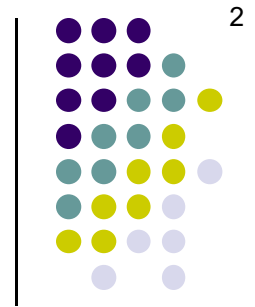


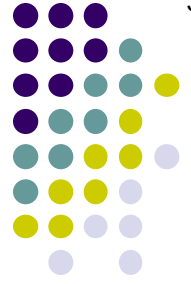
- When anisocoria is present...

Q



- When anisocoria is present...

When faced with anisocoria, what do you want to know first and foremost?



A

- When anisocoria is present...

When faced with anisocoria, what do you want to know first and foremost?

Which pupil (if either) is 'the culprit'; ie, is the larger pupil failing to constrict properly, or is the smaller pupil not dilating properly?

Q



- When anisocoria is present...

*When faced with anisocoria, what do you want to know first and foremost?
Which pupil (if either) is 'the culprit'; ie, is the larger pupil failing to constrict properly, or is the smaller pupil not dilating properly?*

How can you tell which pupil is the culprit?

Q



- When anisocoria is present...

When faced with anisocoria, what do you want to know first and foremost?

Which pupil (if either) is 'the culprit'; ie, is the larger pupil failing to constrict properly, or is the smaller pupil not dilating properly?

How can you tell which pupil is the culprit?

By determining the lighting condition under which the anisocoria is more pronounced. If the anisocoria is more pronounced in **dim** light, this indicates the smaller pupil isn't dilating properly (and thus is abnormal). A pupil that fails to dilate is suggestive of a

ANS division



A

- When anisocoria is present...

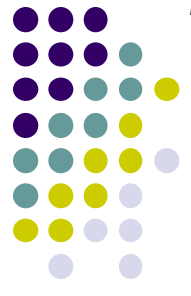
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Q



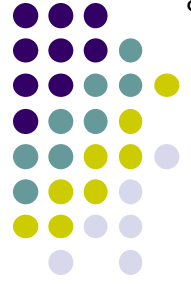
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By determining the lighting condition under which the anisocoria is more pronounced. If the anisocoria is more pronounced in **dim** light, this indicates the smaller pupil isn’t dilating properly (and thus is abnormal). A pupil that fails to dilate is suggestive of a sympathetic pathway problem. Likewise, if the anisocoria is more pronounced in **bright** light, the larger pupil isn’t constricting properly, and is therefore abnormal. A pupil that doesn’t constrict as it should is suggestive of a ANS division pathway problem.



A

- When anisocoria is present...

When faced with anisocoria, what do you want to know first and foremost?

Which pupil (if either) is 'the culprit'; ie, is the larger pupil failing to constrict properly, or is the smaller pupil not dilating properly?

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Q



- When anisocoria is present...

When faced with anisocoria, what do you want to know first and foremost?

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What if the anisocoria is the same under all lighting conditions?



A

- When anisocoria is present...

When faced with anisocoria, what do you want to know first and foremost?

Which pupil (if either) is 'the culprit'; ie, is the larger pupil failing to constrict properly, or is the smaller pupil not dilating properly?

How can you tell which pupil is the culprit?

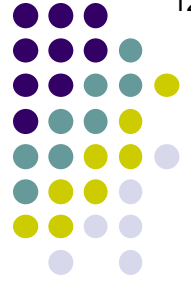
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What if the anisocoria is the same under all lighting conditions?

Then it is nonpathologic or **physiological anisocoria**--a common finding



- When anisocoria is present...and the **larger** pupil is the culprit...



Q

- When anisocoria is present...and the **larger** pupil is the culprit...

As an aside: A pupil that does not constrict owing to inadequate parasympathetic input is often referred to as a pupil



A

- When anisocoria is present...and the **larger** pupil is the culprit...

*As an aside: A pupil that does not constrict owing to inadequate parasympathetic input is often referred to as a **motor pupil***



Q

- When anisocoria is present...and the **larger** pupil is the culprit...
 - **Must** rule out a...



