

Case 3-2017: A Man with Cardiac Sarcoidosis and New Diplopia and Weakness

TO THE EDITOR: In the Case Record discussed by Samuels et al. (Jan. 26 issue),¹ the autopsy of the unfortunate patient who died of granulomatous amebic encephalitis revealed numerous perivascular radiating hemorrhagic areas. This finding is typical in patients with meningoencephalitis caused by *acanthamoeba* species but unusual in patients with neurosarcoidosis, in whom intracranial hemorrhages are extremely rare and if present are readily seen on computed tomography (CT).^{2,3} The initial findings on CT and CT angiography of the head in the patient in this Case Record were reported to be normal.

An analytic sensitivity test to detect brain hemorrhages of any cause not found on CT is spectrophotometry.⁴ In the cerebrospinal fluid (CSF), bilirubin has a yellowish color commonly referred to as xanthochromia. A small amount of CSF bilirubin is easily missed by visual inspection.⁴ In the patient in this Case Record, the CSF was reported to be colorless, clear, and without xanthochromia on admission and on hospital days 5 and 6. The CSF was reported to be yellow only on hospital day 9. The interpretation of this finding as xanthochromia in the presence of an elevated level of CSF total protein is a common mistake.

Was CSF spectrophotometry performed in this patient? An early diagnosis of hemorrhagic meningoencephalitis, on the basis of findings on CSF spectrophotometry, would have narrowed the differential diagnosis at presentation and guided emergency management.

Axel Petzold, M.D., Ph.D.

University College London Institute of Neurology
London, United Kingdom
a.petzold@ucl.ac.uk

No potential conflict of interest relevant to this letter was reported.

1. Case Records of the Massachusetts General Hospital (Case 3-2017). *N Engl J Med* 2017;376:368-79.
2. O'Dwyer JP, Al-Moyeed BA, Farrell MA, et al. Neurosarcoidosis-related intracranial haemorrhage: three new cases and a systematic review of the literature. *Eur J Neurol* 2013;20:71-8.
3. Chandra SR, Adwani S, Mahadevan A. *Acanthamoeba* meningoencephalitis. *Ann Indian Acad Neurol* 2014;17:108-12.
4. Petzold A, Keir G, Sharpe LT. Spectrophotometry for xanthochromia. *N Engl J Med* 2004;351:1695-6.

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