

Q

Orbital Dermoid Cysts

- most vs
least

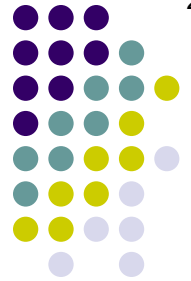
 common pediatric space-occupying lesion of orbit



A

Orbital Dermoid Cysts

- **Most** common pediatric space-occupying lesion of orbit



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- Arise from trapped in



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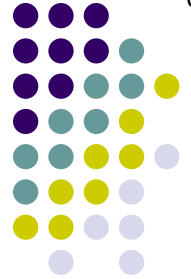
During what general developmental period does this occur?

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Does this mean dermoid cysts are congenital lesions?



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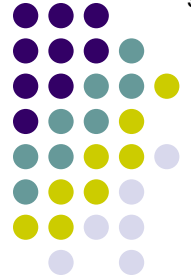
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Yes and no



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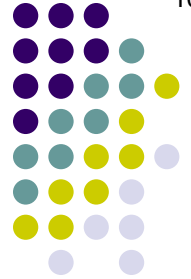
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Yes and no

C'mon brah—either they're congenital, or they're not. What's up with this?



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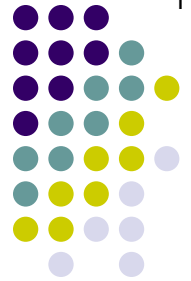
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Yes and no

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They're congenital in the sense that they're always present at birth.
However, depending upon their location, they aren't always clinically apparent at birth--and may not become so until adulthood.



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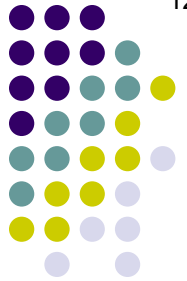
Orbital Dermoid Cysts

- **Most** common pediatric space-occupying lesion of orbit
- Arise from **epithelial nests** trapped in **bony sutures**
- Can be located not nasal/temporal (most common) or ditto

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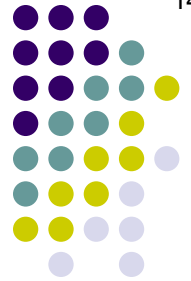
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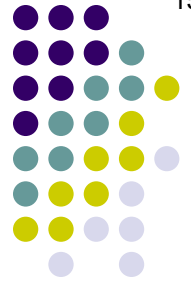
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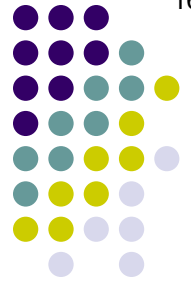
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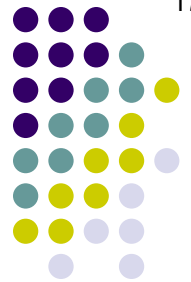
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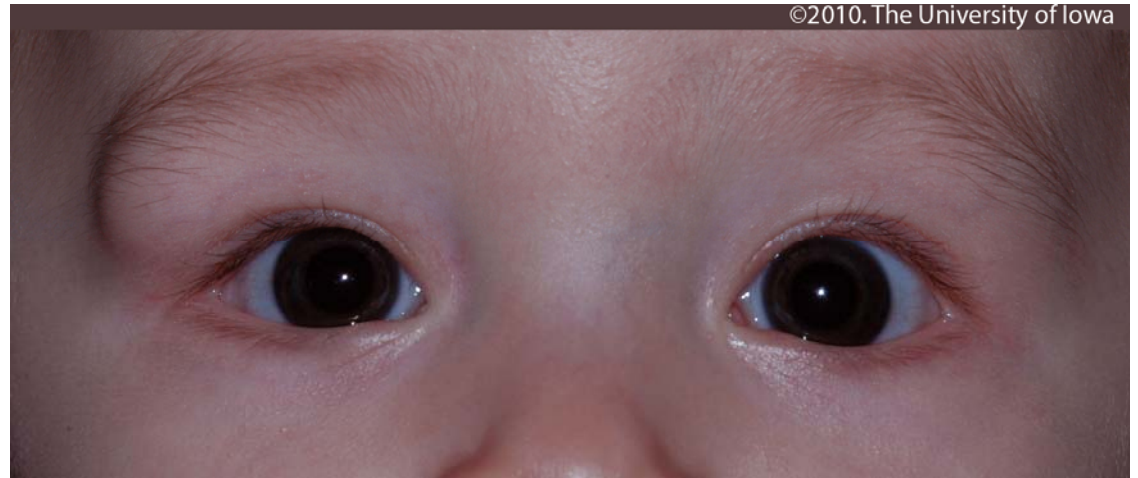
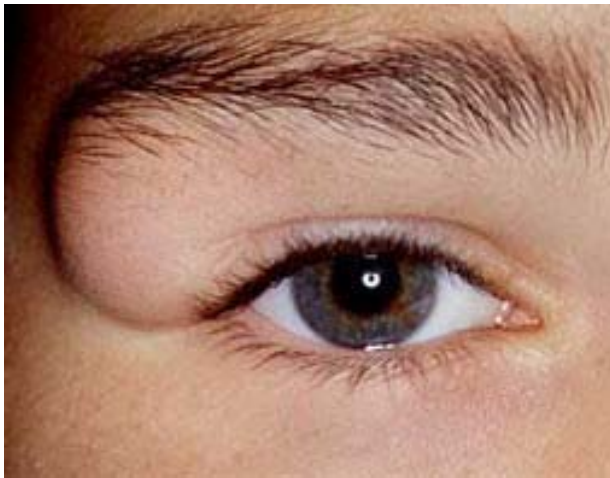


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- Presentation: Palpable mass that is **painless** , **smooth** and **mobile**

Orbital Dermoid Cysts



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Pre-septal orbital dermoid cyst

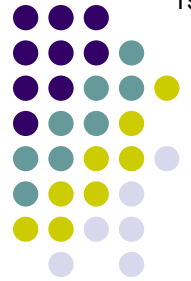


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Can they be affixed to the underlying periosteum?

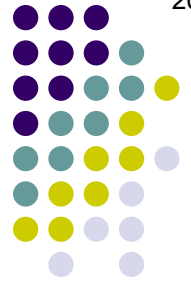


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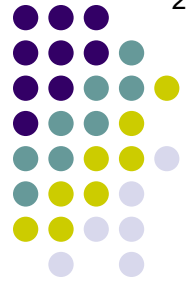
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Can they be affixed to the overlying skin?



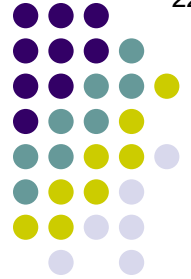
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Can they be affixed to the overlying skin?
Only if the cyst has partially ruptured, leading to scarring

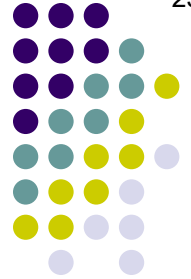


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What about cysts located deep in the orbit--how do they present?

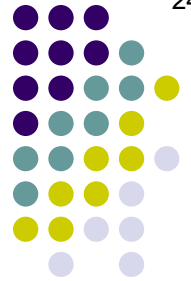


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With progressive proptosis +/- off-axial globe displacement



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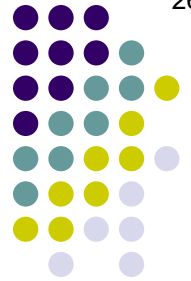
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At what age does this occur?
Adulthood



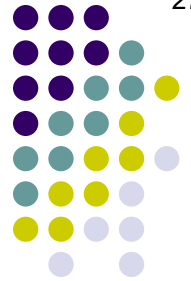
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Orbital Dermoid Cysts

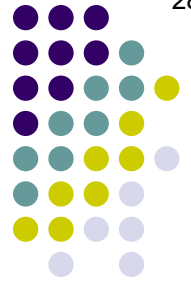
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- Presentation: Palpable mass that is **painless** , **smooth** and **mobile**
 - Natural history: progressive enlargement vs spontaneous involution

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Orbital Dermoid Cysts



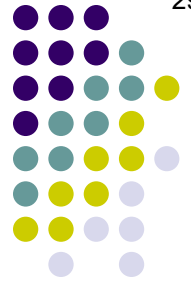
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- CT finding: **well vs poorly** circumscribed lesion with **low vs high** density lumen

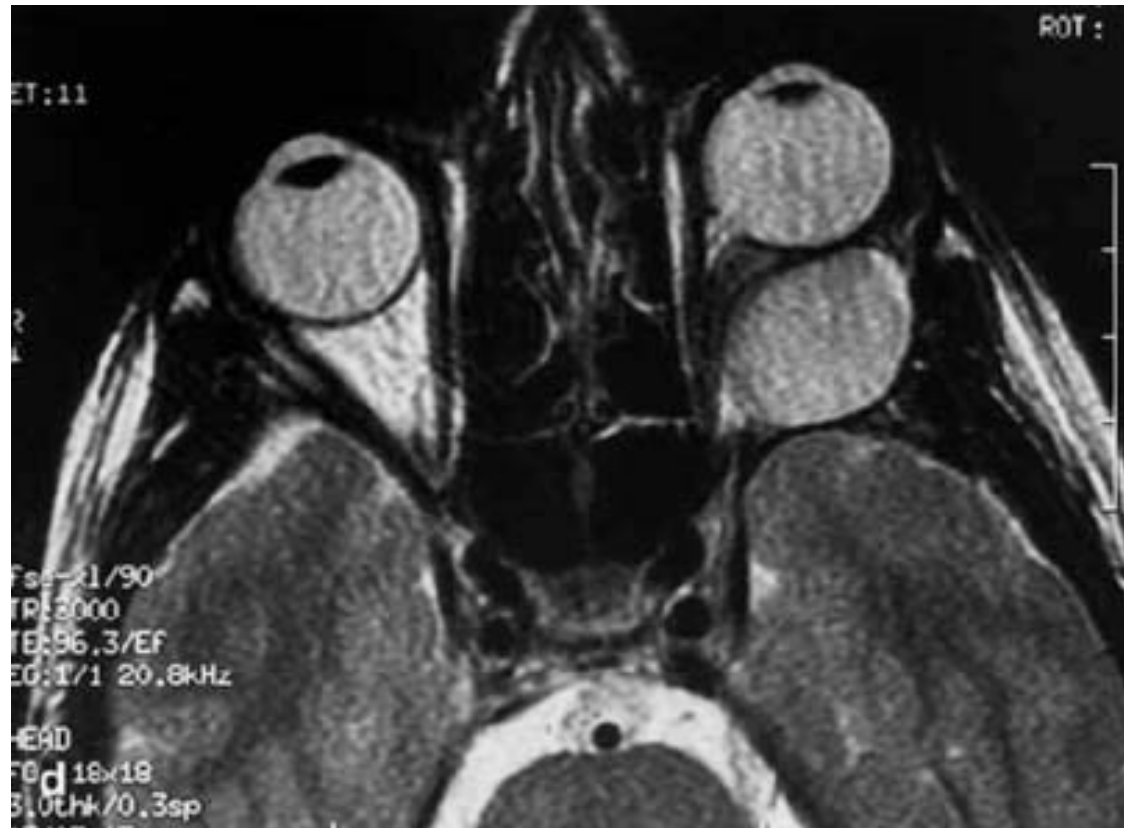


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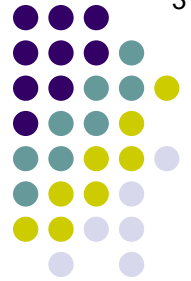
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Orbital Dermoid Cysts



Post-septal orbital dermoid cyst causing left proptosis

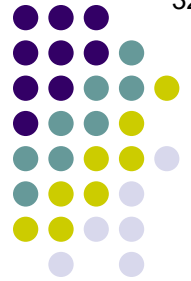


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Is it necessary to CT suspected dermoid cysts?



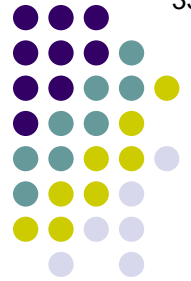
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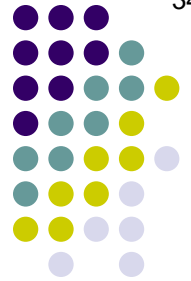
In most cases, no--the dx can be made clinically



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Orbital Dermoid Cysts

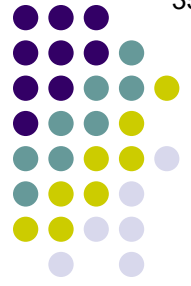
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- Histology:
 - Cyst lined with **common change** epithelium



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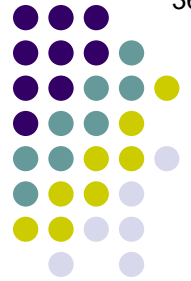


Orbital Dermoid Cysts



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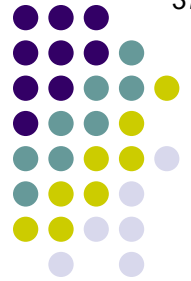
10X H&E stained image of a dermoid cyst. Note the keratin-filled lumen and the epithelial lining.



Q

Orbital Dermoid Cysts

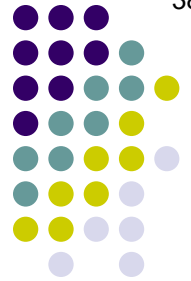
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 - Cyst lined with **keratinized** epithelium
 - Dermal appendages (aka *adnexal structures*) are vs not present



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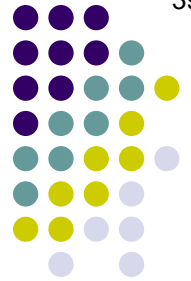
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What three things constitute dermal appendages/adnexal structures?

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Q/A

Orbital Dermoid Cysts

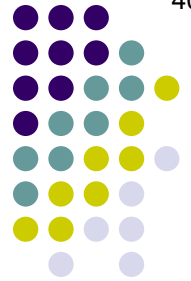
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What three things constitute dermal appendages/adnexal structures?