A

- When anisocoria is present...and the **larger** pupil is the culprit...
 - **Must** rule out a...**CN3 palsy**



Q

- When anisocoria is present...and the **larger** pupil is the culprit...
 - **Must** rule out a...**CN3 palsy**
 - Always consider...



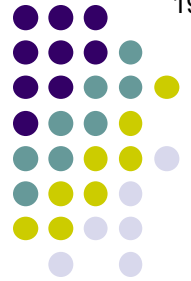
A

- When anisocoria is present...and the **larger** pupil is the culprit...
 - **Must** rule out a...**CN3 palsy**
 - Always consider...**local iris pathology**



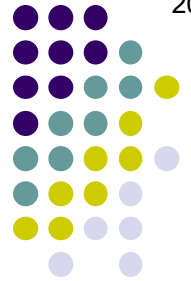
Q

- When anisocoria is present...and the **smaller** pupil is the culprit...
 - **Must** rule out a...



A

- When anisocoria is present...and the **smaller** pupil is the culprit...
 - **Must** rule out a...**Horner syndrome**



Q

- When anisocoria is present...and the **smaller** pupil is the culprit...
 - **Must** rule out a...**Horner syndrome**
 - Always consider...



A

- When anisocoria is present...and the **smaller** pupil is the culprit...
 - **Must** rule out a...**Horner syndrome**
 - Always consider...**local iris pathology**



Q

- common drop can be contributory in evaluating a possible motor pupil



A

- *Pilo testing* can be contributory in evaluating a possible motor pupil



Q

- *Pilo testing* can be contributory in evaluating a possible motor pupil
 - Step 1: Check response to pilo.



A

- *Pilo testing* can be contributory in evaluating a possible motor pupil
 - Step 1: Check response to dilute (1/8-1/16%) pilo.



Q

- *Pilo testing* can be contributory in evaluating a possible motor pupil
 - Step 1: Check response to dilute (1/8-1/16%) pilo. If pupil...
 - ...constricts: is likely an...



A

- *Pilo testing* can be contributory in evaluating a possible motor pupil
 - Step 1: Check response to dilute (1/8-1/16%) pilo. If pupil...
 - ...constricts: is likely an...Adie's pupil



- *Pilo testing* can be contributory in evaluating a possible motor pupil
 - Step 1: Check response to dilute (1/8-1/16%) pilo. If pupil...
 - ...constricts: is likely an...Adie's pupil
 - ...does *not* constrict: Go to Step 2



Q

- *Pilo testing* can be contributory in evaluating a possible motor pupil
 - Step 1: Check response to dilute (1/8-1/16%) pilo. If pupil...
 - ...constricts: is likely an...Adie's pupil
 - ...does *not* constrict: Go to Step 2
 - Step 2: check response to strength pilo.



A

- *Pilo testing* can be contributory in evaluating a possible motor pupil
 - Step 1: Check response to dilute (1/8-1/16%) pilo. If pupil...
 - ...constricts: is likely an...Adie's pupil
 - ...does *not* constrict: Go to Step 2
 - Step 2: check response to full-strength (1%) pilo.

Q



- *Pilo testing* can be contributory in evaluating a possible motor pupil
 - Step 1: Check response to dilute (1/8-1/16%) pilo. If pupil...
 - ...constricts: is likely an...Adie's pupil
 - ...does *not* constrict: Go to Step 2
 - Step 2: check response to full-strength (1%) pilo. If pupil...
 - ...does not constrict: Is a...



A

- *Pilo testing* can be contributory in evaluating a possible motor pupil
 - Step 1: Check response to dilute (1/8-1/16%) pilo. If pupil...
 - ...constricts: is likely an...Adie's pupil
 - ...does *not* constrict: Go to Step 2
 - Step 2: check response to full-strength (1%) pilo. If pupil...
 - ...does not constrict: Is a...drug pupil



Q

- *Pilo testing* can be contributory in evaluating a possible motor pupil
 - Step 1: Check response to dilute (1/8-1/16%) pilo. If pupil...
 - ...constricts: is likely an...Adie's pupil
 - ...does *not* constrict: Go to Step 2
 - Step 2: check response to full-strength (1%) pilo. If pupil...
 - ...does not constrict: Is a...drug pupil
 - ...does constrict: Must image for a



