

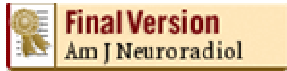


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1: [AJNR Am J Neuroradiol](#). 2008 Nov;29(10):1861-6. Epub 2008 Aug 13.



### **Pilomyxoid astrocytoma: expanding the imaging spectrum.**

[Linscott LL](#), [Osborn AG](#), [Blaser S](#), [Castillo M](#), [Hewlett RH](#), [Wieselthaler N](#), [Chin SS](#), [Krakenes J](#), [Hedlund GL](#), [Sutton CL](#).

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**BACKGROUND AND PURPOSE:** Pilomyxoid astrocytoma (PMA) is a recently described variant of pilocytic astrocytoma (PA) with unique clinical and histopathologic characteristics. Because the histopathology of PMA is distinct from that of PA, we hypothesized that PMAs would display distinctive imaging characteristics. We retrospectively reviewed the imaging findings in a large number of patients with PMA to identify these characteristics.

**MATERIALS AND METHODS:** CT and MR images, pathology reports, and clinical information from 21 patients with pathology-confirmed PMA from 7 institutions were retrospectively reviewed. CT and MR imaging findings, including location, size, signal intensity, hemorrhage, and enhancement pattern, were tabulated. **RESULTS:** Patients ranged in age from 9 months to 46 years at initial diagnosis. Sex ratio was 12:9 (M/F). Twelve of 21 (57%) tumors were located in the hypothalamic/chiasmatic/third ventricular region. Nine (43%) occurred in other locations, including the parietal lobe (2/21), temporal lobe (2/21), cerebellum (2/21), basal ganglia (2/21), and fourth ventricle (1/21). Ten (48%) tumors showed heterogeneous rim enhancement, 9 (43%) showed uniform enhancement, and 2 (9%) showed no enhancement. Five (24%) masses demonstrated intratumoral hemorrhage.

**CONCLUSION:** This series expands the clinical and imaging spectrum of PMA and identifies characteristics that should suggest consideration of this uncommon diagnosis. One third of patients were older children and adults. Almost half of all tumors were located outside the typical hypothalamic/chiasmatic region. Intratumoral hemorrhage occurred in one quarter of patients. PMA remains a histologic diagnosis without definitive imaging findings that distinguish it from PA.

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