A 53-year-old man with a history of left parietal astrocytoma treated with radiation at age 14 years, epilepsy, diabetes mellitus, hyperlipidemia, prior tobacco use, chronic lacunar infarcts, and left basal ganglia infarct 1 month prior with petechial hemorrhage continued on 81 mg of aspirin daily presented with acute-onset lethargy. Neurologic examination showed acute-on-chronic right hemiparesis and new aphasia. CTH revealed a left basal ganglia hemorrhage with intraventricular extension (Figure 1A). Vessel imaging showed diffuse left-sided vessel narrowing and irregularity (Figure 2A). A 2.5-mm left lenticulostriate aneurysm was identified on CTA (Figure 1B), MRA, and conventional angiography (Figures 1C and 2). The cause of dense hemorrhage was likely rupture of lenticulostriate aneurysm secondary to radiation-induced vasculopathy; however, differential diagnosis also includes hemorrhagic conversion of 1-month-old basal ganglia infarct. Repeat conventional angiogram in 3 months showed a persistent but smaller lenticulostriate aneurysm, suggesting aneurysm rupture. There was low clinical suspicion for vasculitis and endocarditis, given the lack of systemic symptoms and unilateral vasculopathy. Radiation is a risk factor of small vessel disease and ischemic stroke and rarely can cause late aneurysm formation and rupture.1,2

Figure 1 Imaging Revealed a Left Basal Ganglia Hemorrhage and Left Lenticulostriate Aneurysm

(A) CTH showed a left basal ganglia hemorrhage. (B) During hemorrhage, CTA demonstrated a possible spot sign vs aneurysm, and (C) conventional angiogram demonstrated a 2.5-mm left lenticulostriate aneurysm with associated vasculopathy.
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