A

- *Pilo testing* can be contributory in evaluating a possible motor pupil
 - Step 1: Check response to dilute (1/8-1/16%) pilo. If pupil...
 - ...constricts: is likely an...Adie's pupil
 - ...does *not* constrict: Go to Step 2
 - Step 2: check response to full-strength (1%) pilo. If pupil...
 - ...does not constrict: Is a...drug pupil
 - ...does constrict: Must image for a...PCA aneurysm

(posterior communicating artery)



Q

- *Pilo testing* can be contributory in evaluating a possible motor pupil
 - Step 1: Check response to dilute (1/8-1/16%) pilo. If pupil...
 - ...constricts: is likely an...Adie's pupil
 - ...does *not* constrict: Go to Step 2
 - Step 2: check response to full-strength (1%) pilo. If pupil...
 - ...does not constrict: Is a...drug pupil
 - ...does constrict: Must image for a...PCA aneurysm

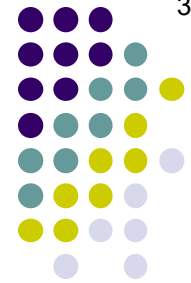
What if a PCA aneurysm is ruled out by imaging (both MRI/MRA and angiography)?



A

- *Pilo testing* can be contributory in evaluating a possible motor pupil
 - Step 1: Check response to dilute (1/8-1/16%) pilo. If pupil...
 - ...constricts: is likely an...Adie's pupil
 - ...does *not* constrict: Go to Step 2
 - Step 2: check response to full-strength (1%) pilo. If pupil...
 - ...does not constrict: Is a...drug pupil
 - ...does constrict: Must image for a...PCA aneurysm

*What if a PCA aneurysm is ruled out by imaging (both MRI/MRA and angiography)?
Is likely an Adie's pupil*



Q

● *Pilo testing* can be contributory in evaluating a possible motor pupil

● Step 1: Check response to dilute (1/8-1/16%) pilo. If pupil...

- ...constricts: **is likely an...Adie's pupil**
- ...does *not* constrict: Go to Step 2

● Step 2: check If pupil...

- ...does not co
- ...does constr

*Wait a minute. According to Step 1, an Adie's pupil constricts with dilute pilo. The reason we tested this pupil with full-strength pilo was that it **failed** to constrict to dilute pilo. So how can it be an Adie's pupil too?*

What if a FCA aneurysm

Is likely an Adie's pupil



A

- *Pilo testing* can be contributory in evaluating a possible motor pupil

- Step 1: Check response to dilute (1/8-1/16%) pilo. If pupil...

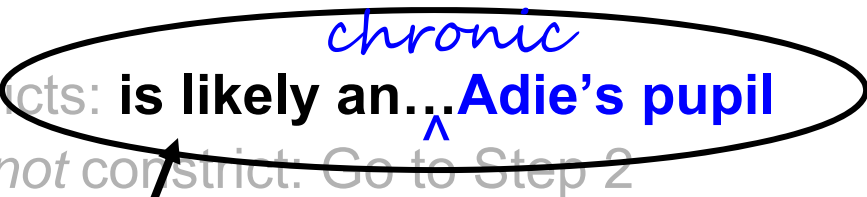
- ...constricts: **is likely an...Adie's pupil**
- ...does not constrict: Go to Step 2

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- ...does not constrict
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Wait a minute. According to Step 1, an Adie's pupil constricts with dilute pilo. The reason we tested this pupil with full-strength pilo was that it **failed** to constrict to dilute pilo. So how can it be an Adie's pupil too? Adie's syndrome involves interruption of the parasympathetics to the eye after the ciliary ganglion. The absence of input produces **denervation supersensitivity** of the receptors at the pupillary constrictor muscle, so a *chronic* Adie's pupil will respond to dilute pilo.

What if a FCA aneurysm
Is likely an Adie's pupil





A

● *Pilo testing* can be contributory in evaluating a possible motor pupil

● Step 1: Check response to dilute (1/8-1/16%) pilo. If pupil...