--Hair

--[] glands

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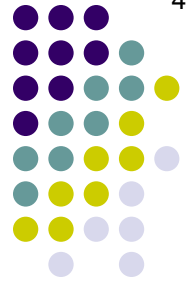
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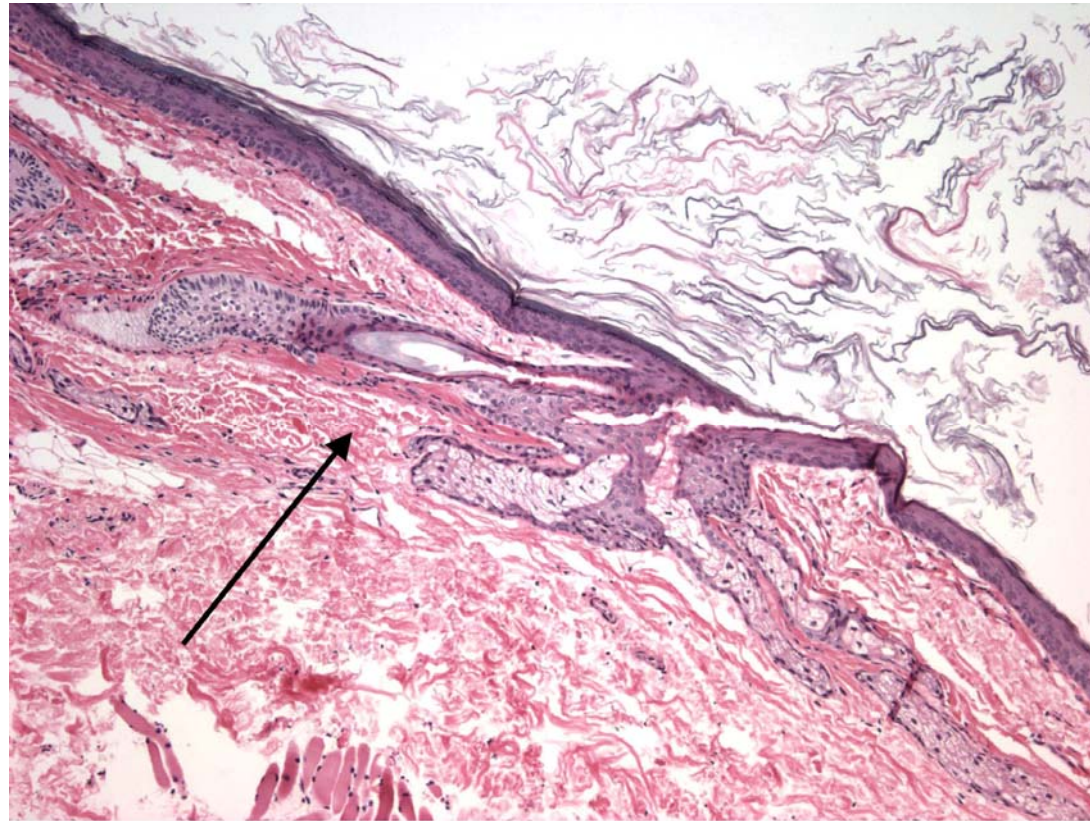
--Hair

--Sebaceous glands

--Sweat glands

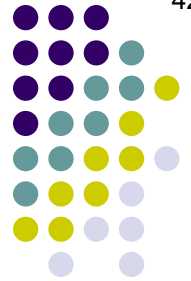


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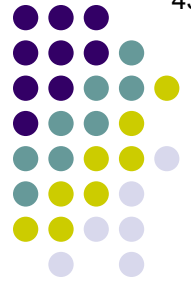
This 50X view of the cyst wall demonstrates a hair follicle (arrow), one of the adnexal structures that are commonly found in walls of dermoid cysts. Note the kertainized stratified squamous epithelium lining the cyst.



Q

Orbital Dermoid Cysts

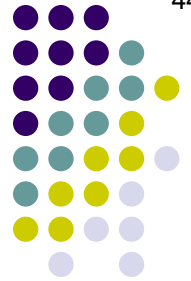
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 - Cyst filled with and



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- Histology:
 - Cyst lined with **keratinized** epithelium
 - Dermal appendages (aka *adnexal structures*) **are** present
 - Cyst filled with **oil** and **keratin**

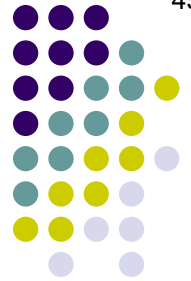


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 - Natural history: Progressive enlargement
- CT finding: Well circumscribed lesion with low density lumen
- Histology:
 - Cyst lined with ^{squamous} ~~keratinized~~ epithelium
 - Dermal appendages (aka *adnexal structures*) ^{not} ~~are~~ present
 - Cyst filled with ~~oil~~ and keratin

A closely-related clinical entity presents similarly to dermoid cysts, but has a somewhat different histology—it's lined with nonkeratinized squamous epithelium, has no dermal appendages, and contains no oil. What is this entity called?



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- Histology:
 - Cyst lined with ^{squamous} ~~keratinized~~ epithelium
 - Dermal appendages (aka *adnexal structures*) ^{not} ~~are~~ present
 - Cyst filled with ~~oil~~ and keratin

A closely-related clinical entity presents similarly to dermoid cysts, but has a somewhat different histology—it's lined with nonkeratinized squamous epithelium, has no dermal appendages, and contains no oil. What is this entity called?

Epidermoid cyst (aka simple epithelial cyst)

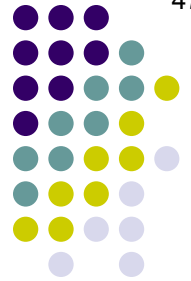


Q

Orbital Dermoid Cysts

- **Most** common pediatric space-occupying lesion of orbit
- Arise from **epithelial nests** trapped in **bony sutures**
- Can be located **pre-septal** (most common) or **deep**
- Pre-septal cysts typically **superotemporal** >> **superonasal**
- Presentation: Palpable mass that is **painless** , **smooth** and **mobile**
 - Natural history: **Progressive enlargement**
- CT finding: **Well** circumscribed lesion with **low** density lumen
- Histology:
 - Cyst lined with **keratinized** epithelium
 - Dermal appendages (aka *adnexal structures*) **are** present
 - Cyst filled with **oil** and **keratin**
- Management:

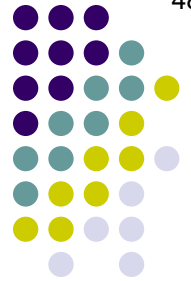
conservative vs surgical



A

Orbital Dermoid Cysts

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 - Dermal appendages (aka *adnexal structures*) **are** present
 - Cyst filled with **oil** and **keratin**
- Management: **Excision**

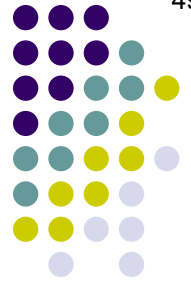


Q

Orbital Dermoid Cysts

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- Histology:
 - Cyst lined with keratinized epithelium
 - Dermal appendages (aka
 - Cyst filled with oil and ke
- **Management: Excision**

At what age should excision be performed?



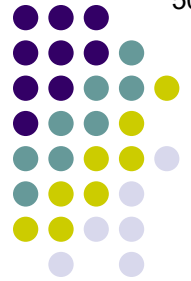
A

Orbital Dermoid Cysts

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- **Management: Excision**

At what age should excision be performed?

Opinions differ, but many authorities would recommend
~1 year



Q

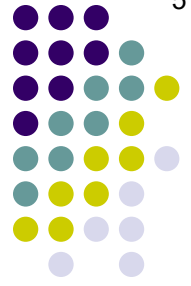
Orbital Dermoid Cysts

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 - Cyst filled with oil and ke
- **Management: Excision**

At what age should excision be performed?

Opinions differ, but many authorities would recommend ~1 year

Why this age?



A

Orbital Dermoid Cysts

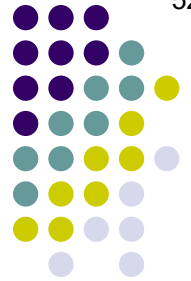
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 - Dermal appendages (aka
 - Cyst filled with oil and ke
- **Management: Excision**

At what age should excision be performed?

Opinions differ, but many authorities would recommend ~1 year

Why this age?

Because at around this age, newly-mobile toddlers are at increased risk of cyst rupture from accidental trauma (eg, from falling and bonking their face)

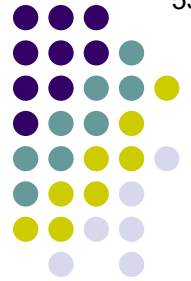


Q

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- Histology:
 - Cyst lined with **keratinized** epithelium
 - Dermal appendages (aka *adnexal structures*) **are** present
 - Cyst filled with **oil** and **keratin**
- Management: **Excision**
 - Effort should be made to remove the cyst without

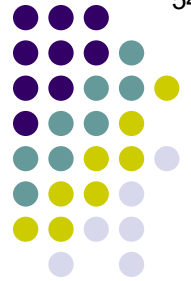
three words



A

Orbital Dermoid Cysts

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- Histology:
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 - Dermal appendages (aka *adnexal structures*) **are** present
 - Cyst filled with **oil** and **keratin**
- Management: **Excision**
 - Effort should be made to remove the cyst without **spilling its contents**

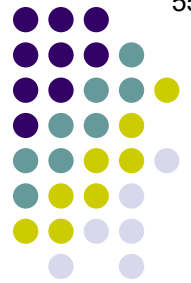


Q

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- Management: Excision
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Why is this important?



A

Orbital Dermoid Cysts

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Why is this important?

Because if released into the orbit and/or subQ space, the cyst's contents will provoke a strong inflammatory response, with subsequent scarring



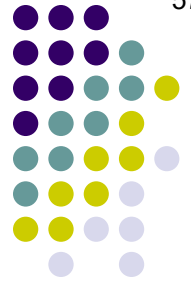
Q

Orbital Dermoid Cysts

= epibulbar dermoid?

BTW: Are epibulbar dermoids related to dermoid cysts?

- Most common pediatric space-occupying lesion of orbit
- Arise from epibulbar dermis
- Can be located pre-septal or intra-orbital
- Pre-septal cysts are more common
- Presentation:
 - Natural history: slow growth and mobile
- CT finding: Well-defined, homogeneous, extraconal mass
- Histology:
 - Cyst lined with keratinized epithelium
 - Dermal appendages (aka *adnexal structures*) are present
 - Cyst filled with oil and keratin
- Management: Excision
 - Effort should be made to remove the cyst without spilling its contents



A

Orbital Dermoid Cysts

= epibulbar dermoid? No

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- Can be located pre-septal or intra-orbital
- Pre-septal cysts are more common
- Presentation:
 - Natural history: slow growth
- CT finding: Well-defined, homogeneous, extraconal mass
- Histology:
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 - Dermal appendages (aka *adnexal structures*) are present
 - Cyst filled with oil and keratin
- Management: Excision
 - Effort should be made to remove the cyst without spilling its contents

BTW: Are epibulbar dermoids related to dermoid cysts?

No, they are completely unrelated entities



Q

Orbital Dermoid Cysts

= epibulbar dermoid? *No*

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BTW: Are epibulbar dermoids related to dermoid cysts?

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Where are epibulbar dermoids located?



A

Orbital Dermoid Cysts

= epibulbar dermoid? No

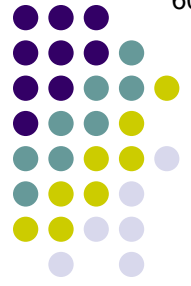
- Most common pediatric space-occupying lesion of orbit
- Arise from epibulbar dermoid
- Can be located pre-septal or intra-orbital
- Pre-septal cysts are mobile
- Presentation:
 - Natural history: slow growth
- CT finding: Well-defined, homogeneous, soft tissue mass
- Histology:
 - Cyst lined with keratinized epithelium
 - Dermal appendages (aka *adnexal structures*) are present
 - Cyst filled with oil and keratin
- Management: Excision
 - Effort should be made to remove the cyst without spilling its contents

BTW: Are epibulbar dermoids related to dermoid cysts?

No, they are completely unrelated entities

Where are epibulbar dermoids located?

On the ocular surface



Q

Orbital Dermoid Cysts

= epibulbar dermoid? No

- Most common pediatric space-occupying lesion of orbit
- Arise from epibulbar dermoid
- Can be located pre-septal or intra-orbital
- Pre-septal cyst
- Presentation:
 - Natural history: slow growing, painless, and mobile
- CT finding: Well-defined, homogeneous, extra-ocular mass
- Histology:
 - Cyst lined with keratinized epithelium
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- Management: Excision
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BTW: Are epibulbar dermoids related to dermoid cysts?

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Where are epibulbar dermoids located?

On the ocular surface

Where on the ocular surface are they typically located?



A

Orbital Dermoid Cysts

= epibulbar dermoid? No

- Most common pediatric space-occupying lesion of orbit
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 - Natural history: slow growth
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 - Cyst filled with oil and keratin
- Management: Excision
 - Effort should be made to remove the cyst without spilling its contents

BTW: Are epibulbar dermoids related to dermoid cysts?

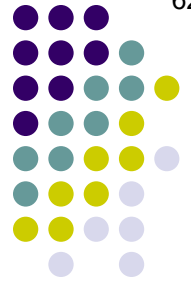
No, they are completely unrelated entities

Where are epibulbar dermoids located?

On the ocular surface

Where on the ocular surface are they typically located?

At the limbus



Q

Orbital Dermoid Cysts

= epibulbar dermoid? No

- Most common pediatric space-occupying lesion of orbit
- Arise from epibulbar dermoid
- Can be located pre-septal or intra-orbital
- Pre-septal cysts are mobile
- Presentation:
 - Natural history: slow growth
- CT finding: Well-defined, fat-containing mass
- Histology:
 - Cyst lined with keratinized epithelium
 - Dermal appendages (aka *adnexal structures*) are present
 - Cyst filled with oil and keratin
- Management: Excision
 - Effort should be made to remove the cyst without spilling its contents

BTW: Are epibulbar dermoids related to dermoid cysts?

No, they are completely unrelated entities

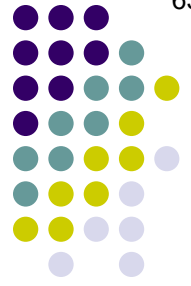
Where are epibulbar dermoids located?

On the ocular surface

Where on the ocular surface are they typically located?

At the limbus

By what other name are epibulbar dermoids commonly known?



A

Orbital Dermoid Cysts

= epibulbar dermoid? No

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- Pre-septal cyst
- Presentation:
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- CT finding: Well circumscribed, fat containing mass
- Histology:
 - Cyst lined with keratinized epithelium
 - Dermal appendages (aka *adnexal structures*) are present
 - Cyst filled with oil and keratin
- Management: Excision
 - Effort should be made to remove the cyst without spilling its contents

BTW: Are epibulbar dermoids related to dermoid cysts?

No, they are completely unrelated entities

Where are epibulbar dermoids located?

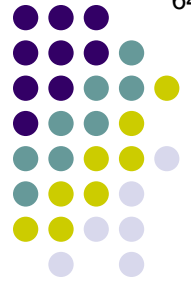
On the ocular surface

Where on the ocular surface are they typically located?

At the limbus

By what other name are epibulbar dermoids commonly known?

Limbal dermoids



Q

Orbital Dermoid Cysts

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- Histology:
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 - Dermal appendages (aka *adnexal structures*) are present
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- Management: Excision
 - Effort should be made to remove the cyst without spilling its contents

BTW: Are epibulbar dermoids related to dermoid cysts?

