Teaching *NeuroImages*: Unmasking raccoon eyes

A classic clinical sign

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Figure 1 Bilateral periorbital ecchymoses (raccoon eyes)

Figure 2 Head CT

Comminuted fracture of the medial wall of the orbit with hemorrhage protruding into the orbit: (A) bone window, (B) brain window.

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A 65-year-old woman presented with head/facial trauma secondary to seizure. Examination revealed right-sided facial contusions and subconjunctival hemorrhage. Over 24 hours she developed bilateral periorbital ecchymoses: “raccoon eyes” (figure 1). Neuroimaging revealed right orbital fracture with hemorrhage into the orbit (figure 2). There was no basilar skull fracture or Battle sign (mastoid ecchymosis).

Raccoon eyes, a clinical sign most commonly associated with basilar skull fracture, can be seen in unilateral and bilateral orbital fractures.¹ The differential, beyond trauma, includes most commonly metastatic neuroblastoma, Kaposi sarcoma, multiple myeloma, and amyloidosis.² Neurologists should be aware of this sign and its differential.

AUTHOR CONTRIBUTIONS

Christopher Tarolli: drafting/revising the manuscript, accepts responsibility for conduct of research and final approval. Michele A. Scully: drafting/revising the manuscript, accepts responsibility for conduct of research and final approval. Andrew D. Smith III: study concept or design, analysis or interpretation of data, accepts responsibility for conduct of research and final approval.

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