- ...constricts: **is likely an...^{chronic} Adie's pupil**
- ...does not constrict: Go to Step 2

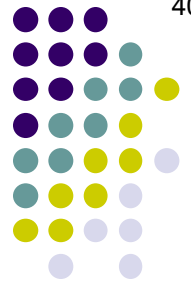
● Step 2: check If pupil...

- ...does not constrict
- ...does constrict

Wait a minute. According to Step 1, an Adie's pupil constricts with dilute pilo. The reason we tested this pupil with full-strength pilo was that it **failed** to constrict to dilute pilo. So how can it be an Adie's pupil too? Adie's syndrome involves interruption of the parasympathetics to the eye after the ciliary ganglion. The absence of input produces **denervation supersensitivity** of the receptors at the pupillary constrictor muscle, so a *chronic* Adie's pupil will respond to dilute pilo. However, denervation supersensitivity takes time to develop; thus, an Adie's of recent onset (a so-called **acute Adie's**) will **not** respond to dilute pilo, but will to full strength.

What if a ^{acute} Adie's pupil
Is likely an Adie's pupil

*Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both***



-
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-



Q

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- Affected pupil smaller:
-
-
-
-
-
-



A

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- Affected pupil smaller: *Chronic*

-

-

-

-

-

-

**Q**

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- Affected pupil smaller: *Chronic*
- Affected pupil larger:
-
-
-
-
-



A

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- Affected pupil smaller: *Chronic*
- Affected pupil larger: *Acute*
-
-
-
-
-



Q

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- Affected pupil smaller: *Chronic*
- Affected pupil larger: *Acute*
- Pilo supersensitivity:
-
-
-
-



A

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-
-
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**Q**

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- Light-near dissociation:
-
-



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- Pupil fixed: *Acute*
- **Light-near dissociation: *Chronic***

What is light-near dissociation?



A

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What is light-near dissociation?

A phenomena in which pupils miose less robustly in response to light than they do as part of the near response



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What are the three general types/locations of light-near dissociation?

--
--
--



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What is light-near dissociation?

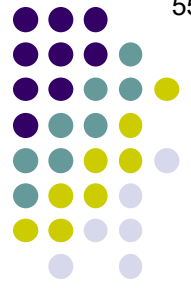
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What are the three general types/locations of light-near dissociation?

--Afferent

--Central

--Peripheral



Q

Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both**

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--Afferent?

--Central?

--Peripheral?

Damage to which type/location is implicated in the light-near dissociation associated with an Adie's?



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Peripheral



Q

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What is light-near dissociation?

A phenomena in which pupils miose less robustly in response to light than they do as part of the near response

What are the three general types/locations of light-near dissociation?

--**Afferent**

--Central

--Peripheral

Where is the lesion in an **afferent** near-light dissociation?



A

Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both**

- Affected pupil smaller: *Chronic*
- Affected pupil larger: *Acute*
- Pilo supersensitivity: *Chronic*
- Pupil fixed: *Acute*
- **Light-near dissociation: *Chronic***

What is light-near dissociation?

A phenomena in which pupils miose less robustly in response to light than they do as part of the near response

What are the three general types/locations of light-near dissociation?

--**Afferent**

--Central

--Peripheral

*Where is the lesion in an **afferent** near-light dissociation?*
Anywhere in the anterior visual pathway



Q

Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both**

- Affected pupil smaller: *Chronic*
- Affected pupil larger: *Acute*
- Pilo supersensitivity: *Chronic*
- Pupil fixed: *Acute*
- **Light-near dissociation: *Chronic***

What is light-near dissociation?
A phenomena in response

What are the three types?
--Afferent
--**Central**
--Peripheral

Where in the brain is the lesion in a **central** near-light dissociation?



