When anisocoria is present...
When anisocoria is present…

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

Q

When anisocoria is present…

When faced with anisocoria, what do you want to know first and foremost?
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?*
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?
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 sympathetic pathway problem.
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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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 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 sympathetic pathway problem.
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 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 parasympathetic pathway problem.
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 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 parasympathetic pathway problem.

What if the anisocoria is the same under all lighting conditions?
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 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 parasympathetic pathway problem.

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...
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].
● 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*
When anisocoria is present...and the larger pupil is the culprit...

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

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

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

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

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

- Must rule out a...**Horner syndrome**
- Always consider...**local iris pathology**
Pilo testing can be contributory in evaluating a possible motor pupil
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Pilo testing can be contributory in evaluating a possible motor pupil

- Step 1: Check response to pilo.
Pilo testing can be contributory in evaluating a possible motor pupil
- Step 1: Check response to dilute (1/8-1/16%) pilo.
*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…
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
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 pilo.
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.
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.
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    - …does not constrict: Is 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...
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  - ...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
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
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)
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)?
Pilo testing can be contributory in evaluating a possible motor pupil

- Step 1: Check response to dilute (1/8-1/16%) pilo. If pupil…
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  - …does not constrict: Go to Step 2

- Step 2: check response to full-strength (1%) pilo. If pupil…
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  - …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
Pilo testing can be contributory in evaluating a possible motor pupil
- Step 1: Check response to dilute (1/8-1/16%) pilo. If pupil...
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- Step 2: check response to full-strength (1%) pilo. If pupil...
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What if a PCA aneurysm is ruled out by imaging (both MRI/MRA and angiography)? Is likely an Adie's pupil

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?

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

- Step 2: check response to full-strength (1%) pilo. If pupil...
  - ...does not constrict: Is a...drug pupil
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What if a PCA aneurysm is ruled out by imaging (both MRI/MRA and angiography)? Is likely an Adie's pupil

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.
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

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.
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**.
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:
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**
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:
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**
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:
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**
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:
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**
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- Affected pupil smaller: **Chronic**
- Affected pupil larger: **Acute**
- Pilo supersensitivity: **Chronic**
- Pupil fixed: **Acute**
- Light-near dissociation:
  - 
  - 
  -
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**
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- Affected pupil smaller: **Chronic**
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- 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
- Three general types/locations: Afferent—Central—Peripheral
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**
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- **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
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?**
- 
- 
-
• 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
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?

*Damage to which type/location is implicated in the light-near dissociation associated with an Adie’s?*
**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**
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- Pilo supersensitivity: **Chronic**
- Pupil fixed: **Acute**
- **Light-near dissociation**: **Chronic**

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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**

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

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

- Afferent
- **Central**
- Peripheral
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

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

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

**Q**

**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 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?**

**Parinaud syndrome**

**What are the two noneponymous names for Parinaud syndrome?**
1) Dorsal midbrain syndrome
2) Pretectal syndrome
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**
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- **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--
- 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
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
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- Pupil fixed: Acute
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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.

**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 three types/locations of light-near dissociation?**
- **Afferent**
- **Central**
- **Peripheral**
**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 eponymous name for the syndrome caused by a dorsal midbrain/pretectum lesion?*

**Parinaud syndrome**

**Sixty-four**
**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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- **Light-near dissociation**: **Chronic**

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**
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
- Pupil reactivity: Chronic
- Pilo supersensitivity: Chronic
- Pupil fixed: Acute
- Light-near dissociation: Chronic
- Decreased accommodation: Acute
- Tonic near response: Chronic

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 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--
--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.
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**
- Decreased accommodation: **Acute**
- Tonic near response: **Chronic**

### Parinaud syndrome

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

- Light-near dissociation
- Impaired upgaze
- Lid retraction
- Convergence-retraction nystagmus

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 non-eponymous names for Parinaud syndrome?
1) Dorsal midbrain syndrome
2) Pretectal syndrome
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**
- Decreased accommodation: **Acute**
- Tonic near response: **Chronic**

**Parinaud syndrome**

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

--Light-near dissociation
--Impaired upgaze
--Lid retraction
--Convergence-retraction nystagmus

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

*What specific structure of the dorsal midbrain is involved?* 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?* 1) Dorsal midbrain syndrome 2) Pretectal syndrome

*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:
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**
- Pupil hypersensitivity: **Chronic**
- Pupil fixed: **Acute**
- Light-near dissociation: **Chronic**
- Decreased accommodation: **Acute**
- Tonic near response: **Chronic**

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

- Light-near dissociation
- Impaired upgaze
- Lid retraction
- Convergence-retraction nystagmus

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

- Light-near dissociation
- Impaired upgaze
- Lid retraction
- Convergence-retraction nystagmus

What are the two noneponymous names for Parinaud syndrome?

