Bilateral tadpole pupils

Figure Bilateral tadpole pupils in patient with congenital erythropoietic protoporphyria

(A) Eye examination at admission showed bilateral nonconstricting tadpole pupils. (B) After mydriatic use, pupils dilate fully but maintain slight tadpole configuration. (C) After mydriatic effect wears off, pupils return to baseline tadpole pupils state.

A 19-year-old man with congenital erythropoietic protoporphyria and without family history or prior migraine attacks had recurrent seizures, which were controlled on propofol. Eye examination performed while awake revealed nonreacting bilateral tadpole pupils (TPs) (figure), without other neurologic deficits. He was hyponatremic (109 mmol/L), slowly corrected (134 mmol/L in 72 hours) but with episodic bilateral TPs persisting; orbitocranial MRI was normal.

Segmental spasms of iris dilator can cause unilateral TP secondary to Horner syndrome.¹ Bilateral TPs is rare. In our patient, we postulate autonomic neuropathy² coupled with severe hyponatremia as the etiology. Persistent bilateral TPs warrants investigation to rule out systemic disorders.

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