A

Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both**

- Affected pupil smaller: *Chronic*
- Affected pupil larger: *Acute*
- Pilo supersensitivity: *Chronic*
- Pupil fixed: *Acute*
- **Light-near dissociation: *Chronic***

What is light-near
A phenomena in
response

What are the three
--Afferent
--**Central**
--Peripheral

Where in the brain is the lesion in a **central** near-light dissociation?
The dorsal midbrain region



Q

Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both**

- Affected pupil smaller: *Chronic*
- Affected pupil larger: *Acute*
- Pilo supersensitivity: *Chronic*
- Pupil fixed: *Acute*
- **Light-near dissociation: *Chronic***

What is light-near dissociation?
A phenomena in which the light response is normal but the near response is absent

What are the three types of light-near dissociation?
--Afferent
--**Central**
--Peripheral

Where in the brain is the lesion in a **central** near-light dissociation?
The dorsal midbrain region

What specific structure of the dorsal midbrain is involved?



A

Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both**

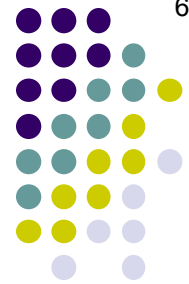
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- Pupil fixed: *Acute*
- **Light-near dissociation: *Chronic***

What is light-near
A phenomena in
response

Where in the brain is the lesion in a **central** near-light dissociation?
The dorsal midbrain region

What are the three
--Afferent
--**Central**
--Peripheral

What specific structure of the dorsal midbrain is involved?
The pretectum, specifically the pretectal nuclei



Q

Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both**

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What is light-near dissociation?
A phenomena in which the light response is normal but the near response is absent

What are the three types of light-near dissociation?
--Afferent
--**Central**
--Peripheral

Where in the brain is the lesion in a **central** near-light dissociation?
The dorsal midbrain region

What specific structure of the dorsal midbrain is involved?
The pretectum, specifically the pretectal nuclei

What is the eponymous name for the syndrome caused by a dorsal midbrain/pretectum lesion?



A

Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both**

- Affected pupil smaller: *Chronic*
- Affected pupil larger: *Acute*
- Pilo supersensitivity: *Chronic*
- Pupil fixed: *Acute*
- **Light-near dissociation: *Chronic***

What is light-near dissociation?
A phenomena in which the light response is normal but the near response is absent

What are the three types of light-near dissociation?
--Afferent
--**Central**
--Peripheral

Where in the brain is the lesion in a **central** near-light dissociation?
The dorsal midbrain region

What specific structure of the dorsal midbrain is involved?
The pretectum, specifically the pretectal nuclei

What is the eponymous name for the syndrome caused by a dorsal midbrain/pretectum lesion?
Parinaud syndrome



Q

Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both**

- Affected pupil smaller: *Chronic*
- Affected pupil larger: *Acute*
- Pilo supersensitivity: *Chronic*
- Pupil fixed: *Acute*
- **Light-near dissociation: *Chronic***

What is light-near dissociation?
A phenomena in which the light response is absent but the near response is present

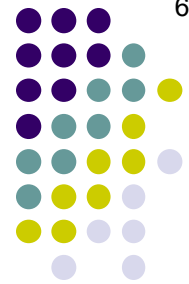
What are the three types of light-near dissociation?
--Afferent
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Where in the brain is the lesion in a **central** near-light dissociation?
The dorsal midbrain region

What specific structure of the dorsal midbrain is involved?
The pretectum, specifically the pretectal nuclei

What is the eponymous name for the syndrome caused by a dorsal midbrain/pretectum lesion?
Parinaud syndrome

What are the two noneponymous names for Parinaud syndrome?
1)
2)



A

Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both**

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- Affected pupil larger: *Acute*
- Pilo supersensitivity: *Chronic*
- Pupil fixed: *Acute*
- **Light-near dissociation: *Chronic***

What is light-near dissociation?
A phenomenon where the light response is normal but the near response is absent.

What are the types of light-near dissociation?
--Afferent
--**Central**
--Peripheral

Where in the brain is the lesion in a **central** near-light dissociation?
The **dorsal midbrain** region

What specific structure of the dorsal midbrain is involved?
The **pretectum**, specifically the **pretectal nuclei**

What is the eponymous name for the syndrome caused by a dorsal midbrain/pretectum lesion?
Parinaud syndrome

What are the two noneponymous names for Parinaud syndrome?
1) **Dorsal midbrain syndrome**
2) **Pretectal syndrome**



Q

Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both**

- Affected pupil smaller: *Chronic*
- Affected pupil larger: *Acute*

- Parinaud syndrome has four classic clinical features. One is light-near dissociation. What are the other three?