No, they are completely unrelated entities

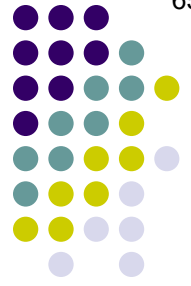
Where are epibulbar dermoids located?

On the ocular surface

Where on the ocular surface are they typically located?

At the limbus

With what syndrome are epibulbar dermoids associated?



A

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BTW: Are epibulbar dermoids related to dermoid cysts?

No, they are completely unrelated entities

Where are epibulbar dermoids located?

On the ocular surface

Where on the ocular surface are they typically located?

At the limbus

With what syndrome are epibulbar dermoids associated?

Goldenhar

Orbital Dermoid Cysts



Epibulbar or limbal dermoid in Goldenhar



Q

Orbital Dermoid Cysts

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Where are epibulbar dermoids located?

On the ocular surface

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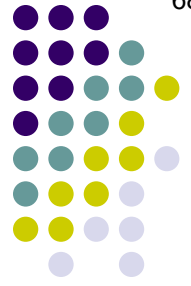
At the limbus

With what syndrome?

Goldenhar

What is the noneponymous name for Goldenhar?

en



A

Orbital Dermoid Cysts

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- Management: Excision
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BTW: Are epibulbar dermoids related to dermoid cysts?

No, they are completely unrelated entities

Where are epibulbar dermoids located?

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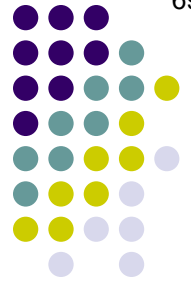
At the limbus

With what syndrome?

Goldenhar

What is the noneponymous name for Goldenhar?

Oculo-auriculo-vertebral syndrome



Q

Orbital Dermoid Cysts

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- Most common pediatric space-occupying lesion of orbit
- Arise from epibulbar dermoids
- Can be located pre-septal or intra-orbital
- Pre-septal cysts are mobile
- Presentation:
 - Natural history:
 - CT finding: With what syndrome? **Goldenhar** (Oculo-auriculo-vertebral syndrome)
- Histology:
 - In two words, what sort of condition is Goldenhar? It's a first word second word
 - Dermal appendages (aka adnexal structures) are present
 - Cyst filled with oil and keratin
- Management: Excision
 - Effort should be made to remove the cyst without spilling its contents

BTW: Are epibulbar dermoids related to dermoid cysts?

No, they are completely unrelated entities

Where are epibulbar dermoids located?

On the ocular surface

Where on the ocular surface are they typically located?

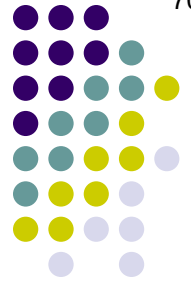
At the limbus

With what syndrome?

Goldenhar

What is the noneponymous name for Goldenhar?

Oculo-auriculo-vertebral syndrome



Q/A

Orbital Dermoid Cysts

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- Arise from epibulbar dermoid
- Can be located pre-septal or intra-orbital
- Pre-septal cysts are mobile
- Presentation:
 - Natural history: slow growth
- CT finding: Well-defined, fat-containing mass
- Histology:
 - In two words, what sort of condition is Goldenhar? It's a **malformation**
 - Dermal appendages (aka *adnexal structures*) are present
 - Cyst filled with oil and keratin
- Management: Excision
 - Effort should be made to remove the cyst without spilling its contents

BTW: Are epibulbar dermoids related to dermoid cysts?

No, they are completely unrelated entities

Where are epibulbar dermoids located?

On the ocular surface

Where on the ocular surface are they typically located?

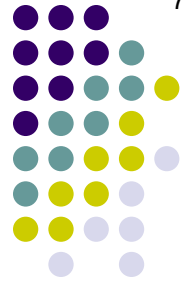
At the limbus

With what syndrome?

Goldenhar

What is the noneponymous name for Goldenhar?

Oculo-auriculo-vertebral syndrome



A

Orbital Dermoid Cysts

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- Most common pediatric space-occupying lesion of orbit
- Arise from epibulbar dermoid? No, they are completely unrelated entities
- Can be located on the ocular surface
- Pre-septal cyst
- Presentation: and mobile
 - Natural history
- CT finding: With what syndrome? Goldenhar Oculo-auriculo-vertebral syndrome
- Histology:
 - In two words, what sort of condition is Goldenhar? It's a **craniofacial malformation**
 - Dermal appendages (aka *adnexal structures*) are present
 - Cyst filled with oil and keratin
- Management: Excision
 - Effort should be made to remove the cyst without spilling its contents

BTW: Are epibulbar dermoids related to dermoid cysts?

No, they are completely unrelated entities

Where are epibulbar dermoids located?

On the ocular surface

Where on the ocular surface are they typically located?

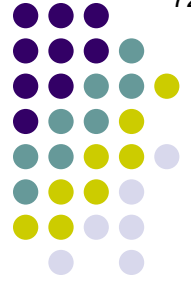
At the limbus

With what syndrome?

Goldenhar

What is the noneponymous name for Goldenhar?

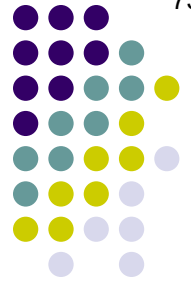
Oculo-auriculo-vertebral syndrome



Orbital Dermoid Cysts



Hemifacial microsomia in Goldenhar



Q

Orbital Dermoid Cysts

= epibulbar dermoid? No

- Most common pediatric space-occupying lesion of orbit

- Arise from epibulbar dermoids

- Can be located on the ocular surface

- Pre-septal cyst

- Presentation:
 - Natural history:
 - Where on the ocular surface are they typically located? At the limbus

- CT finding: With what syndrome? Goldenhar

- Histology:

- In two words, what sort of condition is Goldenhar?
 - It's a craniofacial malformation

- Dermal appendages (aka adnexal structures) are present

Craniofacial malformations are divided into two categories based on etiology-- what are they?

without spilling its contents

Q/A

Orbital Dermoid Cysts

= epibulbar dermoid? No

- Most common pediatric space-occupying lesion of orbit

- Arise from epibulbar dermoid? No, they are completely unrelated entities

- Can be located on the ocular surface

- Pre-septal cysts

- Presentation: Where on the ocular surface are they typically located?
At the limbus

- Natural history

- CT finding: With what syndrome?
Goldenhar Oculo-auriculo-vertebral syndrome

- Histology:

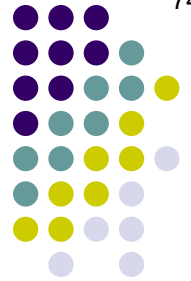
- In two words, what sort of condition is Goldenhar?
It's a **craniofacial malformation**

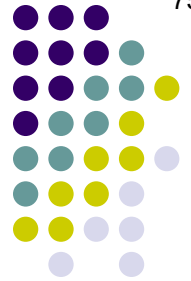
- Dermal appendages (aka adnexal structures) are present

Craniofacial malformations are divided into two categories based on etiology--
what are they?

Those due to **one long word**, and those not due to **same long word**

without spilling its contents





A

Orbital Dermoid Cysts

= epibulbar dermoid? No

- Most common pediatric space-occupying lesion of orbit

- Arise from epibulbar dermoid? No, they are completely unrelated entities

- Can be located on the ocular surface

- Pre-septal cyst

- Presentation: Where on the ocular surface are they typically located?
At the limbus

- Natural history

- CT finding: With what syndrome? Goldenhar Oculo-auriculo-vertebral syndrome

- Histology:

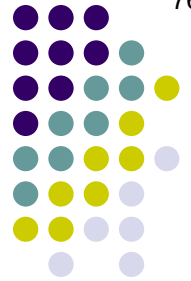
- In two words, what sort of condition is Goldenhar?
It's a craniofacial malformation

- Dermal appendages (aka adnexal structures) are present

Craniofacial malformations are divided into two categories based on etiology-- what are they?

Those due to craniosynostosis, and those not due to craniosynostosis

without spilling its contents



Q

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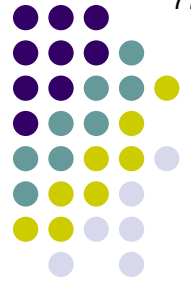
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To what process does craniosynostosis refer?

s contents



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To what process does craniosynostosis refer?

To the premature closing of the bony sutures of the cranium

s contents



Q

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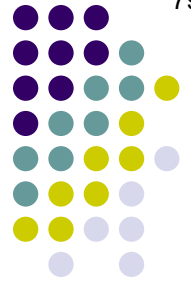
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To which category does Goldenhar belong?

without spilling its contents



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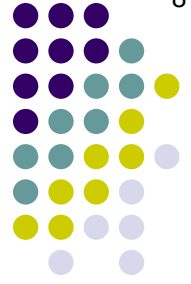
It is of the non-craniosynostosis sort

without spilling its contents

Orbital Dermoid Cysts



OK, confession time. To my frustration, I discovered that I inadvertently revised this topic on separate occasions, and thus am ‘stuck’ with two reviews of the same subject. That said, the two differ in a number of ways—so much so it’s worth keeping both. The second, same-but-different review commences with the next slide.



Q

Orbital Dermoid Cysts

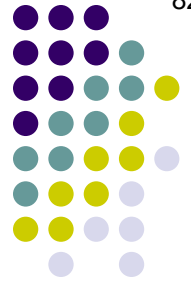
In very general terms (think in terms of the Path and/or Fundamentals book), what sort of lesion is a dermoid cyst?

A

Orbital Dermoid Cysts

*In very general terms (think in terms of the Path and/or Fundamentals book),
what sort of lesion is a dermoid cyst?*

A choristoma





Q

Orbital Dermoid Cysts

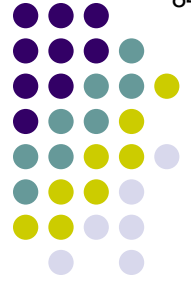
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A choristoma

What is a choristoma?

Q/A

Orbital Dermoid Cysts



In very general terms (think in terms of the Path and/or Fundamentals book), what sort of lesion is a dermoid cyst?

A choristoma

What is a choristoma?

A tumor composed of histologically normal vs abnormal cells found in an normal vs abnormal location



A

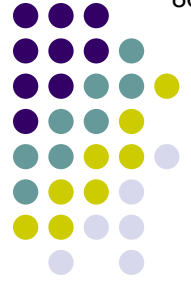
Orbital Dermoid Cysts

In very general terms (think in terms of the Path and/or Fundamentals book), what sort of lesion is a dermoid cyst?

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A tumor composed of histologically normal cells found in an abnormal location



Q

Orbital Dermoid Cysts

In very general terms (think in terms of the Path and/or Fundamentals book), what sort of lesion is

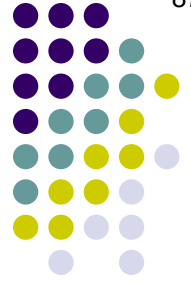
A choristoma

What is the name of the reverse clinical entity, ie, one with **abnormal** cells found in their **normal** location?

?

What is a ~~choristoma~~?

A tumor composed of histologically ~~normal~~ ^{abnormal} cells found in ~~an abnormal~~ ^{their normal} location



A

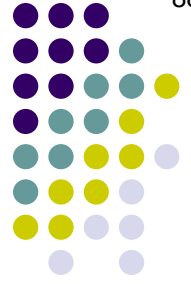
Orbital Dermoid Cysts

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A choristoma

What is the name of the reverse clinical entity, ie, one with **abnormal** cells found in their **normal** location?
A hamartoma

hamartoma
What is a ~~choristoma~~?
A tumor composed of histologically ~~normal~~ *abnormal* cells found in ~~an abnormal~~ *their normal* location



Q

Orbital Dermoid Cysts

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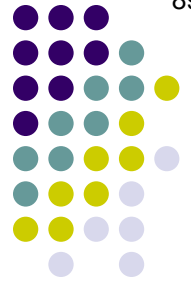
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Q/A

Orbital Dermoid Cysts



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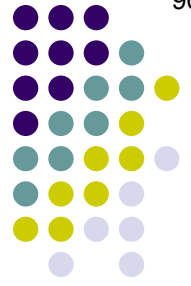
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That a lesion is a choristoma (or hamartoma) indicates what about its onset?
That, by definition, it is...[congenital vs acquired]



A

Orbital Dermoid Cysts

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Are all choristomas/hamartomas congenital?



A

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That, by definition, **it is...congenital**

Are all choristomas/hamartomas congenital?
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Are all congenital lesions choristomas/hamartomas?



A

Orbital Dermoid Cysts

In very general terms (think in terms of the Path and/or Fundamentals book), what sort of lesion is

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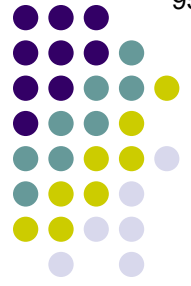
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Are all congenital lesions choristomas/hamartomas?
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Q

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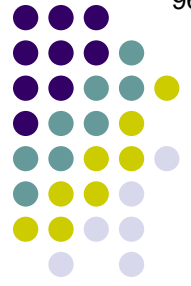
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Q/A

Orbital Dermoid Cysts



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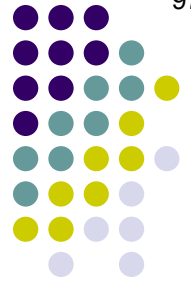
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A

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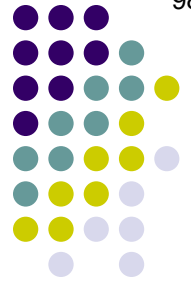
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That, by definition, it is...**benign**



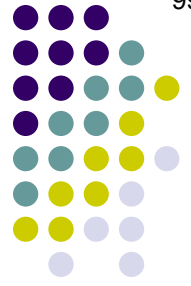
Q

Orbital Dermoid Cysts

In very general terms (think in terms of the Path and/or Fundamentals book), what sort of lesion is a dermoid cyst?

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Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?



A

Orbital Dermoid Cysts

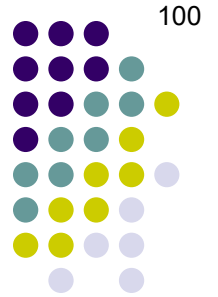
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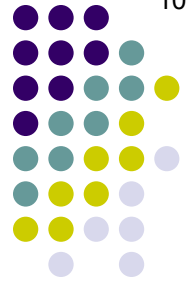
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Orbital Dermoid Cysts



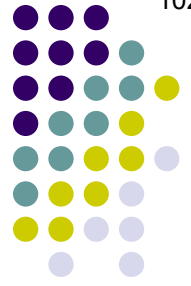
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Q

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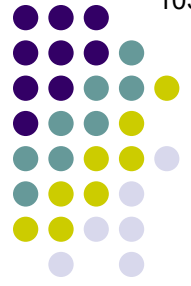
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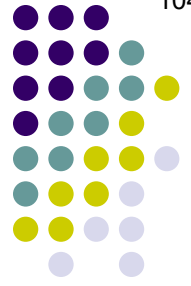
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Epidermoid cysts



Q

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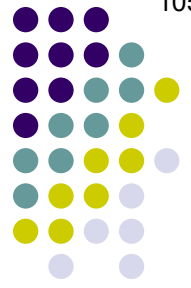
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Epidermoid cysts *aka...*

The BCSC Path book uses a different name for this lesion—what is it?

