Locked-in syndrome resulting from traumatic basilar artery occlusion following clivus fracture

A 67-year-old previously healthy man presented after head-first collision into a wall. Glasgow Coma Scale score on arrival was 11, but quickly deteriorated to 3. CT angiography and diagnostic angiogram demonstrated proximal basilar artery (BA) occlusion with nearby longitudinal clivus fracture (figures 1, A through C, and 2). MRI showed pontomedullary and cerebellar infarcts (figure 1D). These findings suggested BA entrapment by adjacent fractured clivus. Clinically, the patient’s examination evolved to a locked-in state with purposeful vertical eye movements. Clivus fractures are rare in head trauma, occurring with <0.6% frequency.1 Posterior circulation entrapment from clivus fracture, though also uncommon, is typically a poor prognosticator.2

AUTHOR CONTRIBUTIONS
Indranil Sen-Gupta, MD: drafting/revising the manuscript, study concept or design, analysis or interpretation of data, acquisition of data. David A. Daiga, MD: drafting/revising the manuscript, study concept or design, analysis or interpretation of data, acquisition of data. Mark J. Alberts, MD: drafting/revising the manuscript, study concept or design, analysis or interpretation of data, acquisition of data, study supervision.

REFERENCES
Figure 2  Diagnostic cerebral angiogram

(A) Absent antegrade and (B) partial retrograde basilar artery filling (black arrows).
Teaching NeuroImages: Locked-in syndrome resulting from traumatic basilar artery occlusion following clivus fracture
Indranil Sen-Gupta, David A. Daiga and Mark J. Alberts
Neurology 2012;78:e148-e149
DOI 10.1212/WNL.0b013e318259e237

This information is current as of June 11, 2012

Updated Information & Services
including high resolution figures, can be found at:
http://n.neurology.org/content/78/24/e148.full

References
This article cites 2 articles, 0 of which you can access for free at:
http://n.neurology.org/content/78/24/e148.full#ref-list-1

Subspecialty Collections
This article, along with others on similar topics, appears in the following collection(s):
Brain trauma
http://n.neurology.org/cgi/collection/brain_trauma
Clinical neurology examination
http://n.neurology.org/cgi/collection/clinical_neurology_examination
Infarction
http://n.neurology.org/cgi/collection/infarction

Permissions & Licensing
Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
http://www.neurology.org/about/about_the_journal#permissions

Reprints
Information about ordering reprints can be found online:
http://n.neurology.org/subscribers/advertise