- --Light-near dissociation

--

--

--

What is light-near dissociation?
A phenomenon where there is a normal light response but a near response

What are the three types of light-near dissociation?
--Afferent
--**Central**
--Peripheral

Where in the brain is the lesion in a **central** near-light dissociation?
The **dorsal midbrain** region

What specific structure of the dorsal midbrain is involved?
The **pretectum**, specifically the **pretectal** nuclei

What is the eponymous name for the syndrome caused by a dorsal midbrain/pretectum lesion?
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What are the two noneponymous names for Parinaud syndrome?
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 - --Light-near dissociation
 - --Impaired upgaze
 - --Lid retraction
 - --Convergence-retraction nystagmus

What is light-near dissociation?
A phenomenon where the pupil reacts to light but not to near objects.

What are the types of light-near dissociation?
--Afferent
--**Central**
--Peripheral

Where in the brain is the lesion in a **central** near-light dissociation?
The **dorsal midbrain** region

What specific structure of the dorsal midbrain is involved?
The **pretectum**, specifically the **pretectal nuclei**

What is the eponymous name for the syndrome caused by a dorsal midbrain/pretectum lesion?
Parinaud syndrome

What are the two noneponymous names for Parinaud syndrome?
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What is light-near dissociation?
A phenomenon where the pupil reacts to light but not to near objects.

What are the causes of light-near dissociation?
--Afferent pathway lesion
--Central
--Peripheral

The etiology of a Parinaud syndrome is often a function of who the pt is. For each of these pts with Parinaud's, state the most likely cause:

- A child:
- A young man:
- A young woman:
- An older man:

Parinaud syndrome

- What are the two noneponymous names for Parinaud syndrome?
- 1) Dorsal midbrain syndrome
 - 2) Pretectal syndrome



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What is light-near dissociation?
A phenomenon where the pupil dilates in response to light but constricts in response to near vision.

What are the causes of light-near dissociation?
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The etiology of a Parinaud syndrome is often a function of who the pt is.

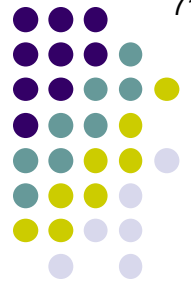
For each of these pts with Parinaud's, state the most likely cause:

- A child: **Hydrocephalus**
- A young man: **A pineal tumor**
- A young woman: **MS**
- An older man: **CVA**

Parinaud syndrome

What are the two noneponymous names for Parinaud syndrome?

- 1) Dorsal midbrain syndrome
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Q

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Parinaud syndrome is characterized by tonic downward displacement of the eyes, with impaired upgaze. There is a clinical entity that is the opposite of this, that is, tonic **upward** deviation of the eyes, with impaired **downgaze**. What is this condition?

What is light-near dissociation?
A phenomenon where the light response is intact but the near response is absent.

What are the afferent pathways for the near response?
--Afferent
--Central
--Peripheral

Where in the brain is the dorsal midbrain/pretectum located?
The **dorsal midbrain/pretectum**

What specific structures are involved in the dorsal midbrain/pretectum?
The **pretectum**

What is the eponymous name for the syndrome caused by a dorsal midbrain/pretectum lesion?
Parinaud syndrome

- What are the two noneponymous names for Parinaud syndrome?
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Oculogyric crisis

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What is the etiology of oculogyric crisis?

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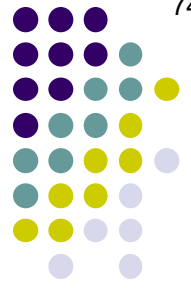
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What is the etiology of oculogyric crisis?
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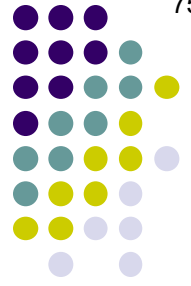
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What is the etiology of oculogyric crisis?
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Which two classes of drugs are most commonly implicated and which is number one?