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Orbital Dermoid Cysts



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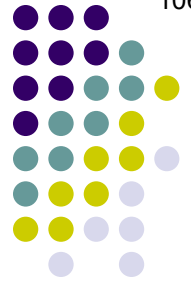
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Epidermoid cysts aka...*simple epithelial cyst*

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Simple epithelial cyst



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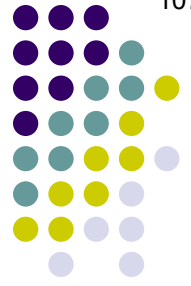
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Epidermoid cysts vs Dermoid cysts

?	Yes	Is a choristoma?

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Orbital Dermoid Cysts



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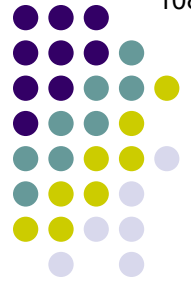
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Epidermoid cysts VS Dermoid cysts

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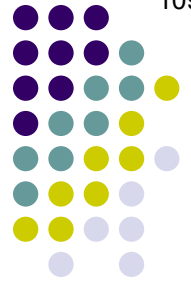
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Epidermoid cysts VS Dermoid cysts

Yes	Yes	Is a choristoma?
?	?	Contains dermal appendages?



A

Orbital Dermoid Cysts

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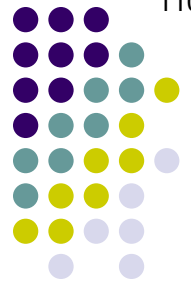
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Epidermoid cysts VS Dermoid cysts

Yes	Yes	Is a choristoma?
No	Yes	Contains dermal appendages?



Q

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Epidermoid cysts VS **Dermoid cysts**

What three 'dermal appendages' being referred to here?

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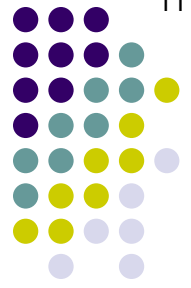
Yes

Yes

No

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Contains dermal appendages?



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Epidermoid cysts VS **Dermoid cysts**

What three 'dermal appendages' being referred to here?

- Hair follicles
- Sebaceous glands
- Sweat glands

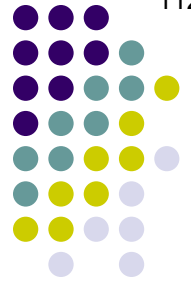
Yes

Yes

No

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Contains dermal appendages?



Q

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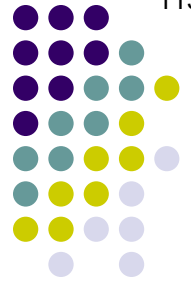
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#1

What embryologic event results in the eventual development of a dermoid cyst?
The sequestration of dermoid elements within bony sutures

A closely-related condition presents in a manner identical to that of dermoid cysts, differing only with regard to histology. What is this condition?

Epidermoid cysts VS Dermoid cysts

Yes	Yes	<i>Is a choristoma?</i>
No	Yes	<i>Contains dermal appendages?</i>
?	?	<i>Filled with...?</i>



A

Orbital Dermoid Cysts

In very general terms (think in terms of the Path and/or Fundamentals book), what sort of lesion is a dermoid cyst?

A choristoma

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?
#1

What embryologic event results in the eventual development of a dermoid cyst?
The sequestration of dermoid elements within bony sutures

A closely-related condition presents in a manner identical to that of dermoid cysts, differing only with regard to histology. What is this condition?

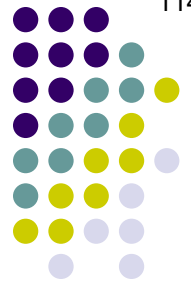
Epidermoid cysts VS Dermoid cysts

Yes	Yes	<i>Is a choristoma?</i>
No	Yes	<i>Contains dermal appendages?</i>
Keratin	Keratin and oil	<i>Filled with...?</i>

Q

Orbital Dermoid Cysts

114



In very general terms (think in terms of the Path and/or Fundamentals book), what sort of lesion is a dermoid cyst?

A choristoma

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?
#1

What embryologic event results in the eventual development of a dermoid cyst?
The sequestration of dermoid elements within bony sutures

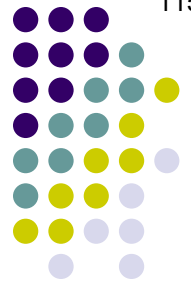
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Epidermoid cysts

In general terms, dermoid/epidermoid cysts presents in one of two manners. We'll get to what the two presentations are shortly, but first: What factor determines the manner in which it presents?

A

Orbital Dermoid Cysts



In very general terms (think in terms of the Path and/or Fundamentals book), what sort of lesion is a dermoid cyst?

A choristoma

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?
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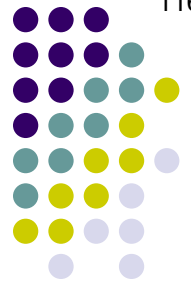
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The lesion's location



Q

Orbital Dermoid Cysts

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A choristoma

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?
#1

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The sequestration of dermoid elements within bony sutures

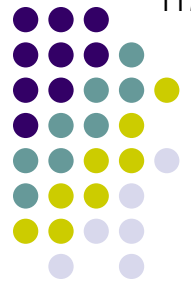
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Epidermoid cysts

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The lesion's location

What are the two locations?



A

Orbital Dermoid Cysts

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Epidermoid cysts

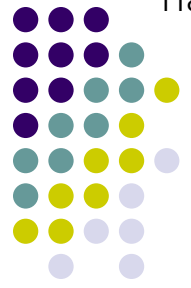
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The lesion's location

What are the two locations?

Pre-septal

Post-septal



Q

Orbital Dermoid Cysts

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A choristoma

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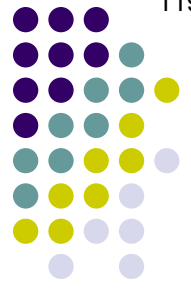
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The lesion's location

Nasal vs temporal aspect of orbit	?	?
	Pre-septal	Post-septal

A

Orbital Dermoid Cysts



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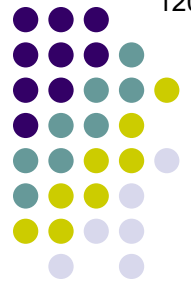
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The lesion's location

Nasal vs temporal aspect of orbit	Temporal	Temporal
	Pre-septal	Post-septal

Q

Orbital Dermoid Cysts



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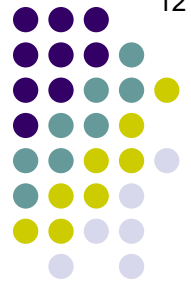
*In general terms, dermoid/e
to what the two presentation
manner in which it presents*

The lesion's location

Age it becomes clinically apparent	?	?
Nasal vs temporal aspect of orbit	Temporal	Temporal
	Pre-septal	Post-septal

A

Orbital Dermoid Cysts



In very general terms (think in terms of the Path and/or Fundamentals book), what sort of lesion is a dermoid cyst?

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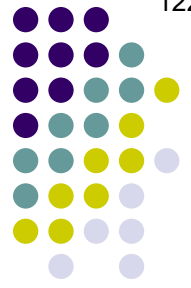
*In general terms, dermoid/e
to what the two presentation
manner in which it presents*

The lesion's location

Age it becomes clinically apparent	Late infancy/early toddlerhood	Adult
Nasal vs temporal aspect of orbit	Temporal	Temporal
	Pre-septal	Post-septal

Q

Orbital Dermoid Cysts



In very general terms (think in terms of the Path and/or Fundamentals book), what sort of lesion is a dermoid cyst?

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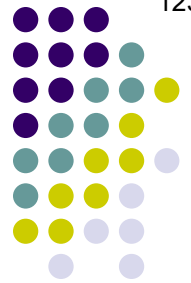
*In general terms, dermoid/e
to what the two presentation
manner in which it presents*

The lesion's location

<i>Presentation</i>	Slowly... ?	Slowly... ?
<i>Age it becomes clinically apparent</i>	Late infancy/early toddlerhood	Adult
<i>Nasal vs temporal aspect of orbit</i>	Temporal	Temporal
	Pre-septal	Post-septal

A

Orbital Dermoid Cysts



In very general terms (think in terms of the Path and/or Fundamentals book), what sort of lesion is a dermoid cyst?

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The sequestration of dermoid elements within bony sutures

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Epidermoid cysts

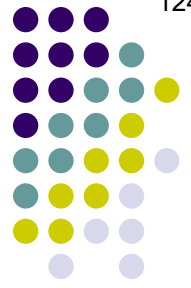
In general terms, dermoid/epidermoid cysts differ in the manner in which they present

The lesion's location

Presentation	Slowly... enlarging mass	Slowly... progressive proptosis
Age it becomes clinically apparent	Late infancy/early toddlerhood	Adult
Nasal vs temporal aspect of orbit	Temporal	Temporal
	Pre-septal	Post-septal

Q

Orbital Dermoid Cysts



In very general terms (think in terms of the Path and/or Fundamentals book), what sort of lesion is a dermoid cyst?

A choristoma

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?
#1

What embryologic event results in the eventual development of a dermoid cyst?
The sequestration of dermoid elements within bony sutures

*A closely-related condition p...
differing only with regard to*
Epidermoid cysts

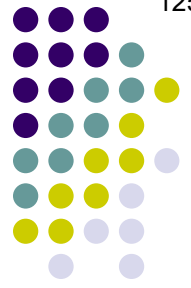
*In general terms, dermoid/e...
to what the two presentation...
manner in which it presents*

The lesion's location

<i>Painful?</i>	?	?
<i>Presentation</i>	Slowly... enlarging mass	Slowly... progressive proptosis
<i>Age it becomes clinically apparent</i>	Late infancy/early toddlerhood	Adult
<i>Nasal vs temporal aspect of orbit</i>	Temporal	Temporal
	Pre-septal	Post-septal

A

Orbital Dermoid Cysts



In very general terms (think in terms of the Path and/or Fundamentals book), what sort of lesion is a dermoid cyst?

A choristoma

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?
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What embryologic event results in the eventual development of a dermoid cyst?
The sequestration of dermoid elements within bony sutures

*A closely-related condition p...
differing only with regard to*
Epidermoid cysts

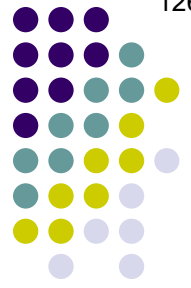
*In general terms, dermoid/e...
to what the two presentation...
manner in which it presents*

The lesion's location

<i>Painful?</i>	No	No
<i>Presentation</i>	Slowly... enlarging mass	Slowly... progressive proptosis
<i>Age it becomes clinically apparent</i>	Late infancy/early toddlerhood	Adult
<i>Nasal vs temporal aspect of orbit</i>	Temporal	Temporal
	Pre-septal	Post-septal

Q

Orbital Dermoid Cysts



In very general terms (think in terms of the Path and/or Fundamentals book), what sort of lesion is a dermoid cyst?

A choristoma

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?
#1

What embryologic event results in the eventual development of a dermoid cyst?
The sequestration of dermoid elements within bony sutures

*A closely-related condition p...
differing only with regard to*
Epidermoid cysts

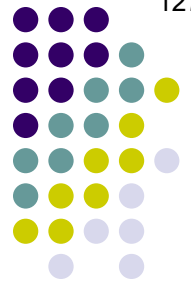
*In general terms, dermoid/e...
to what the two presentation...
manner in which it presents*

The lesion's location

<i>Painful?</i>	No	No
<i>Presentation</i>	Slowly... enlarging mass	Slowly... progressive proptosis
<i>Age it becomes clinically apparent</i>	Can epi/dermoid cysts appear in the nasal orbit?	
<i>Nasal vs temporal aspect of orbit</i>	Nasal? Temporal	Nasal? Temporal
	Pre-septal	Post-septal

A

Orbital Dermoid Cysts



In very general terms (think in terms of the Path and/or Fundamentals book), what sort of lesion is a dermoid cyst?

A choristoma

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?
#1

What embryologic event results in the eventual development of a dermoid cyst?
The sequestration of dermoid elements within bony sutures

*A closely-related condition p...
differing only with regard to*
Epidermoid cysts

*In general terms, dermoid/e...
to what the two presentation...
manner in which it presents*

The lesion's location

<i>Painful?</i>	No	No
<i>Presentation</i>	Slowly... enlarging mass	Slowly... progressive proptosis
<i>Age it becomes clinically apparent</i>	Can epi/dermoid cysts appear in the nasal orbit? Yes, but it is uncommon and unexpected	
<i>Nasal vs temporal aspect of orbit</i>	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal

Q

Pre-septal mass in nasal orbit

?

Anatomic issue:
Is the mass...

?

In very general terms,
what sort of lesion is this?
A choristoma

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?
#1

What embryologic event results in this?
The sequestration of dermoid

The differential for a preseptal mass in the nasal orbit of an infant is influenced by another anatomic factor—what is it?

