

Teaching NeuroImages: Presentation of diffuse large B-cell lymphoma with bilateral sequential oculomotor neuropathy

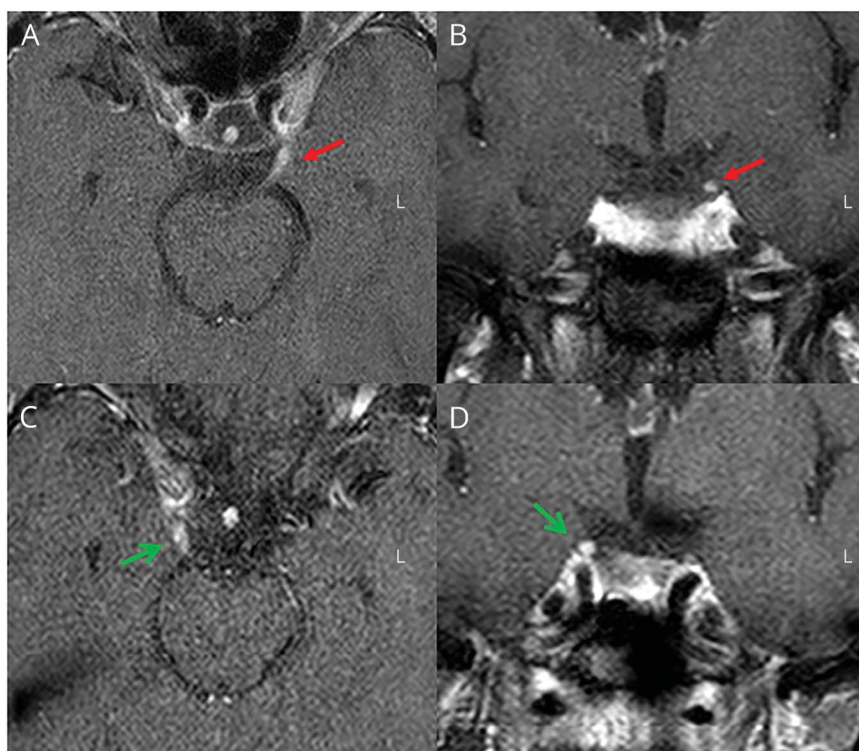
Krishna M. Galla, MBBS, Erin Cameron-Smith, MD, Sara H. Bares, MD, Alexander Braun, MD, Michael Punsoni, MD, Kirk Foster, MD, Jason Helvey, MD, and Sachin Kedar, MD

Neurology® 2018;91:e92-e93. doi:10.1212/WNL.0000000000005735

Correspondence

Dr. Kedar
sachin.kedar@unmc.edu

Figure 1 T1 fat saturation post gadolinium MRI brain



Axial (A, C) and coronal (B, D) sections show nonexpansile enhancement of left (red arrows) and right (green arrows) oculomotor nerve.

A 56-year-old man with HIV on combination antiretroviral therapy (CD4 count 368 cells/ μ L; HIV-RNA < 20 copies/mL) had sequential, bilateral oculomotor nerve palsy after recent travel to Africa. Nonexpansile enhancement of the oculomotor nerves was noted on MRI (figure 1). Multiple CSF studies showed lymphocytic pleocytosis without neoplastic cells. Molecular testing on the serum was positive for *Plasmodium falciparum* by PCR early in the course of presentation but symptoms progressed despite treatment for *P falciparum*. Infectious etiologies including *Cryptococcus neoformans*, histoplasmosis, varicella-zoster virus, herpes simplex virus, and JC virus were ruled out. He developed multiple cranial neuropathies (bilateral 3rd, 5th, 9th, and 10th) and encephalopathy and died of cytomegalovirus-related cardiopulmonary complications. Lymphadenopathy was not observed during the course of his illness. Autopsy

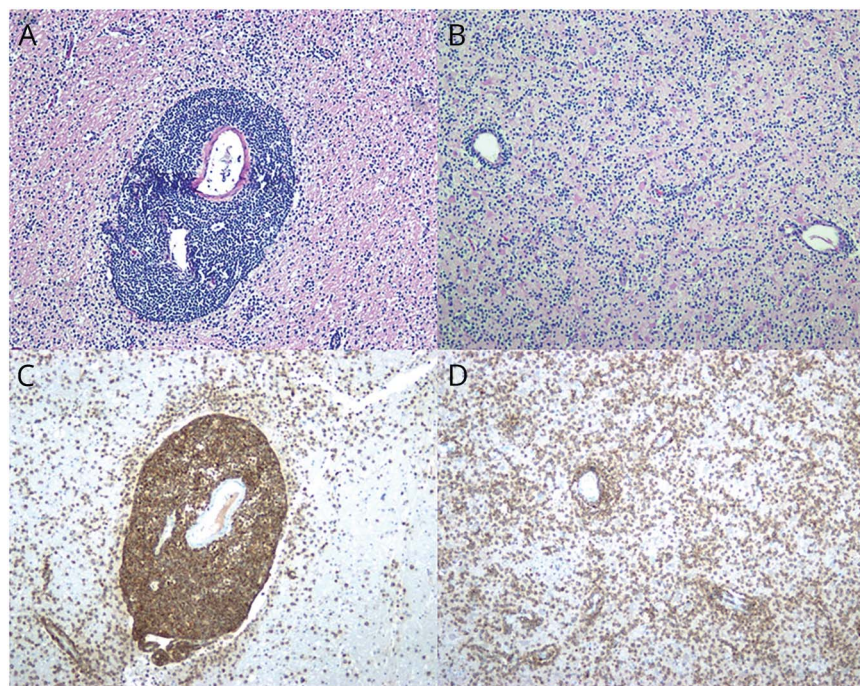
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From the Departments of Neurological Sciences (K.M.G., E.C.-S., S.K.), Infectious Disease (S.H.B.), Pathology (A.B., M.P., K.F.), and Radiology (J.H.), and Stanley M. Truhlsen Eye Institute (S.K.), University of Nebraska Medical Center, Omaha.

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Hematoxylin & eosin-stained sections show perivascular (A) and infiltrative (B) patterns of involvement by diffuse large B-cell lymphoma. Immunohistochemistry demonstrates expression of CD79a B-cell marker (C, D). Original magnification $\times 10$.

revealed intracranial and pericardial diffuse large B-cell lymphoma (DLBCL) (figure 2). Isolated oculomotor palsy is a rare presentation of DLBCL, with fewer than 20 reported cases.^{1,2} The risk for DLBCL, an AIDS-defining illness, increases with decreasing CD4 counts; however, it can occur in HIV despite normal CD4 counts.³

Author contributions

Krishna M. Galla: data acquisition, analysis of data, manuscript writing. Erin Cameron-Smith: data acquisition, analysis of data, editing. Sara H. Bares: editing for intellectual content. Alexander Braun: image contribution, interpretation of pathology slides. Michael Punsoni: image contribution, interpretation of pathology slides. Kirk Foster: image contribution, interpretation of pathology slides. Jason Helvey: image contribution, interpretation of radiology images. Sachin Kedar: critical revision of manuscript for intellectual content.

Study funding

No targeted funding reported.

Disclosure

K. Galla and E. Cameron-Smith report no disclosures relevant to the manuscript. S. Bares received research funding from Gilead Sciences. A. Braun, M. Punsoni, K. Foster, and J. Helvey report no disclosures relevant to the manuscript. S. Kedar reports being a coinventor for the Advanced Pupil Simulator licensed by EON Reality Inc. Go to Neurology.org/N for full disclosures.

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