What is light-near dissociation?
A phenomenon of light-near response

What are the afferent pathways?
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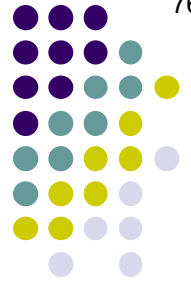
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What specific structures are involved in the pretectum?

What is the eponymous name for the syndrome caused by a dorsal midbrain/pretectum lesion?
Parinaud syndrome

What are the two noneponymous names for Parinaud syndrome?

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Which two classes of drugs are most commonly implicated and which is number one?

The neuroleptics (#1), and the antiemetics

What is light-near dissociation?
A phenomenon of light-near response

Where in the brain is the lesion?
The **dorsal**

What specific part of the brain?
The **pretectum**

What are the afferent pathways?
--Afferent
--Central
--Peripheral

What is the eponymous name for the syndrome caused by a dorsal midbrain/pretectum lesion?
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What is light-near dissociation?
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What are the afferent pathways?
--Afferent
--Central
--Peripheral

Where in the brain is the dorsal midbrain/pretectum lesion?
The **dorsal midbrain/pretectum**

What specific signs and symptoms are associated with the dorsal midbrain/pretectum lesion?
The **pretectal syndrome**

What is the etiology of Parinaud syndrome?
Parinaud syndrome is caused by a **dorsal midbrain/pretectum lesion**

What are the afferent pathways for the dorsal midbrain/pretectum lesion?
1) Dorsal midbrain/pretectum
2) Pretectal syndrome

Which neuroleptic is most commonly implicated?

What is the etiology of Parinaud syndrome?
Parinaud syndrome is caused by a **dorsal midbrain/pretectum lesion**



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Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both**

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Which two classes of drugs are most commonly implicated and which is number one?

The neuroleptics (#1), and the antiemetics

Which neuroleptic is most commonly implicated?
Haloperidol

... / midbrain/pretectum lesion?

Where in the brain is the dorsal midbrain?
The **dorsal midbrain**

What specific structures are involved?
The **pretectum**

What is the etiology of Parinaud syndrome?

What are the causes?

- 1) Dorsal midbrain syndrome
- 2) Pretectal syndrome

What is light-near dissociation?
A phenomenon where the light response is normal but the near response is impaired

What are the clinical features?
--Afferent pupillary defect
--Central fixation
--Peripheral vision



Q

Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both**

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What is the etiology of oculogyric crisis?
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Which two classes of drugs are most commonly implicated and which is number one?
The neuroleptics (#1), and **the antiemetics**

What is light-near dissociation?
A phenomenon where the light response is intact but the near response is absent.

What are the afferent pathways for the light-near reflex?
--Afferent
--Central
--Peripheral

Where in the brain is the dorsal midbrain/pretectum lesion?
The **dorsal midbrain/pretectum**

What specific signs and symptoms are associated with the dorsal midbrain/pretectum lesion?
The **pretectal syndrome**

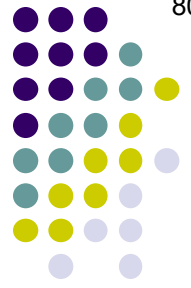
What is the etiology of Parinaud syndrome?
Parinaud syndrome is caused by a **midbrain/pretectum lesion**

What are the afferent pathways for the light-near reflex?
1) Dorsal midbrain/pretectum
2) Pretectal syndrome

Which neuroleptic is most commonly implicated?
Haloperidol

Which antiemetic is most commonly implicated?

What is the etiology of Parinaud syndrome?
Parinaud syndrome is caused by a **midbrain/pretectum lesion**



A

Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both**

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The neuroleptics (#1), and **the antiemetics**

Which neuroleptic is most commonly implicated?

Haloperidol

Which antiemetic is most commonly implicated?

Metoclopramide

Where in the brain is the dorsal midbrain/pretectum lesion?
The **dorsal midbrain/pretectum**

What is the etiology of Parinaud syndrome?

- 1) Dorsal midbrain/pretectum lesion
- 2) Pretectal syndrome

What is the etiology of Parinaud syndrome? / midbrain/pretectum lesion?