A closely-related condition presents in a similar manner,
differing only with regard to location.
Epidermoid cysts

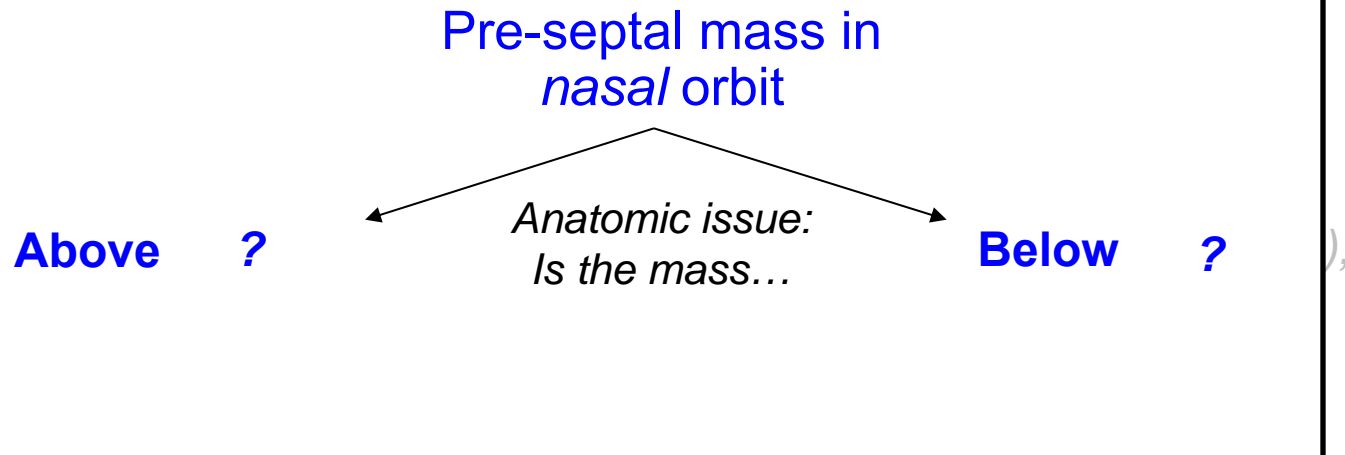
In general terms, dermoid/epidermoid cysts differ
to what the two presentation differ in
manner in which it presents

The lesion's location

Painful?	No	No
Presentation	Slowly... enlarging mass	Slowly... progressive proptosis
Age it becomes clinically apparent	Late infancy/early toddlerhood	Adult
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal

Q/A

In very general terms, what sort of lesion is this?
A choristoma



Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?
#1

What embryologic event results in this?
The sequestration of dermoid

The differential for a preseptal mass in the nasal orbit of an infant is influenced by another anatomic factor—what is it?
It's whether the mass is above or below the

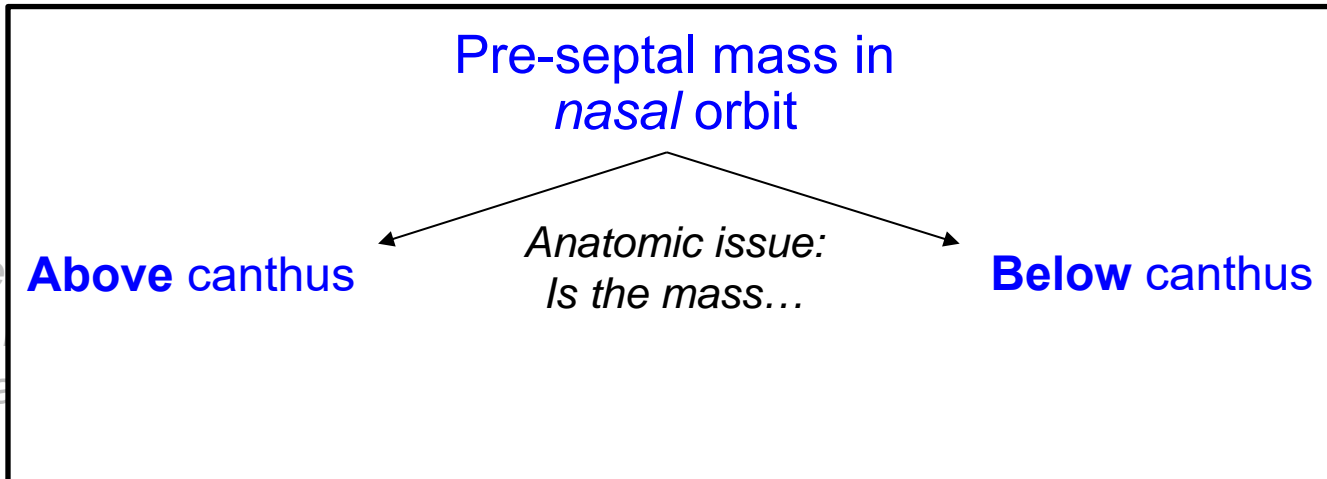
two words

A closely-related condition presents in a similar manner, differing only with regard to
Epidermoid cysts

In general terms, dermoid/epidermoid cysts differ in the manner in which it presents
The lesion's location

Painful?	No	No
Presentation	Slowly... enlarging mass	Slowly... progressive proptosis
Age it becomes clinically apparent	Late infancy/early toddlerhood	Adult
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal

A



In very general terms,
what sort of lesion is this?
A choristoma

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?
#1

What embryologic event results in this?
The sequestration of dermoid tissue

The differential for a preseptal mass in the nasal orbit of an infant is influenced by another anatomic factor—what is it?
It's whether the mass is above or below the medial canthus

A closely-related condition presents in a similar manner,
differing only with regard to presentation
Epidermoid cysts

In general terms, dermoid/epidermoid cysts differ
to what the two presentation differ in
manner in which it presents
The lesion's location

Painful?	No	No
Presentation	Slowly... enlarging mass	Slowly... progressive proptosis
Age it becomes clinically apparent	Late infancy/early toddlerhood	Adult
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal

Q

Pre-septal mass in nasal orbit

Above canthus

Anatomic issue:
Is the mass...

Below canthus

In very general terms,
what sort of mass is this?
A choristoma

└ ?

What is the primary condition of concern for a
mass **above** the nasal canthus in an infant?

space-occupying orbital lesions in kids?

What embryologic event results in this?
The sequestration of dermoid

What is the primary concern for a preseptal mass in the nasal orbit of an
infant is influenced by another anatomic factor—what is it?
It's whether the mass is above or below the medial canthus

A closely-related condition presents in a similar manner,
differing only with regard to presentation
Epidermoid cysts

In general terms, dermoid/epidermoid cysts differ
to what the two presentation differ in
manner in which it presents

The lesion's location

Painful?	No	No
Presentation	Slowly... enlarging mass	Slowly... progressive proptosis
Age it becomes clinically apparent	Late infancy/early toddlerhood	Adult
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal

A

Pre-septal mass in nasal orbit

Above canthus

Anatomic issue:
Is the mass...

Below canthus

Meningocele, etc

What is the primary condition of concern for a mass **above** the nasal canthus in an infant?
#1 A meningocele (or encephalocele, or meningoencephalocele)

space-occupying orbital lesions in kids?

What embryologic event results in the sequestration of dermoid?

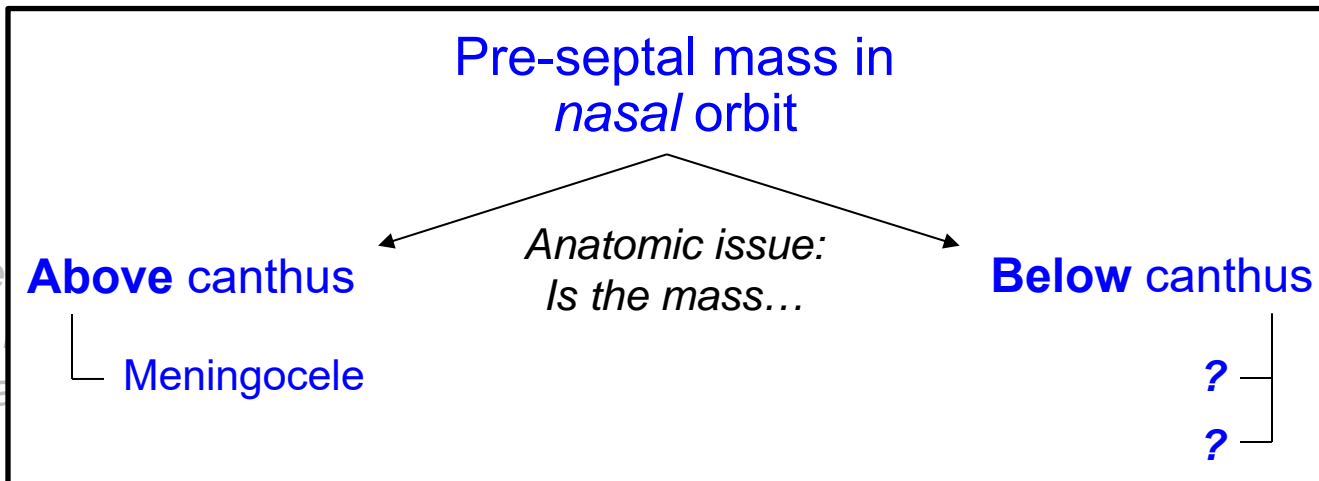
What is the primary concern for a preseptal mass in the nasal orbit of an infant is influenced by another anatomic factor—what is it?
It's whether the mass is above or below the medial canthus

A closely-related condition presenting differently only with regard to location
Epidermoid cysts

In general terms, dermoid/enophthalmos to what the two presentation differ in
manner in which it presents
The lesion's location

Painful?	No	No
Presentation	Slowly... enlarging mass	Slowly... progressive proptosis
Age it becomes clinically apparent	Late infancy/early toddlerhood	Adult
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal

Q



In very general terms,
what sort of mass is this?
A choristoma?

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?
#1

What two conditions top the DDX for a mass
below the nasal canthus in an infant?

What embryologic event results in this?
The sequestration of dermoid tissue

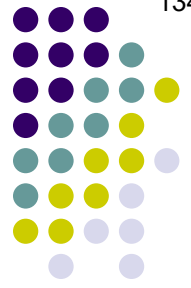
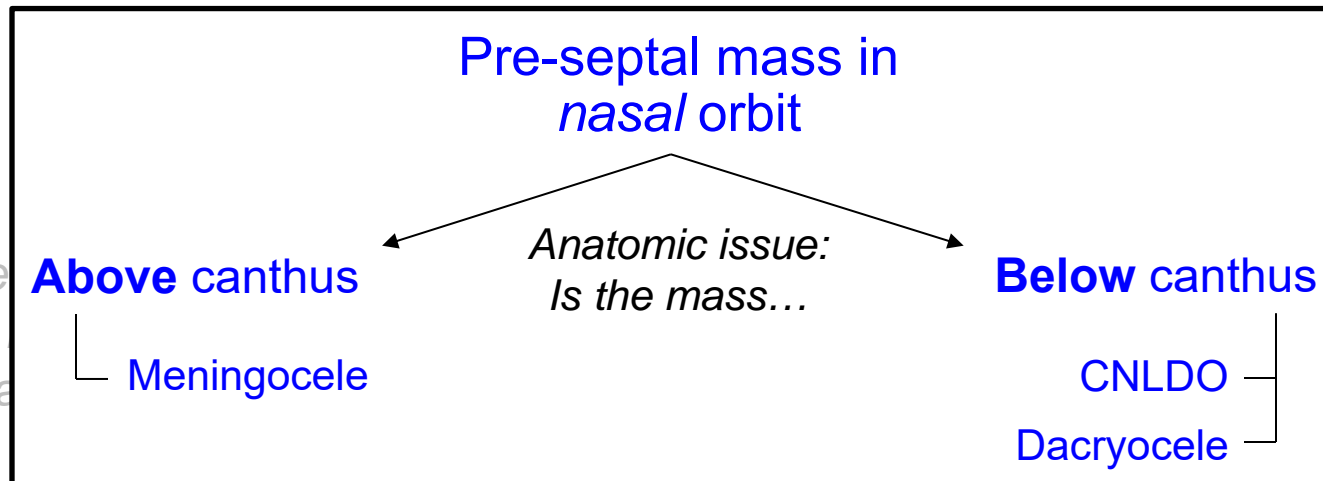
The differential for a mass
in an infant is influenced by
It's whether the mass is above or below the medial canthus

A closely-related condition presents
differing only with regard to location
Epidermoid cysts

In general terms, dermoid/epidermoid cysts differ
to what the two presentation
manner in which it presents
The lesion's location

Painful?	No	No
Presentation	Slowly... enlarging mass	Slowly... progressive proptosis
Age it becomes clinically apparent	Late infancy/early toddlerhood	Adult
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal

A



In very general terms, what sort of mass is a choristoma?

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids? #1

What embryologic event results in the sequestration of dermoid tissue?

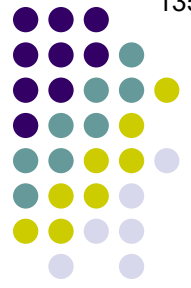
The differential for a mass in an infant is influenced by its location. It's whether the mass is above or below the medial canthus.

What two conditions top the DDX for a mass **below** the nasal canthus in an infant? Congenital nasolacrimal duct obstruction (CNLDO), and dacryoceles

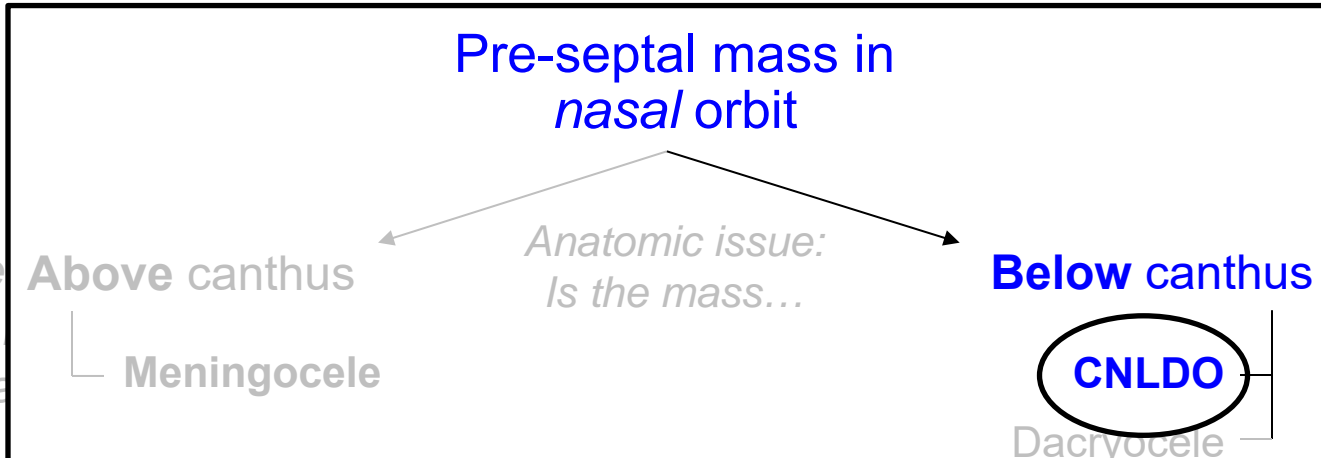
A closely-related condition presents differently, differing only with regard to presentation. Epidermoid cysts

In general terms, dermoid/epidermoid cysts differ in the manner in which they present. The lesion's location

Painful?	No	No
Presentation	Slowly... enlarging mass	Slowly... progressive proptosis
Age it becomes clinically apparent	Late infancy/early toddlerhood	Adult
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal



Q



In very general terms, what sort of mass is this? A choristoma

Where is it?

In a nutshell, what is the pathophysiology underlying CNLDO?

What else is it?

A close differential diagnosis is Epidermoid

In general terms, dermoid/epidermoid to what the two presentation manner in which it presents

The lesion's location

Age it becomes clinically apparent	Late infancy/early toddlerhood	Adult
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal

Q/A

Pre-septal mass in nasal orbit

Above canthus

Meningocele

Anatomic issue:
Is the mass...

