

## DIAGNOSTIC CHALLENGE

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# A motor vehicle collision and dark corners

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### Case history

A 16-year-old girl was brought by ambulance to the emergency department (ED) of a local hospital after she was involved in a rollover collision. She was the rear seat passenger in a car that had lost control on a corner while travelling at 80 km/h. The patient was immobilized on a spinal board at the scene and transferred to the local hospital ED. Primary and secondary surveys revealed an uncomplicated sternal fracture associated with ecchymoses across

the anterior neck and abdomen corresponding to the positioning of the shoulder and lap belts. No signs of serious head, spine, truncal or extremity trauma were identified. The patient received analgesics and was monitored for 48 hours before being discharged.

Four weeks after the injury she presented to our ED with a droopy right eyelid. In addition to the ptosis, she was found to have a miotic pupil on the same side. Her visual acuity was normal, the anterior chamber was clear and there was no ophthalmoplegia (Fig. 1).

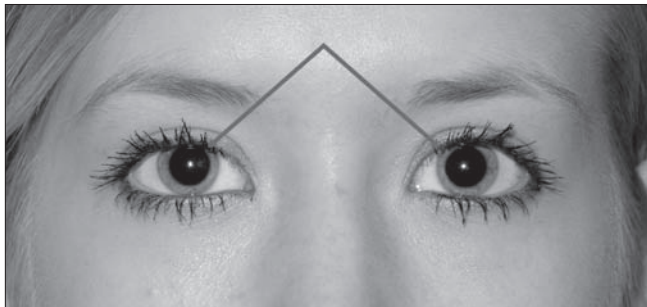


Fig. 1. Right-sided ptosis is evident but the miosis is subtle.

### Question

The most likely explanation for this patient's ocular findings is

- a) sphincter pupillae injury from ocular contusion
- b) third nerve injury in the cavernous sinus
- c) Horner syndrome due to carotid artery dissection
- d) third nerve palsy secondary to injury in the orbital apex.

**For the answer to this challenge, see page 483.**

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