1) Dorsal midbrain syndrome
2) Pretectal syndrome
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

**Pupil**

- **Parinaud syndrome**
  - One is light-near dissociation
  - **Impaired upgaze**
  - Lid retraction
  - Convergence-retraction

**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

**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

**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?**

Oculogyric crisis

**What is the etiology of oculogyric crisis?**

It is an idiosyncratic drug reaction

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

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

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

**Decreased accommodation:**
- *Acute*
- *Chronic*

**Tonic near response:**
- *Chronic*

---

**Parinaud syndrome** has:
- One is light-near dissociation
- Impaired upgaze
- Lid retraction
- Convergence-retraction

**Oculogyric crisis**

---

**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 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

**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

**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?**
- Oculogyric crisis
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**

**Pupil**
- Parinaud syndrome has been described in patients with Adie’s syndrome.
  - One is light-near dissociation
  - --Light-near dissociation
  - --Impaired upgaze
  - --Lid retraction
  - --Convergence-retraction

**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 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*

**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
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
- **Decreased accommodation:** Acute

---

**Parinaud syndrome** has been identified.

One is light-near dissociation:
- Light-near dissociation
- **Impaired upgaze**
- Lid retraction
- Convergence-retraction

**Where in the brain is the lesion in a central near-light dissociation?**
- The dorsal midbrain region
- 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?**
1) Dorsal midbrain syndrome
2) Pretectal syndrome

**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

**What is the etiology of oculogyric crisis?**
It is an idiosyncratic drug reaction

---
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:  
- One is **light-near dissociation**  
- **Impaired upgaze**  
- Lid retraction  
- Convergence-retraction

**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?  
**Oculogyric crisis**

What is the etiology of oculogyric crisis?  
It is an idiosyncratic drug reaction

**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 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 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**

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
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**

- One is light-near dissociation
- Impaired upgaze
- Lid retraction
- Convergence-retraction

*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 **downtgaze**. What is this condition?*

**Oculogyric crisis**

*What is the etiology of oculogyric crisis?*

- It is an idiosyncratic drug reaction

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

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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 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

*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
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**
  - **Impaired upgaze**
  - Lid retraction
  - Convergence-retraction

---

**What is light-near dissociation?**

A phenomena in which pupils mirose 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 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*

**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

**Parinaud syndrome** has four classic clinical features.

- **Light-near dissociation**
- **Impaired upgaze**
- Lid retraction
- Convergence-retraction

**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?

**Oculogyric crisis**

**What is the etiology of oculogyric crisis?**

It is an idiosyncratic drug reaction

**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

**Which antiemetic is most commonly implicated?**

Metoclopramide
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

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

- **Impaired upgaze**
- Lid retraction
- Convergence-retraction

**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 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.

**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

**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?**

**Oculogyric crisis**

**What is the etiology of oculogyric crisis?**

It is an idiosyncratic drug reaction.

**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**

**Which antiemetic is most commonly implicated?**

Metoclopramide.
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**

**Pupil**
- Parinaud syndrome has many clinical features
  - One is light-near dissociation
    - Light-near dissociation
      - **Impaired upgaze**
        - Lid retraction
        - Convergence-retraction

**Light-near dissociation**
- A phenomena in which pupils mirose 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 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

**What is the eponymic 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

**Parinaud syndrome** has four classic clinical features.
- One is light-near dissociation. What are the other three?
  - Light-near dissociation
  - Impaired upgaze
  - Lid retraction
  - Convergence-retraction

**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?
- **Oculogyric crisis**

**What is the etiology of oculogyric crisis?**
- It is an idiosyncratic drug reaction

**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**

**Which antiemetic is most commonly implicated?**
- **Metoclopramide**
**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.

<table>
<thead>
<tr>
<th>Sign/Symptom</th>
<th>Type of Adie’s Pupil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affected pupil smaller:</td>
<td><strong>Chronic</strong></td>
</tr>
<tr>
<td>Affected pupil larger:</td>
<td><strong>Acute</strong></td>
</tr>
<tr>
<td><strong>Pilo supersensitivity:</strong></td>
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</tr>
<tr>
<td><strong>Pupil fixed:</strong></td>
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</tr>
<tr>
<td><strong>Light-near dissociation:</strong></td>
<td><strong>Chronic</strong></td>
</tr>
<tr>
<td><strong>Decreased accommodation:</strong></td>
<td><strong>Acute</strong></td>
</tr>
<tr>
<td><strong>Tonic near response:</strong></td>
<td><strong>Chronic</strong></td>
</tr>
</tbody>
</table>

---

**Parinaud syndrome**

One is light-near dissociation.
- Impaired upgaze
- Lid retraction
- Convergence-retraction

---

**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 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**

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

**Parinaud syndrome**

**What is the etiology of oculogyric crisis?**

It is an idiosyncratic drug reaction.

