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Teaching Neuro*Images*: Brain mass with hilar adenopathy

The importance of histologic diagnosis

Figure 1 Brain and chest imaging



Coronal contrasted T1 (A) shows heterogeneously enhancing, multifocal mass. Axial fluid-attenuated inversion recovery (B) shows vasogenic edema. Chest x-ray (C) and CT (D) demonstrate lymphadenopathy (arrows).





Lymph node biopsy (A) reveals sarcoid, with noncaseating granuloma (asterisk) surrounded by lymphocytes (arrow). Brain biopsy (B) reveals glioblastoma, with pseudopalisading necrosis (asterisk) and vascular proliferation (arrow).

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A 30-year-old man presented with weeks of progressive headaches, imbalance, and aphasia. Brain MRI revealed an enhancing left frontal mass (figure 1, A and B). Chest imaging revealed mediastinal and hilar adenopathy (figure 1, C and D). Metastatic cancer was initially suspected, but pulmonary lymph node aspiration revealed sarcoidosis (figure 2A). Subsequent brain biopsy revealed glioblastoma (figure 2B).

This case emphasizes the importance of histologic diagnosis before initiating therapy. One study demonstrated nearly 50% variation in diagnosis following brain biopsy, 27% leading to a change in treatment.¹ Sarcoid is associated with increased risk of certain cancers, though this has not been demonstrated for gliomas.²

AUTHOR CONTRIBUTIONS

Analysis and interpretation of data: Drs. Jordan, Yang, Narendra, and Plotkin. Drafting of the manuscript: Drs. Jordan, Yang, and Plotkin. Critical revision of the manuscript for important intellectual content: Drs. Jordan, Yang, Narendra, and Plotkin.

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