Below canthus

CNLDO

Dacryocoele

In a nutshell, what is the pathophysiology underlying CNLDO?

Obstruction at the proximal v distal end of the two words leads to stasis of fluid within the two related words, which subsequently becomes infected

In general terms, dermoid/e
to what the two presentation
manner in which it presents
The lesion's location

Age it becomes clinically apparent	Late infancy/early toddlerhood	Adult
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal

A

In very general terms, what sort of lesion is this? A choristoma

Above canthus

Meningocele

Pre-septal mass in
nasal orbit

Anatomic issue:
Is the mass...

Below canthus

CNLDO

Dacryocoele

Where is it?
#1

In a nutshell, what is the pathophysiology underlying CNLDO?

Obstruction at the distal end of the nasolacrimal duct leads to stasis of fluid within the lacrimal sac, which subsequently becomes infected

What else is it?
The second

A close relationship
differentiating
Epidermoid

In general terms, dermoid/epidermoid
to what the two presentation
manner in which it presents
The lesion's location

Age it becomes
clinically apparent

Late infancy/early
toddlerhood

Adult

Nasal vs temporal
aspect of orbit

~~Nasal!~~
~~Temporal~~

~~Nasal!~~
~~Temporal~~

Pre-septal

Post-septal

Q

In very general terms, what sort of lesion is a choristoma?

Above canthus

Meningocele

Pre-septal mass in
nasal orbit

Anatomic issue:
Is the mass...

Below canthus

CNLDO

Dacryocoele

Where is the lesion?

In a nutshell, what is the pathophysiology underlying CNLDO?

Obstruction at the distal end of the nasolacrimal duct leads to stasis of fluid within the lacrimal sac, which subsequently becomes infected

What are the signs and symptoms?

What is the classic sign of CNLDO?

A close differential diagnosis is Epidermoid

In general terms, dermoid/epidermoid to what the two presentation manner in which it presents

The lesion's location

Age it becomes clinically apparent	Late infancy/early toddlerhood	Adult
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal

A

In very gene
what sort of
A choristoma

Above canthus

Meningocele

Pre-septal mass in
nasal orbit

Anatomic issue:
Is the mass...

Below canthus

CNLDO

Dacryocoele

Where
#1

In a nutshell, what is the pathophysiology underlying CNLDO?

Obstruction at the distal end of the nasolacrimal duct leads to stasis of fluid within the lacrimal sac, which subsequently becomes infected

What e
The se

What is the classic sign of CNLDO?

The presence of epiphora with sticky mucopurulent discharge. Further, the lacrimal sac often swells, resulting in an erythematous mass below the nasal canthus.

A close
differin
Epider

In general terms, dermoid/e
to what the two presentation
manner in which it presents
The lesion's location

Age it becomes clinically apparent	Late infancy/early toddlerhood	Adult
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal

Q

In very general terms, what sort of lesion is a choristoma?

Above canthus

Meningocele

Pre-septal mass in
nasal orbit

Anatomic issue:
Is the mass...

Below canthus

CNLDO

Dacryocoele

Where is the lesion?

In a nutshell, what is the pathophysiology underlying CNLDO?

Obstruction at the distal end of the nasolacrimal duct leads to stasis of fluid within the lacrimal sac, which subsequently becomes infected

What are the signs and symptoms?

What is the classic sign of CNLDO?

The presence of epiphora with sticky mucopurulent discharge. Further, the lacrimal sac often swells, resulting in an erythematous mass below the nasal canthus.

A close differential diagnosis?

How is CNLDO managed?

In general terms, dermoid/epidermoid cysts present in two different ways depending on the manner in which it presents

The lesion's location

Age it becomes clinically apparent

Late infancy/early toddlerhood

Adult

Nasal vs temporal aspect of orbit

~~Nasal!~~
~~Temporal~~

~~Nasal!~~
~~Temporal~~

Pre-septal

Post-septal

Q/A

In very gene
what sort of
A choristoma

Above canthus

Meningocele

Pre-septal mass in
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A close
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How is CNLDO managed?

Epider

Initially conservatively, with lacrimal-sac massage + topical abx-steroid drop; if this fails, with probing at around age

In general terms, dermoid/e
to what the two presentation
manner in which it presents
The lesion's location

Age it becomes clinically apparent	Late infancy/early toddlerhood	Adult
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal

A

In very gene
what sort of
A choristoma

Above canthus

Meningocele

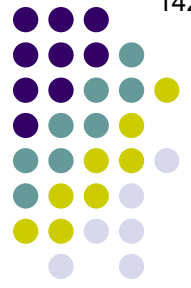
Pre-septal mass in
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Where
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A close
differin

How is CNLDO managed?

Epider

Initially conservatively, with lacrimal-sac massage + topical abx-steroid drop; if this fails, with probing at around age 1 yr

In general terms, dermoid/e
to what the two presentation
manner in which it presents
The lesion's location

Age it becomes clinically apparent	Late infancy/early toddlerhood	Adult
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
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Q

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What is the classic sign of CNLDO?

The presence of **epiphora** with sticky mucopurulent discharge. Further, the lacrimal sac often swells, resulting in an erythematous mass below the nasal canthus.

What blinding condition must always, always, ALWAYS be ruled out in an infant with epiphora?

al abx-steroid drop; if this fails,

In general terms, dermoid/e
to what the two presentation
manner in which it presents
The lesion's location

Age it becomes
clinically apparent

Late infancy/early
toddlerhood

Adult

Nasal vs temporal
aspect of orbit

Nasal!
~~Temporal~~

Nasal!
~~Temporal~~

Pre-septal

Post-septal

A

In very gene
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What blinding condition must always, always, ALWAYS be ruled out in an infant with epiphora?

Glaucoma. Epiphora is part of the 'classic triad' in the presentation of congenital glaucoma.

In general terms, dermoid/e
to what the two presentation
manner in which it presents
The lesion's location

Age it becomes
clinically apparent

Late infancy/early
toddlerhood

Adult

Nasal vs temporal
aspect of orbit

Nasal!
~~Temporal~~

Nasal!
~~Temporal~~

Pre-septal

Post-septal

Q

In very general terms, what sort of mass is this?
A choristoma

Above canthus

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Pre-septal mass in
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Anatomic issue:
Is the mass...

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CNLDO

Dacryocoele

Where is the mass?
#1

In a nutshell, what is the pathophysiology underlying CNLDO?

Obstruction at the distal end of the nasolacrimal duct leads to stasis of fluid within the lacrimal sac, which subsequently becomes infected

What are the classic signs of CNLDO?
The second

What is the classic sign of CNLDO?
The presence of epiphora with the lacrimal sac often swells, resulting in an erythematous swelling

epiphora

What are the other two findings in the classic triad?

--Epiphora

--

--

What blinding condition must always, always, always be ruled out in an infant with epiphora?

Glaucoma. Epiphora is part of the 'classic triad' in the presentation of congenital glaucoma. Always rule out glaucoma first with an abx-steroid drop; if this fails,

In general terms, dermoid/cyst vs what the two presentation
manner in which it presents
The lesion's location

Age it becomes
clinically apparent

Late infancy/early
toddlerhood

Adult

Nasal vs temporal
aspect of orbit

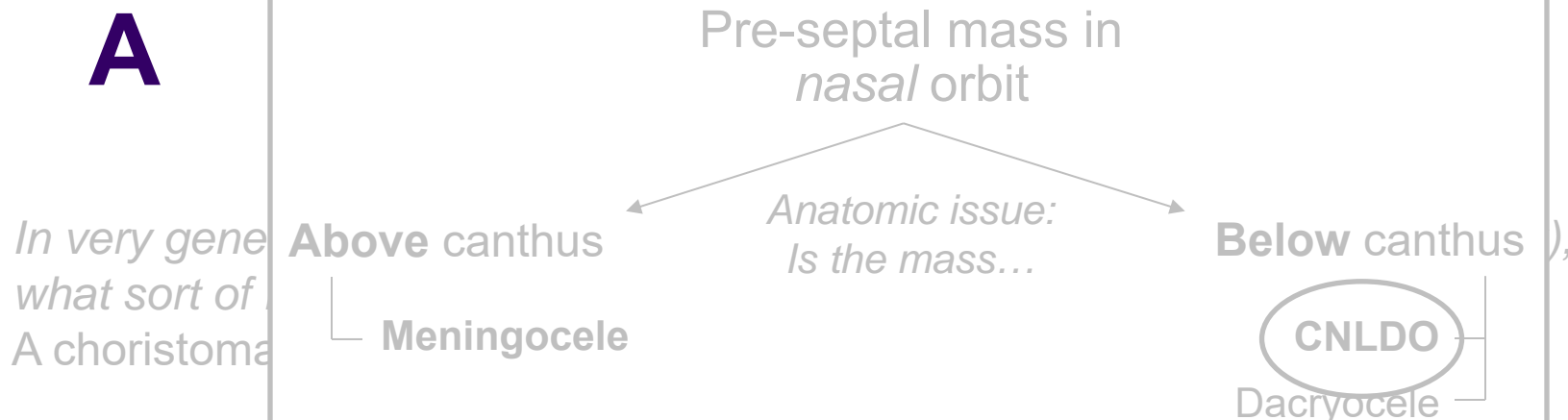
Nasal!
~~Temporal~~

Nasal!
~~Temporal~~

Pre-septal

Post-septal

A



Where #1 In a nutshell, what is the pathophysiology underlying CNLDO?

Obstruction at the distal end of the nasolacrimal duct leads to stasis of fluid within the lacrimal sac, which subsequently becomes infected

What is the classic sign of CNLDO? The presence of epiphora

What are the other two findings in the classic triad?

- Epiphora
- Photophobia
- Blepharospasm

What blinding condition must always, always be ruled out in an infant with epiphora?

Glaucoma. Epiphora is part of the 'classic triad' in the presentation of congenital glaucoma.

In general terms, dermoid/cyst to what the two presentation manner in which it presents

The lesion's location

Age it becomes clinically apparent	Late infancy/early toddlerhood	Adult
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal

Q

In very general terms, what sort of lesion is a choristoma?

Above canthus

Meningocele

Pre-septal mass in
nasal orbit

Anatomic issue:
Is the mass...

Below canthus

CNLDO

Dacryoceles

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?
#1

Do dacryoceles present with sticky, mucopurulent epiphora a la congenital NLDO?

What embryologic origin does the sequestrated tissue have?

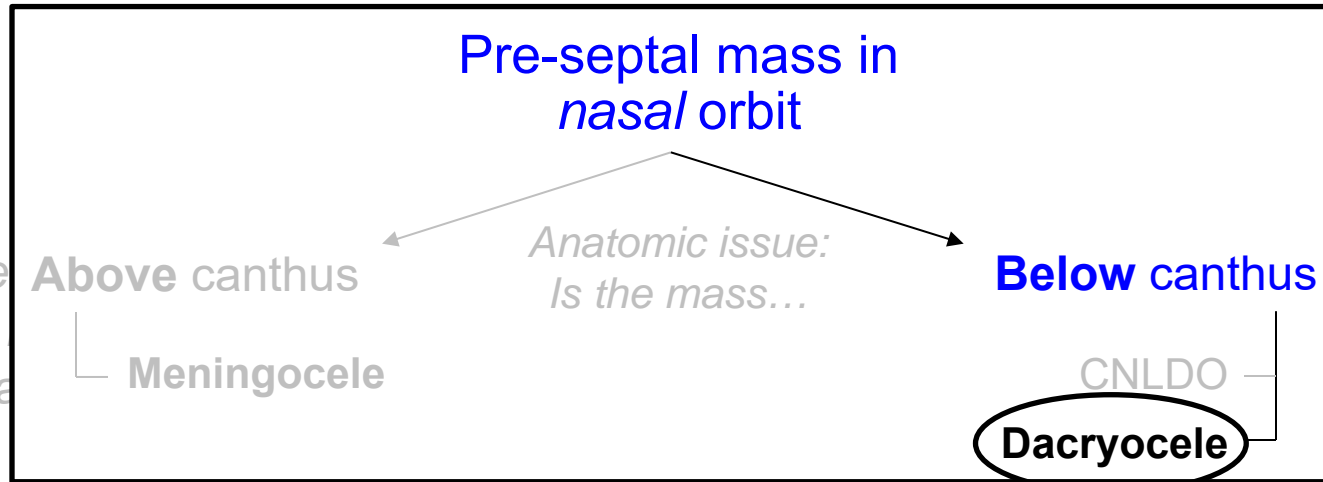
A closely-related entity is the epidermoid cyst, differing only with respect to the lesion's location.

In general terms, what are the two presentation patterns to what the two presentation patterns are based on the manner in which it presents?

The lesion's location

Clinically apparent	Location	Location
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal

A



In very general terms, what sort of mass is a choristoma?

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?

#1

Do dacryoceles present with sticky, mucopurulent epiphora à la congenital NLDO?

No. In fact, they generally don't have much epiphora at all.

What embryologic origin does the sequestrated part of the eyelid have?

A closely-related entity is the epidermoid cyst, differing only in its location.

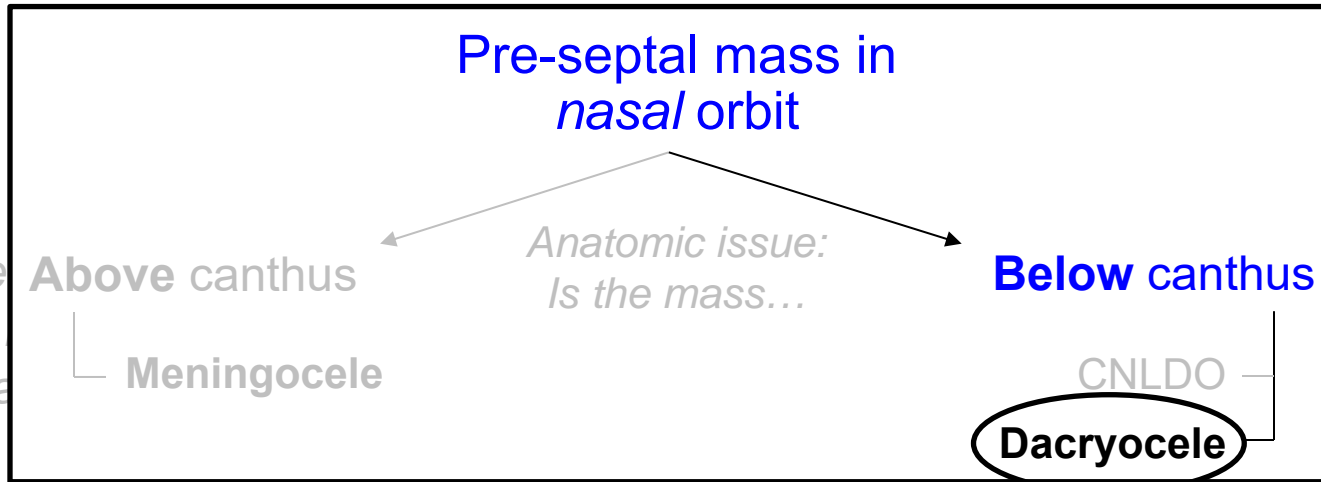
Epidermoid cyst

In general terms, what are the two presentation manners in which it presents?

