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Teaching NeuroImages: T2 hyperintensities in neurofibromatosis type 1

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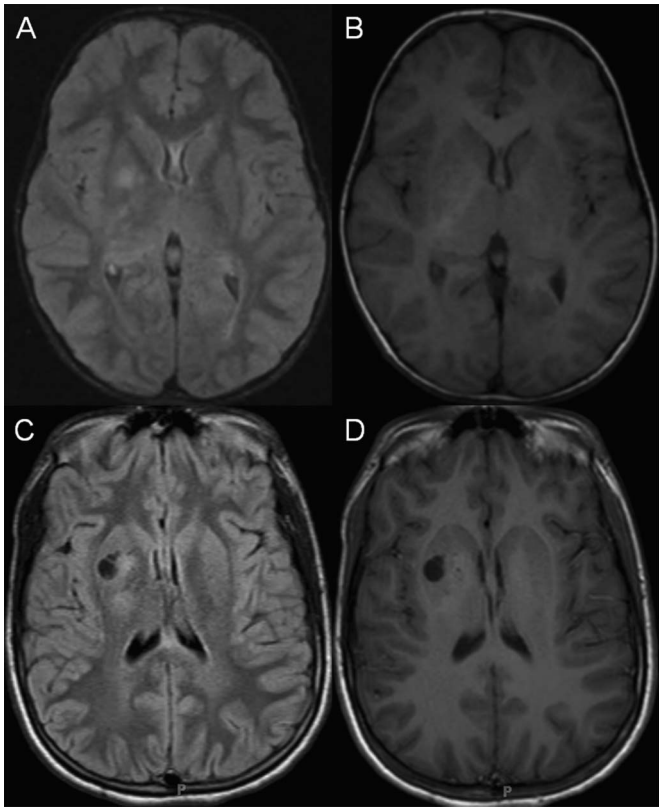
Figure T2 hyperintensities in a child with neurofibromatosis type 1



Brain MRI from 2003 revealed a T2 hyperintensity in the right basal ganglia, frequently observed in children with neurofibromatosis type 1. In 2012, a cyst-like mass was found in the identical location associated with a new left hemiparesis and hyperreflexia. (A, C) Fluid-attenuated inversion recovery images; (B, D) T1-weighted images.

A 4-year-old boy with neurofibromatosis type 1 (NF1), an asymptomatic optic glioma, and a right basal ganglia T2-hyperintense lesion (figure, A and B) developed a left hemiparesis with hyperreflexia over the course of a year. Neuroimaging revealed a cyst-like mass in the region of his previously identified T2 hyperintensity (figure, C and D). While it is often difficult to distinguish T2 hyperintensities from low-grade glioma without tissue diagnosis,[1] even with advanced imaging methods,[2] T2 hyperintensities typically disappear with age and do not become cystic with associated mass effect. Coupled with the development of new neurologic signs, these MRI features are worrisome for neoplasm in a patient with NF1.

AUTHOR CONTRIBUTIONS

A.P.O. wrote the initial draft of the manuscript. R.C.M. and J.S.S. reviewed the MRI data. D.H.G. performed the final editing.

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DISCLOSURE

The authors report no disclosures relevant to the manuscript. Go to Neurology.org for full disclosures.

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