What is light-near dissociation?
A phenomenon of light-near response dissociation

What are the clinical features?
--Afferent pupillary defect
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Q

Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both**

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What is light-near dissociation?

A phenomena in which pupils miase less robustly in response to light than they do as part of the near response

What are the three general types/locations of light-near dissociation?

- Afferent
- Central
- Peripheral**

Where is the lesion in **peripheral** near-light dissociation?



A

Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both**

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- Central
- Peripheral**

*Where is the lesion in **peripheral** near-light dissociation?*

The ciliary ganglion, or the long ciliary nerves



Q

Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both**

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What is the pathophysiology of ciliary ganglion damage in Adie's?



A

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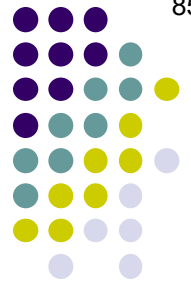
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- Central
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*Where is the lesion in **peripheral** near-light dissociation?*

The ciliary ganglion, or the long ciliary nerves

What is the pathophysiology of ciliary ganglion damage in Adie's?

Unknown; some authorities suspect a viral cause



Q

Speaking of Adie's... For each sign and symptom, identify whether it is associated with an **acute** Adie's pupil, a **chronic** Adie's pupil, or **both**

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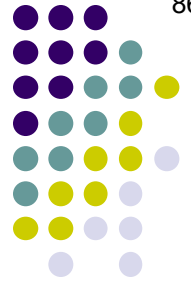
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What is the most common cause of damage to the long ciliary nerves?



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What is the pathophysiology of ciliary ganglion damage in Adie's?

Unknown; some authorities suspect a viral cause

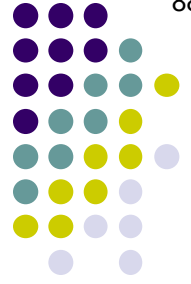
What is the most common cause of damage to the long ciliary nerves?

Panretinal photocoagulation

**Q**

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It's called an Adie's **tonic** pupil



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It means the pupil's miotic near response persists even after the eye is no longer engaged in attempting to see at near, with re-dilation occurring s-l-o-w-l-y

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When it is idiopathic, ie, when no identifiable cause can be found

**Q**

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What will an acute Adie's patient complain of?

- 1)
- 2)

A/Q

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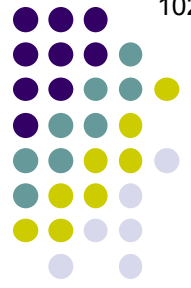
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- 1) Loss of accommodation → **Difficulty reading**
- 2) Pupil dilation → **photophobia**

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Adie's pupil stems from disruption of postganglionic parasympathetics in the orbit. Acutely, this results in a loss of both pupillary constrictor function (hence the fixed dilated pupil) and accommodation (hence the difficulty at near). However, over time several developments change the clinical picture. *Denervation supersensitivity* may develop, as described previously. In addition, can occur.

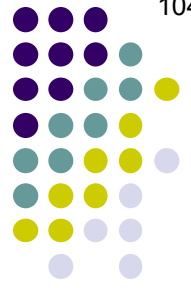


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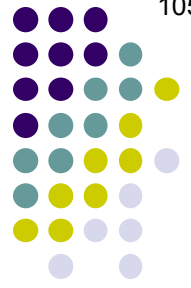
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To what does aberrant regeneration refer in this context?



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To what does aberrant regeneration refer in this context?

97% of orbital postganglionic parasympathetic fibers are dedicated to accommodation. Because of this, regeneration produces a number of inadvertent accommodation-fiber-to-constrictor-muscle connections. This results in the tonic near response, miosis, and light-near dissociation of the chronic Adie's pupil.

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Is there a gender predilection in Adie's pupil?

Q/A

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Is there a gender predilection in Adie's pupil?

Yes--the majority (%) of pts are M vs F





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Yes--the majority (70%) of pts are female*



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Does Adie's tend to be unilateral, or bilateral?

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It is in the majority (%) of cases*





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*Is there a gender predilection in Adie's pupil?
Yes--the majority (70%) of pts are female*

*Does Adie's tend to be unilateral, or bilateral?
It is unilateral in the majority (80%) of cases*