateral blepharoconjunctivitis
     --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
HSV blepharoconjunctivitis
1) Primary ocular disease
   --Usually a *unilateral* blepharoconjunctivitis
     --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
   a) ?
   b) ?
   c) ?
   d) ?

Four distinct ocular manifestations (think broadly and anatomically)
1) **Primary ocular disease**
--Usually a *unilateral* **blepharoconjunctivitis**
  --Presents with lid margin *vesicles/ulcers* and bulbar *conj ulcers*

2) **Recurrent ocular disease**
   a) **Blepharoconjunctivitis**
   b) **Keratitis**
   c) **Iridocyclitis**
   d) **Trabeculitis**

*Four distinct ocular manifestations (think broadly and anatomically)*
1) Primary ocular disease
--Usually a unilateral blepharoconjunctivitis
--Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
a) Blepharoconjunctivitis
b) Keratitis
--?
--?
Three specific and distinct keratitis subtypes
--?
c) Iridocyclitis
d) Trabeculitis
1) Primary ocular disease
--Usually a unilateral blepharoconjunctivitis
    --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
   a) Blepharoconjunctivitis
   b) Keratitis
      --Epithelial
      --Stromal
      --Endotheliitis
       Three specific and distinct keratitis subtypes
   c) Iridocyclitis
   d) Trabeculitis
1) Primary ocular disease
--Usually a *unilateral* blepharoconjunctivitis
--Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
a) *Blepharoconjunctivitis*

b) *Keratitis*
   --Epithelial: c/o three words. Classic sign:
   --Stromal

   --Endotheliitis

c) *Iridocyclitis*

d) *Trabeculitis*
1) Primary ocular disease
--Usually a *unilateral* blepharoconjunctivitis
   --Presents with lid margin *vesicles*/ulcers and bulbar *conj ulcers*

2) Recurrent ocular disease
a) Blepharoconjunctivitis
b) Keratitis
   --Epithelial: c/o *foreign body sensation*. Classic sign: *Dendrites*
   --Stromal
   --Endotheliitis
c) Iridocyclitis
d) Trabeculitis
HSV epithelial keratitis
1) *Primary ocular disease*

--Usually a *unilateral* blepharoconjunctivitis

--Presents with lid margin *vesicles/ulcers* and bulbar *conj ulcers*

2) *Recurrent ocular disease*

a) *Blepharoconjunctivitis*

b) *Keratitis*

--Epithelial: c/o *foreign body sensation*. Classic sign: *Dendrites*

--Stromal

--*Endotheliitis* (aka *two words*): Presents as *shaped* edematous area with *abbrev.

c) *Iridocyclitis*

d) *Trabeculitis*
1) Primary ocular disease
   --Usually a unilateral blepharoconjunctivitis
     --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
   a) Blepharoconjunctivitis
   b) Keratitis
     --Epithelial: c/o foreign body sensation. Classic sign: Dendrites
     --Stromal

     --Endotheliitis (aka disciform keratitis): Presents as disc-shaped edematous area with KP
   c) Iridocyclitis

   d) Trabeculitis
HSV endotheliitis/disciform keratitis
1) Primary ocular disease
--Usually a *unilateral* blepharoconjunctivitis
   --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
   a) Blepharoconjunctivitis
   b) Keratitis
      --Epithelial: c/o foreign body sensation. Classic sign: Dendrites
      --Stromal
         --?
         --?
         Two subtypes of stromal keratitis
      --Endotheliitis (aka disciform keratitis): Presents as disc-shaped edematous area with KP
   c) Iridocyclitis
   d) Trabeculitis
1) Primary ocular disease
--Usually a unilateral *blepharoconjunctivitis*
  --Presents with lid margin *vesicles/ulcers* and bulbar *conj ulcers*

2) Recurrent ocular disease
a) *Blepharoconjunctivitis*
b) *Keratitis*
  --*Epithelial*: c/o *foreign body sensation*. Classic sign: *Dendrites*
  --*Stromal*
    --*Necrotizing*
    --*Interstitial* \[
    \text{Two subtypes of stromal keratitis} \\
    \text{--*Endotheliitis* (aka *disciform keratitis*): Presents as disc-shaped edematous area with \text{KP}}
  \]
c) *Iridocyclitis*
d) *Trabeculitis*
1) Primary ocular disease
--Usually a *unilateral* blepharoconjunctivitis
  --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
a) Blepharoconjunctivitis
b) Keratitis
   --Epithelial: c/o foreign body sensation. Classic sign: Dendrites
   --Stromal
      --Necrotizing: Looks like an [ ]
      --Interstitial
   --Endotheliitis (aka disciform keratitis): Presents as disc-shaped edematous area with KP