**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**

**Which antiemetic is most commonly implicated?**

**Metoclopramide**

---

**Parinaud syndrome** has four classic clinical features.

1. Light-near dissociation
2. Impaired upgaze
3. Lid retraction
4. Convergence-retraction

**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?

**Oculogyric crisis**

---

**What in the brain is the lesion in an oculogyric crisis?**

**The dorsal midbrain**

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

**Parinaud syndrome**

**What are the two noneponymous names for Parinaud syndrome?**

1) Dorsal midbrain syndrome
2) Pretectal syndrome

**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?

**Oculogyric crisis**

---

**What in the brain is the lesion in an oculogyric crisis?**

**The dorsal midbrain**

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

**Parinaud syndrome**

**What are the two noneponymous names for Parinaud syndrome?**

1) Dorsal midbrain syndrome
2) Pretectal syndrome
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 mirose 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?**
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 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**

- 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 peripheral near-light dissociation?**
The ciliary ganglion, or the long ciliary nerves

**What is the pathophysiology of ciliary ganglion damage in Adie’s?**
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 miosis 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?**
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
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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- **Light-near dissociation**: **Chronic**

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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

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

What is the most common cause of damage to the long ciliary nerves?
Panretinal!photocoagulation
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**
- Decreased accommodation:
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- Decreased accommodation: Acute
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- Pilo supersensitivity: **Chronic**
- Pupil fixed: **Acute**
- Light-near dissociation: **Chronic**
- Decreased accommodation: **Acute**
- Tonic near response:
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*
- Decreased accommodation: *Acute*
- Tonic near response: *Chronic*
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**
- Decreased accommodation: **Acute**
- **Tonic near response:** **Chronic**

**What is the full name of an Adie’s pupil?**

**Adie’s tonic 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**

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

*What is the full name of an Adie’s pupil? It’s called an Adie’s **tonic** 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**

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

**What is the full name of an Adie’s pupil?**
It’s called an Adie’s **tonic** pupil

**What does it mean to say the near response is tonic?**
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**
- Decreased accommodation: **Acute**

**Tonic near response:** **Chronic**

What is the full name of an Adie’s pupil?
It’s called an Adie’s **tonic** pupil

What does it mean to say the near response is tonic?
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
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**
- Decreased accommodation: **Acute**
- **Tonic near response:** **Chronic**

**What is the full name of an Adie’s pupil?**
It’s called an Adie’s **tonic** pupil

**What does it mean to say the near response is tonic?**
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

**Under what circumstance does a tonic pupil earn the distinction of being an ‘Adie’s’?**
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
- Decreased accommodation: Acute
- **Tonic near response:** Chronic

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**What is the full name of an Adie’s pupil?**
It’s called an Adie’s **tonic** pupil

**What does it mean to say the near response is tonic?**
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

**Under what circumstance does a tonic pupil earn the distinction of being an ‘Adie’s’?**
When it is idiopathic, ie, when no identifiable cause can be found
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**
- Decreased accommodation: **Acute**
- Tonic near response: **Chronic**

What will an acute Adie’s patient complain of?
1) __________
2) __________
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**
- **Decreased accommodation**: **Acute**
- Tonic near response: **Chronic**

**What will an acute Adie’s patient complain of?**
1) Loss of accommodation ➔
2)
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
- **Decreased accommodation:** Acute
- Tonic near response: Chronic

**What will an acute Adie’s patient complain of?**
1) Loss of accommodation → **Difficulty reading**
2)
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**
- Decreased accommodation: **Acute**
- Tonic near response: **Chronic**

What will an acute Adie’s patient complain of?
1) Loss of accommodation → **Difficulty reading**
2) Pupil dilation →
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
- Decreased accommodation: Acute
- Tonic near response: Chronic

What will an acute Adie’s patient complain of?
1) Loss of accommodation → **Difficulty reading**
2) Pupil dilation → **Photophobia**
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
- Decreased accommodation: Acute
- Tonic near response: Chronic

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, two words can occur.
**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, *aberrant regeneration* can occur.
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**
- Decreased accommodation: **Acute**
- Tonic near response: **Chronic**

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*To what does aberrant regeneration refer in this context?*
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**
- Decreased accommodation: **Acute**
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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, aberrant regeneration can occur.

*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.
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**
- Decreased accommodation: **Acute**
- Tonic near response: **Chronic**

**Is there a gender predilection in 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.

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

*Is there a gender predilection in Adie’s pupil?* Yes--the majority (70%) of pts are female (M vs F).
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**
- Decreased accommodation: **Acute**
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**Is there a gender predilection in Adie’s pupil?**
Yes--the majority (70%) of pts are female.
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**
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- Pilo supersensitivity: **Chronic**
- Pupil fixed: **Acute**
- Light-near dissociation: **Chronic**
- Decreased accommodation: **Acute**
- Tonic near response: **Chronic**

*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?*
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**
- Decreased accommodation: **Acute**
- Tonic near response: **Chronic**

**Q/A**

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 **uni- vs bilateral** in the majority ( 80% ) of cases.
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**
- Decreased accommodation: **Acute**
- Tonic near response: **Chronic**

*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