The lesion's location

Clinically apparent	Location	Location
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal

Q



In very general terms,
what sort of lesions are these?
A choristoma

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?
#1

Do dacryoceles present with sticky, mucopurulent epiphora à la congenital NLDO?
No. In fact, they generally don't have much epiphora at all.

What embryologic origin do they have?
The sequestration of ectoderm

When and how does dacryoceles present?

A closely-related entity is the epidermoid cyst,
differing only with respect to the histology.
Epidermoid cyst

In general terms, what are the two presentation
to what the two presentation
manner in which it presents
The lesion's location

Clinically apparent	Location	Location
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
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Q/A

In very gene
what sort of
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Above canthus

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Pre-septal mass in
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Anatomic issue:
Is the mass...

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CNLDO

Dacryoceles

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No. In fact, they generally don't have much epiphora at all.

What embryologic
The sequestrated

When and how does dacryoceles present?

At birth, with a classic color swelling below the nasal canthus

classic
color

A closely-related
differing only w
Epidermoid cyst

In general terms
to what the two presentation
manner in which it presents
The lesion's location

Clinically apparent

Location

Nasal vs temporal
aspect of orbit

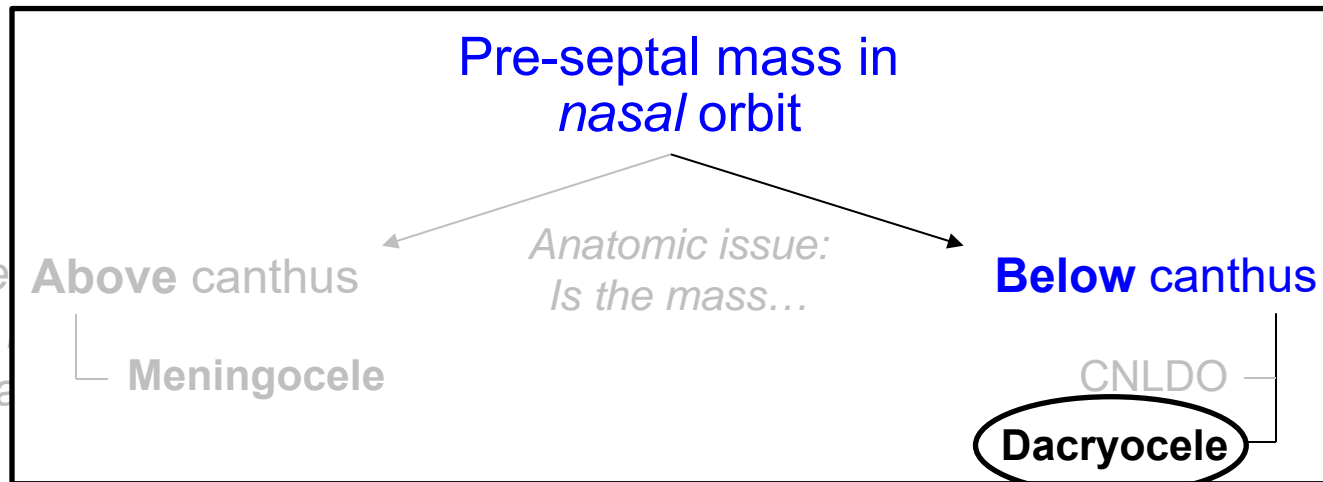
Nasal!
~~Temporal~~

~~Nasal!~~
~~Temporal~~

Pre-septal

Post-septal

A



In very general terms, what sort of lesion is a choristoma?

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?

#1

Do dacryoceles present with sticky, mucopurulent epiphora à la congenital NLDO?

No. In fact, they generally don't have much epiphora at all.

What embryologic origin does the sequestrated lacrimal sac have?

When and how does dacryocoele present?

At birth, with a bluish swelling below the nasal canthus

A closely-related entity is the epidermoid cyst, differing only in its histologic appearance.

Epidermoid cyst

In general terms, what are the two presentation patterns for the lesion?

to what the two presentation patterns differ in

manner in which it presents

The lesion's location

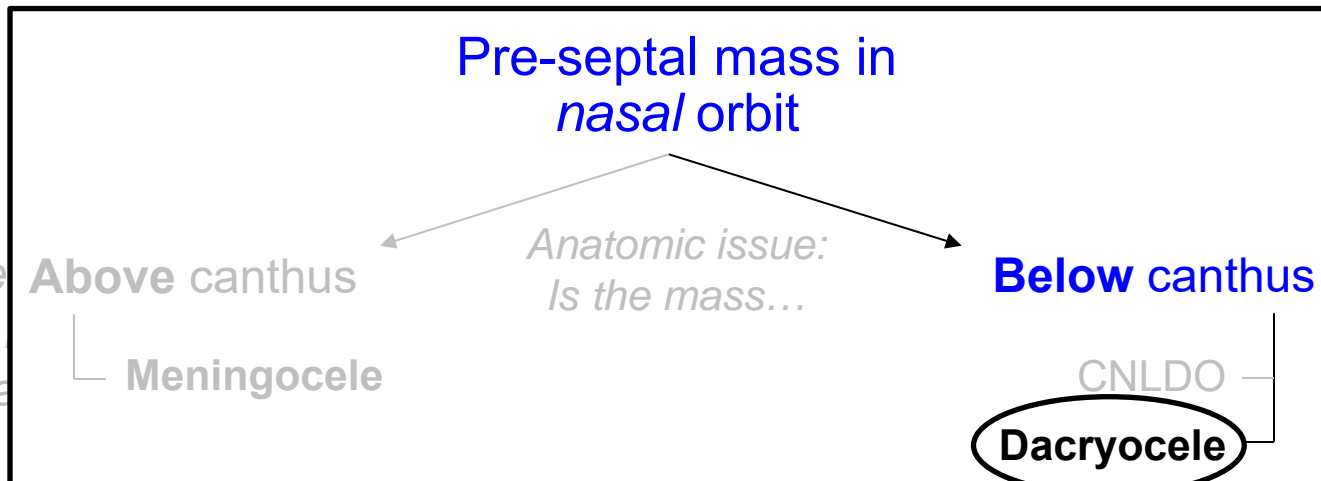
Clinically apparent location	Location	Location
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal

Orbital Dermoid Cysts



Dacryoceles

Q



In very general terms,
what sort of lesion is this?
A choristoma

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?
#1

What embryologic origin does it have?
The sequestration of ectoderm

A closely-related entity is the epidermoid cyst,
differing only with respect to the histologic appearance.
Epidermoid cyst

In general terms, what are the clinical features of a dermoid cyst?

to what the two presentations differ in
manner in which it presents

The lesion's location

Do dacryoceles present with sticky, mucopurulent epiphora à la congenital NLDO?
No. In fact, they generally don't have much epiphora at all.

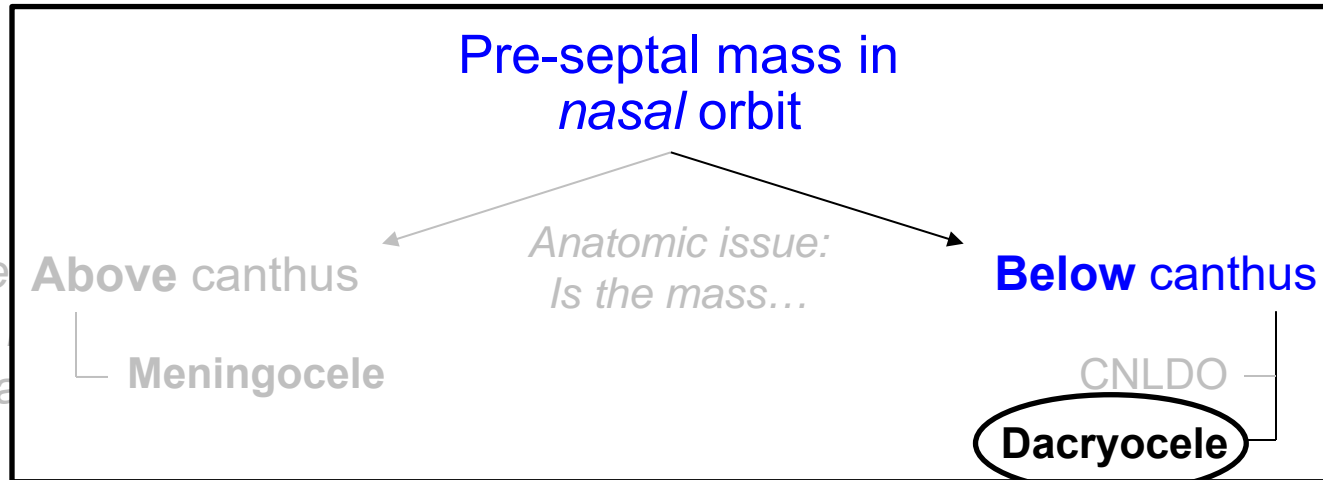
When and how does dacryoceles present?

At birth, with a **bluish** swelling below the nasal canthus

What is the key anatomic difference between CNLDO and dacryoceles?

Clinically apparent	Location	Location
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal

A



In very general terms, what sort of lesion is a choristoma?

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?

#1

Do dacryoceles present with sticky, mucopurulent epiphora à la congenital NLDO?

No. In fact, they generally don't have much epiphora at all.

What embryologic origin does the sequestrated lacrimal sac have?

When and how does dacryocoele present?

At birth, with a bluish swelling below the nasal canthus

A closely-related entity is the epidermoid cyst, differing only with respect to the site of origin.

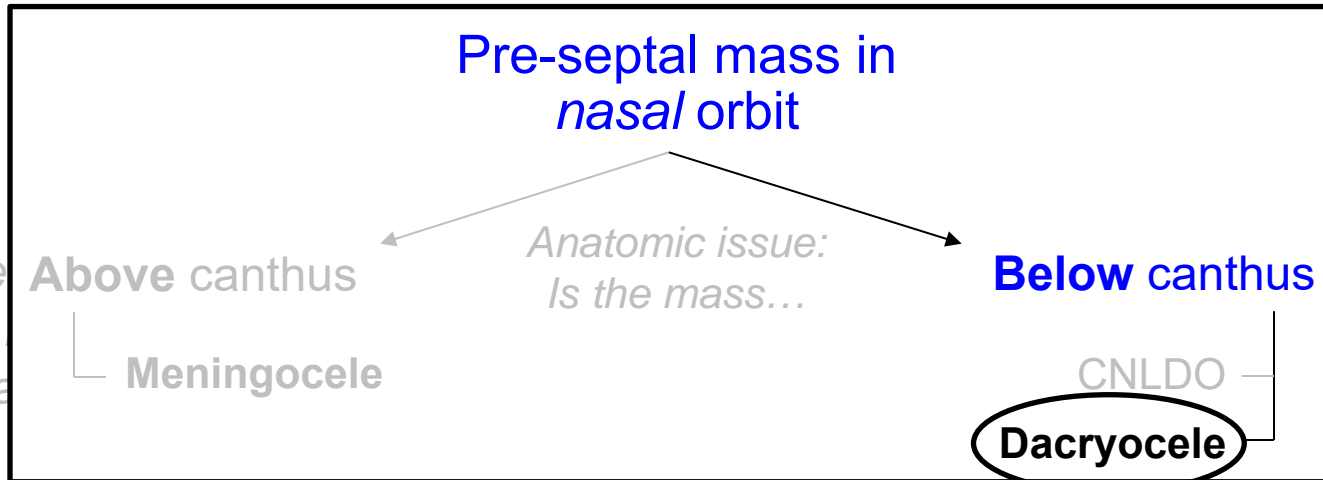
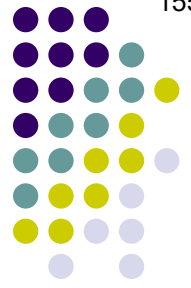
What is the key anatomic difference between CNLDO and dacryocoele?

CNLDO involves obstruction at only one site ('below' the lacrimal sac), whereas a dacryocoele involves obstruction at **two**—one below the lacrimal sac (as in CNLDO), but also one 'above' it (usually at the common canaliculus)

In general terms, what are the two presentation patterns for pre-septal masses?

The lesion's location

Clinically apparent location	Location	Location
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal



In very general terms, what sort of lesion is a choristoma?

Where does dermoid cyst rank as a cause of space-occupying orbital lesions in kids?

#1

Do dacryoceles present with sticky, mucopurulent epiphora à la congenital NLDO?

No. In fact, they generally don't have much epiphora at all.

What embryologic origin does the sequestrated lacrimal sac have?

When and how does dacryocoele present?

At birth, with a **bluish** swelling below the nasal canthus

A closely-related entity is Epidermoid cyst, differing only with respect to the lesion's histology.

What is the key anatomic difference between CNLDO and dacryocoele?

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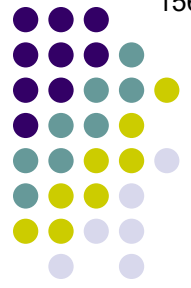
In general terms, what are the two presentation patterns for these lesions?

For more about CNLDO and dacryoceles, see slide-set O8

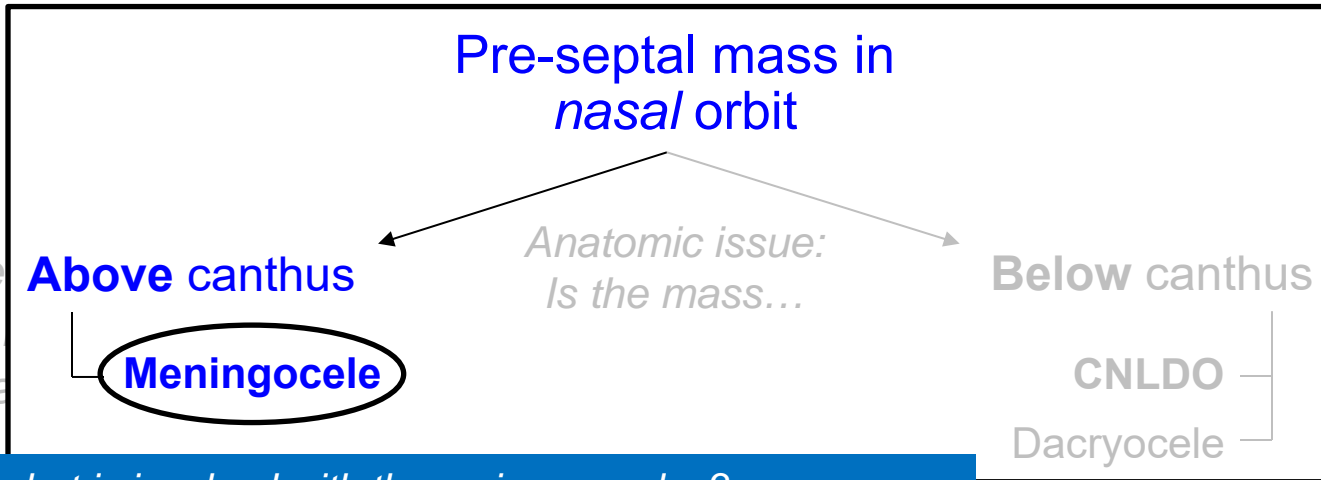
manner in which it presents

The lesion's location

Clinically apparent location		Embryologic location	
Nasal vs temporal aspect of orbit		Nasal! Temporal	Nasal! Temporal
		Pre-septal	Post-septal



Q



In very general terms, what sort of mass is this? A choristoma

),

In a nutshell, what is involved with the various -oceles?

