

# Teaching NeuroImages: Unmasking raccoon eyes

A classic clinical sign

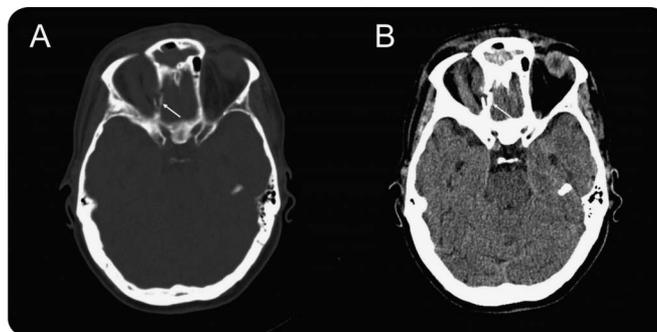
Christopher Tarolli, MD  
Michele A. Scully, MD  
Andrew D. Smith III,  
MD

Correspondence to  
Dr. Tarolli:  
christopher\_tarolli@urmc.  
rochester.edu

**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.

Download teaching  
slides: [Neurology.org](http://Neurology.org)

From the University of Rochester Medical Center, NY.

Go to [Neurology.org](http://Neurology.org) for full disclosures. Funding information and disclosures deemed relevant by the authors, if any, are provided at the end of the article.

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.<sup>1</sup> The differential, beyond trauma, includes most commonly metastatic neuroblastoma, Kaposi sarcoma, multiple myeloma, and amyloidosis.<sup>2</sup> 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.

## STUDY FUNDING

No targeted funding reported.

## DISCLOSURE

The authors report no disclosures relevant to the manuscript. Go to [Neurology.org](http://Neurology.org) for full disclosures.

## REFERENCES

1. Herbella F, Mudo M, Delmonti C, Braga F, Del Grande JC. “Raccoon eyes” (periorbital haematoma) as a sign of skull base fracture. *Injury* 2001;32:745–747.
2. Gumus K. A child with raccoon eyes masquerading as trauma. *Int Ophthalmol* 2007;27:379–381.

# Neurology®

## Teaching *NeuroImages*: Unmasking raccoon eyes: A classic clinical sign

Christopher Tarolli, Michele A. Scully and Andrew D. Smith III

*Neurology* 2014;83:e58-e59

DOI 10.1212/WNL.0000000000000611

**This information is current as of July 21, 2014**

<b>Updated Information &amp; Services</b>	including high resolution figures, can be found at: <a href="http://n.neurology.org/content/83/4/e58.full">http://n.neurology.org/content/83/4/e58.full</a>
<b>Supplementary Material</b>	Supplementary material can be found at: <a href="http://n.neurology.org/content/suppl/2014/07/20/83.4.e58.DC1">http://n.neurology.org/content/suppl/2014/07/20/83.4.e58.DC1</a>
<b>References</b>	This article cites 2 articles, 0 of which you can access for free at: <a href="http://n.neurology.org/content/83/4/e58.full#ref-list-1">http://n.neurology.org/content/83/4/e58.full#ref-list-1</a>
<b>Subspecialty Collections</b>	This article, along with others on similar topics, appears in the following collection(s): <b>All Imaging</b> <a href="http://n.neurology.org/cgi/collection/all_imaging">http://n.neurology.org/cgi/collection/all_imaging</a> <b>All Neuro-ophthalmology</b> <a href="http://n.neurology.org/cgi/collection/all_neuroophthalmology">http://n.neurology.org/cgi/collection/all_neuroophthalmology</a> <b>All Trauma</b> <a href="http://n.neurology.org/cgi/collection/all_trauma">http://n.neurology.org/cgi/collection/all_trauma</a> <b>Clinical neurology examination</b> <a href="http://n.neurology.org/cgi/collection/clinical_neurology_examination">http://n.neurology.org/cgi/collection/clinical_neurology_examination</a> <b>CT</b> <a href="http://n.neurology.org/cgi/collection/ct">http://n.neurology.org/cgi/collection/ct</a>
<b>Permissions &amp; Licensing</b>	Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: <a href="http://www.neurology.org/about/about_the_journal#permissions">http://www.neurology.org/about/about_the_journal#permissions</a>
<b>Reprints</b>	Information about ordering reprints can be found online: <a href="http://n.neurology.org/subscribers/advertise">http://n.neurology.org/subscribers/advertise</a>

*Neurology*® is the official journal of the American Academy of Neurology. Published continuously since 1951, it is now a weekly with 48 issues per year. Copyright © 2014 American Academy of Neurology. All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.

