Parinaud syndrome: Four main features:
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- Impaired upgaze
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The combination of downward-deviated eyes + lid retraction produces an appearance that has resulted in this being known as the **setting-sun sign**.
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**What is the eponymous name for lid retraction in Parinaud syndrome?**

**Thyroid eye disease**
Parinaud syndrome: Four main features:

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Collier’s sign

What is the most common cause of lid retraction in adults? (Hint: It ain’t Parinaud’s)

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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?
Parinaud syndrome: Four main features:

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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.
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Which neuroleptic is most commonly implicated?

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**Which neuroleptic is most commonly implicated?** Haloperidol

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What is convergence-retraction nystagmus?

What causes the eyes to retract?
Attempted elevation causes the medial and lateral recti muscles to fire simultaneously, the net result of which is the globes being pulled back into the orbits—retracting, in other words.

OK, but if the MR and LR are both firing, why do the eyes converge?
Because the medial recti are the strongest EOMs. Thus, in a battle royale among the recti, the MR are going to cause both eyes to adduct—converge, in other words.
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*What is convergence-retraction nystagmus?*
A phenomena in which attempted upgaze causes the globes to retract (ie, sink deeper into the orbit), converge, and ‘shimmy’ (for lack of a better word)
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What’s the difference between a nystagmus and a saccadic disorder?
Q/A

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By definition, a nystagmus commences with a movement away from fixation, whereas a saccadic disorder commences with a movement away from fixation
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By definition, a nystagmus commences with a slow movement away from fixation, whereas a saccadic disorder commences with a fast movement away from fixation
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What causes the eyes to retract?
Attempted elevation causes the medial and lateral recti muscles to fire simultaneously, the net result of which is the globes being pulled back into the orbits--retracting, in other words

(Note: Another source said all the recti muscles fire on attempted upgaze--not just the MR/LR. Caveat emptor.)
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Another well-known motility disorder involves simultaneous firing of the MR and LR, resulting in globe retraction. What is it?
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Duane syndrome (remember, the full name is Duane retraction syndrome)
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Parinaud syndrome: Four main features:
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- 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.

Damage to which type/location is implicated in the light-near dissociation associated with Parinaud’s syndrome?
- Central
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Where is the lesion in an afferent near-light dissociation?

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

Damage to which type/location is implicated in the light-near dissociation associated with Parinaud’s?
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Where is the lesion in peripheral near-light dissociation?
The ciliary ganglion, or the long ciliary nerves

What common condition is associated with ciliary ganglion damage?
Adie’s syndrome

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?
(Prompt: It’s iatrogenic)
Panretinal photocoagulation (PRP)
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How does PRP result in damage to the long ciliary nerves?
Panretinal photocoagulation (PRP)

Damage to the long ciliary nerves is often associated with Panretinal photocoagulation (PRP) procedures, which cover extensive portions of the retinal periphery and can inadvertently impact these nerves.
**What is light-near dissociation?**
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What is the pathophysiology of ciliary ganglion damage in Adie’s?
Unknown; some authorities suspect a viral cause.

How does PRP result in damage to the long ciliary nerves?
These nerves run fairly close to the inner wall of the eye, and thus are frequently impacted by thermal laser procedures that cover extensive portions of the retinal periphery.

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Parinaud syndrome: Four main features:
-- Impaired upgaze
-- Lid retraction
-- Convergence-retraction nystagmus
-- Light-near dissociation

More precisely, where does Parinaud syndrome localize to?
The dorsal midbrain

Damage to what dorsal midbrain structure is causative in Parinaud syndrome?
The pretectum (specifically, the pretectal nuclei)

What are the two noneponymous names for Parinaud syndrome?
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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:

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What other signs will be present in an infant with hydrocephalus?
- Enlarged head
- Bulging fontanelle
- Dilated scalp vessels