...ing orbital lesions in kids?

...mass in the nasal orbit of an
...anatomic factor—what is it?
...below the medial canthus

In general terms, dermoid/e
to what the two presentation
manner in which it presents
The lesion's location

	No
...y... mass	Slowly... progressive proptosis
Age it becomes clinically apparent	Late infancy/early toddlerhood
Nasal vs temporal aspect of orbit	Nasal! Temporal
	Pre-septal
	Post-septal

A

In very general terms, what sort of lesion is this?
A choristoma

Above canthus

Meningocele

Pre-septal mass in
nasal orbitAnatomic issue:
Is the mass...

Below canthus

CNLDO

Dacryocoele

...involving orbital lesions in kids?

...mass in the nasal orbit of an
...anatomic factor—what is it?
...below the medial canthus

In a nutshell, what is involved with the various -oceles?
A herniation of CNS contents through a bony defect

In general terms, dermoid/cystic
to what the two presentation
manner in which it presents
The lesion's location

Age it becomes
clinically apparentNasal vs temporal
aspect of orbitLate infancy/early
toddlerhood~~Nasal!~~
~~Temporal~~

Pre-septal

No

...y...
massSlowly...
progressive proptosis

Adult

~~Nasal!~~
~~Temporal~~

Post-septal

Orbital Dermoid Cysts



Nasal encephalocele

Q

In very general terms, what sort of mass is this?
A choristoma

Above canthus

Meningocele

Pre-septal mass in
nasal orbit

Anatomic issue:
Is the mass...

Below canthus

CNLDO

Dacryoceles

...involving orbital lesions in kids?

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...below the medial canthus

In a nutshell, what is involved with the various -oceles?
A herniation of CNS contents through a bony defect

What's up with the various names?

In general terms, dermoid/epidermoid
to what the two presentation
manner in which it presents
The lesion's location

Age it becomes
clinically apparent

Nasal vs temporal
aspect of orbit

Late infancy/early
toddlerhood

Nasal!
~~Temporal~~

Pre-septal

No

...y...
mass
Slowly...
progressive proptosis

Adult

Nasal!
~~Temporal~~

Post-septal

A

In very general terms, what sort of mass is this? A choristoma

Above canthus

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Pre-septal mass in
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Anatomic issue:
Is the mass...

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Dacryocoele

...ing orbital lesions in kids?

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...anatomic factor—what is it?
...below the medial canthus

In a nutshell, what is involved with the various -oceles?
A herniation of CNS contents through a bony defect

What's up with the various names?

They reflect the contents of the herniation. If it's meninges only, it's called a **meningocele**. If it's brain tissue, it's an **encephalocele**. If both are present, it's a **meningoencephalocele**.

In general terms, dermoid/epidermoid
to what the two presentation
manner in which it presents
The lesion's location

		No
...y... mass		Slowly... progressive proptosis
Age it becomes clinically apparent	Late infancy/early toddlerhood	Adult
Nasal vs temporal aspect of orbit	Nasal! Temporal	Nasal! Temporal
	Pre-septal	Post-septal

Q

In very general terms, what sort of mass is this? A choristoma

Above canthus

Meningocele

Pre-septal mass in
nasal orbit

Anatomic issue:
Is the mass...

Below canthus

CNLDO

Dacryocoele

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...mass in the nasal orbit of an
...anatomic factor—what is it?
...below the medial canthus

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A herniation of CNS contents through a bony defect

What's up with the various names?
They reflect the contents of the herniation. If it's meninges only, it's called a **meningocele**. If it's brain tissue, it's an **encephalocele**. If both are present, it's a **meningoencephalocele**.

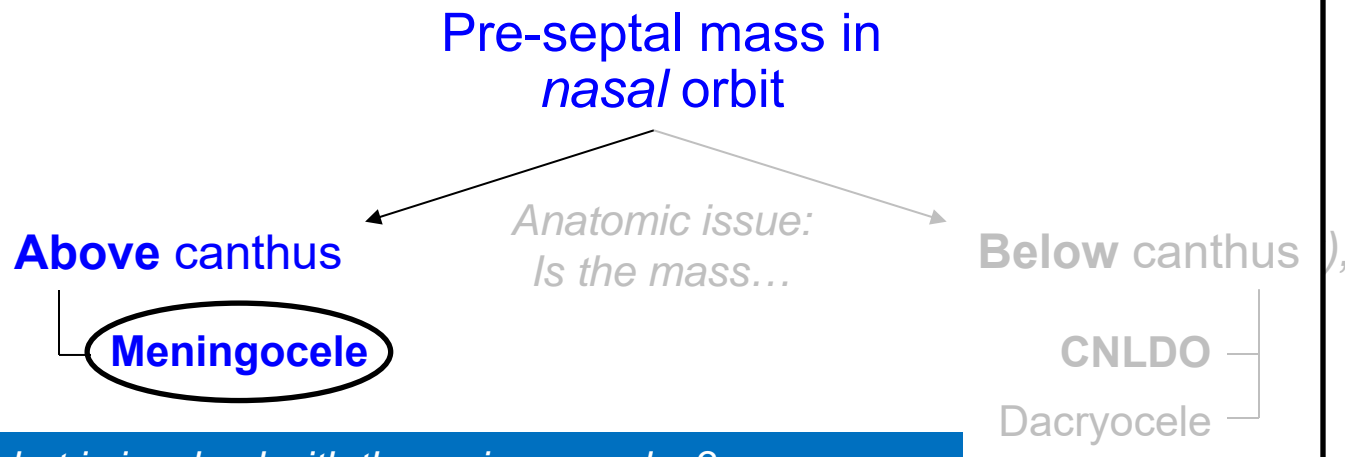
In addition to its relation to the medial canthus, what other exam finding should alert you to the possibility that one of these 'oceles' is present?

In general terms, dermoid/ectodermal mass
to what the two presentation
manner in which it presents
The lesion's location

Age it becomes clinically apparent	Late infancy/early toddlerhood	No
Nasal vs temporal aspect of orbit	Nasal! Temporal	Slowly... progressive proptosis
	Pre-septal	Adult
		Nasal! Temporal
		Post-septal

Q/A

In very general terms, what sort of mass is a choristoma?



In a nutshell, what is involved with the various -oceles?
A herniation of CNS contents through a bony defect

What's up with the various names?

They reflect the contents of the herniation. If it's meninges only, it's called a **meningocele**. If it's brain tissue, it's an **encephalocele**. If both are present, it's a **meningoencephalocele**.

In addition to its relation to the medial canthus, what other exam finding should alert you to the possibility that one of these 'oceles' is present?

If the mass is one word

In general terms, dermoid/epidermoid—what are the two presentation manner in which it presents?

The lesion's location

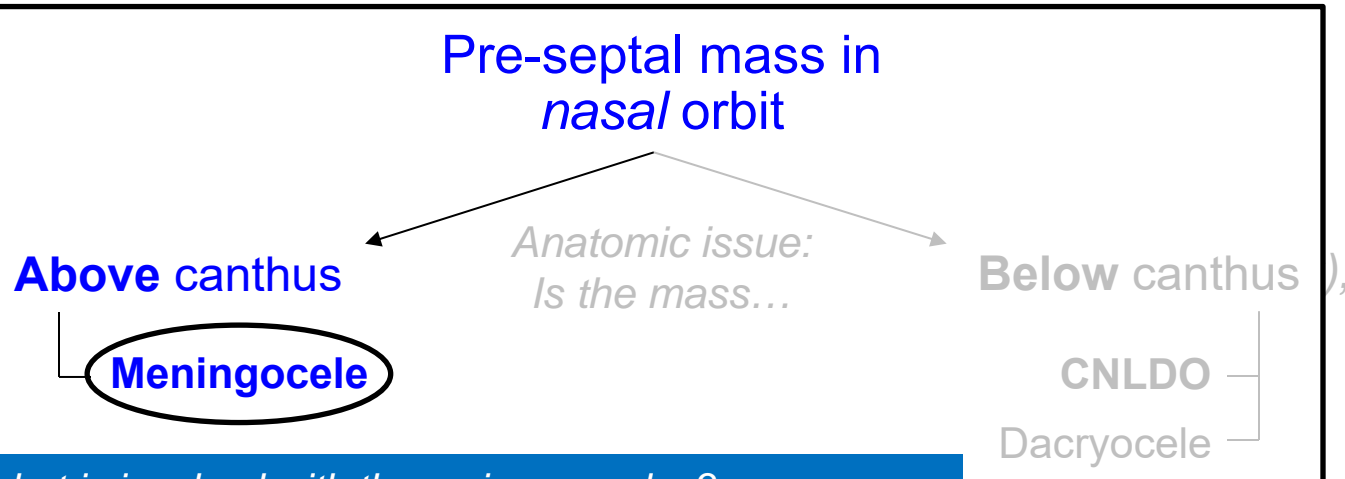
Age it becomes clinically apparent	Late infancy/early toddlerhood	No
Nasal vs temporal aspect of orbit	Nasal! Temporal	Slowly... progressive proptosis
	Pre-septal	Adult
		Nasal! Temporal
		Post-septal

...lying orbital lesions in kids?

...mass in the nasal orbit of an infant—what is it?
...below the medial canthus

A

In very general terms, what sort of mass is this? A choristoma



In a nutshell, what is involved with the various -oceles?
A herniation of CNS contents through a bony defect

What's up with the various names?

They reflect the contents of the herniation. If it's meninges only, it's called a **meningocele**. If it's brain tissue, it's an **encephalocele**. If both are present, it's a **meningoencephalocele**.

In addition to its relation to the medial canthus, what other exam finding should alert you to the possibility that one of these 'oceles' is present?

If the mass is pulsatile

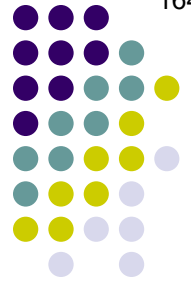
In general terms, dermoid/encephalocele—what are the two presentation manner in which it presents

The lesion's location

Age it becomes clinically apparent	Late infancy/early toddlerhood	No
Nasal vs temporal aspect of orbit	Nasal! Temporal	Slowly... progressive proptosis
	Pre-septal	Adult
		Nasal! Temporal
		Post-septal

...lying orbital lesions in kids?

...mass in the nasal orbit of an anatomic factor—what is it?
...below the medial canthus



Q

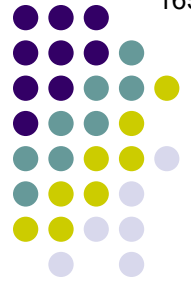
Orbital Dermoid Cysts

- Dermoid cysts: Management
 - Depends upon whether the cyst in question is

two-words

VS

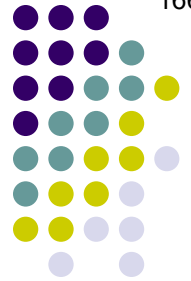
slightly diff two-words



A

Orbital Dermoid Cysts

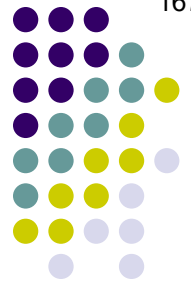
- Dermoid cysts: Management
 - Depends upon whether the cyst in question is pre-septal vs post-septal



Q

Orbital Dermoid Cysts

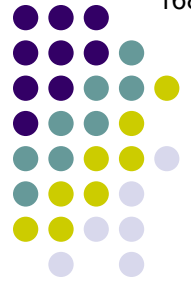
- Dermoid cysts: Management
 - Depends upon whether the cyst in question is **pre-septal** vs **post-septal**
 - *Pre-septal*: Surgical excision... when?
 - *Post-septal*: Surgical excision...



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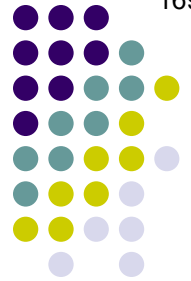
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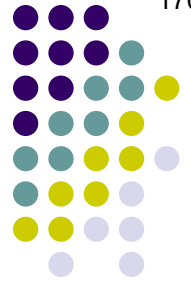
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Why this age?



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 - *Pre-septal*: Surgical excision... **around age 1 year**
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 - Why this age?*
Because it is around this age when the risk of accidental cyst rupture (due to incidental trauma commonly experienced by unsteady toddlers) outweighs risk of surgical anesthesia



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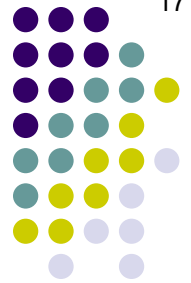
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Why is cyst rupture something to be avoided?



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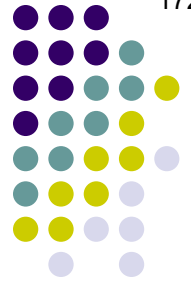
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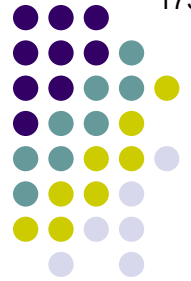
Why is cyst rupture something to be avoided?
Good question! We'll address it shortly



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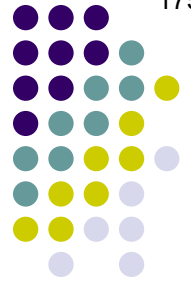
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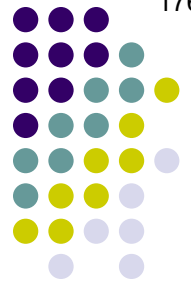
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 - For both locations, every effort must be made to avoid three words during surgical removal



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Why is it important not to rupture the cyst during excision?



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Why is it important not to rupture the cyst during excision?

Because the cyst's contents are highly inflammogenic-- if spilled, they can produce significant local scarring. (And, circling back: This is also why traumatic rupture is something to be avoided.)