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## **Uncommon Presentation of Intracranial Cryptococcoma in an Immunocompetent Patient**

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*AJNR Am J Neuroradiol* published online 26 January 2012  
<http://www.ajnr.org/content/early/2012/01/26/ajnr.A2988.citation>

This information is current as  
of April 9, 2024.

# Uncommon Presentation of Intracranial Cryptococcoma in an Immunocompetent Patient

We read with special interest the article by Saigal et al,<sup>1</sup> who described unusual brain MR imaging findings in an immunocompetent patient with cryptococcosis. The authors emphasized that the imaging findings of cryptococcosis affecting the brain in immunocompetent patients can be different from the more commonly described findings in immunocompromised patients.

We present a similar case of a 37-year-old man with a 2-month history of headache and 1 episode of seizures. There was no history of fever or any additional medical illness. Neurologic examination showed bilateral papilledema. CSF study findings were normal, except for marginally elevated protein levels. All the laboratory tests results, including an HIV test, were normal. Brain MR imaging showed an intra-axial right frontoparietal mass lesion hypointense on T1-weighted images and heterogeneously hyperintense on FLAIR/T2-weighted images, with surrounding vasogenic edema and heterogeneous enhancement (Fig 1A, -B). No high perfusion or restricted diffusion was noted, and MR spectroscopy (TE = 30 ms) demonstrated a high choline peak, low *N*-acetylaspartate (NAA), and a peak of lipids/lactate (Fig 1C). The patient underwent stereotactic biopsy, and histopathology revealed a granulomatous lesion with the typical appearance of cryptococcoma. The patient was treated with amphotericin B, intravenous steroids, and anticonvulsants.

Cryptococcosis is an opportunistic fungal infection that affects the central nervous system in patients with HIV and other immunocompromised patients; it is rarely seen in immunocompetent patients.<sup>1</sup> Central nervous system infection can be either meningeal or parenchymal. Intraparenchymal cryptococcomas are masslike lesions that can masquerade as a brain tumor,<sup>1,2</sup> as seen in our case. Despite the

absence of signs of high perfusion, the very high choline/NAA ratio (>3) and the conventional MR imaging findings could allow the diagnostic hypothesis of a brain tumor. Although there are no unequivocal cutoff metabolite signal-intensity ratios that clearly distinguish neoplastic from nonneoplastic conditions, a choline/NAA cutoff ratio of 2:2, as seen in our case, has been described in the literature to differentiate high-grade from low-grade neoplasms and nonneoplastic conditions.<sup>3</sup>

In conclusion, corroborating the observation of Saigal et al,<sup>1</sup> the appearance of a *Cryptococcus* organism central nervous system infection in an immunocompetent patient may be different from that commonly encountered in the immunocompromised patient, making the preoperative diagnosis of this fungal infection a challenge.

## References

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<http://dx.doi.org/10.3174/ajnr.A2988>



**Fig 1.** Axial FLAIR (A) and sagittal postcontrast T1-weighted MR (B) images demonstrate a heterogeneously enhancing right parietal mass, with surrounding vasogenic edema. MR spectroscopy (TE = 30 ms) (C) shows a decrease in the NAA (at 2.02 ppm) and creatine (Cr) (at 3.0 ppm) peaks and elevation of the choline (Cho) (at 3.2 ppm) and lactate (Lac) and/or lipid peaks (at 1.33 ppm).