c) Iridocyclitis
d) Trabeculitis
1) Primary ocular disease
--Usually a unilateral blepharoconjunctivitis
--Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
a) Blepharoconjunctivitis
b) Keratitis
   --Epithelial: c/o foreign body sensation. Classic sign: Dendrites
   --Stromal
     --Necrotizing: Looks like an ulcer
   --Interstitial
     --Endotheliitis (aka disciform keratitis): Presents as disc-shaped edematous area with KP
   --Trabeculitis
   --Iridocyclitis
1) Primary ocular disease
--Usually a *unilateral* blepharoconjunctivitis
   --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
   a) Blepharoconjunctivitis
   b) Keratitis
      --Epithelial: c/o foreign body sensation. Classic sign: Dendrites
      --Stromal
         --Necrotizing: Looks like an ulcer (ie, suppurative, with an overlying epithelial defect)
      --Interstitial
         --Endotheliitis (aka disciform keratitis): Presents as disc-shaped edematous area with KP
   c) Iridocyclitis
   d) Trabeculitis
HSV necrotizing keratitis
1) Primary ocular disease
--Usually a *unilateral* blepharoconjunctivitis
  --Presents with lid margin *vesicles/ulcers and bulbar conj ulcers*

2) Recurrent ocular disease
a) Blepharoconjunctivitis
b) Keratitis
  --Epithelial: c/o *foreign body sensation*. Classic sign: Dendrites
  --Stromal
    --Necrotizing: Looks like an *ulcer* (ie, suppurative, with an overlying epithelial defect)
    --Interstitial: Looks like a [ ]
  --Endotheliitis (aka disciform keratitis): Presents as disc-shaped edematous area with KP
c) Iridocyclitis
d) Trabeculitis
1) Primary ocular disease
--Usually a unilateral **blepharoconjunctivitis**
  --Presents with lid margin **vesicles/ulcers** and bulbar **conj ulcers**

2) Recurrent ocular disease
a) **Blepharoconjunctivitis**
b) **Keratitis**
  --Epithelial: c/o foreign body sensation. Classic sign: **Dendrites**
  --Stromal
    --Necrotizing: Looks like an **ulcer** (ie, suppurative, with an overlying epithelial defect)
    --**Interstitial**: Looks like a **scar**
  --**Endotheliitis** (aka **disciform keratitis**): Presents as disc-shaped edematous area with **KP**
c) **Iridocyclitis**
d) **Trabeculitis**
1) Primary ocular disease
--Usually a unilateral blepharoconjunctivitis
  --Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
a) Blepharoconjunctivitis
b) Keratitis
  --Epithelial: c/o foreign body sensation. Classic sign: Dendrites
  --Stromal
    --Necrotizing: Looks like an ulcer (ie, suppurative, with an overlying epithelial defect)
    --Interstitial: Looks like a scar (ie, hazy, with no overlying epithelial defect)
  --Endotheliitis (aka disciform keratitis): Presents as disc-shaped edematous area with KP
c) Iridocyclitis
d) Trabeculitis
HSV interstitial keratitis
1) Primary ocular disease
--Usually a unilateral blepharoconjunctivitis
--Presents with lid margin vesicles/ulcers and bulbar conj ulcers

2) Recurrent ocular disease
a) Blepharoconjunctivitis
b) Keratitis
   --Epithelial: c/o foreign body sensation. Classic sign: Dendrites
   --Stromal
      --Necrotizing: Looks like an ulcer (ie, suppurative, with an overlying epithelial defect)
      --Interstitial: Looks like a scar (ie, hazy, with no overlying epithelial defect)
   --Endotheliitis (aka disciform keratitis): Presents as disc-shaped edematous area with KP

For more on anterior HSV dz, see slide-set K23

c) Iridocyclitis

d) Trabeculitis
Next we will turn our attention to Cogan syndrome
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes young adults. **F**
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years. **F**
- It often follows an URTI by 1-2 weeks or so.

(Upper respiratory tract infection)
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years. **F**
- It often follows an URTI by 1-2 weeks or so. **T**
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years. **F**
- It often follows an URTI by 1-2 weeks or so. **T**
- Some patients have serologic evidence of granulomatosis with polyangiitis. **T**
Regarding interstitial keratitis (IK) associated with Cogan syndrome, which are true?

- It usually strikes children around age 9 years: **F**
- It often follows an URTI by 1-2 weeks or so: **T**
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**Q**

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