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Teaching NeuroImages: HIV-associated cerebral vasculopathy with multiple nodular aneurysms

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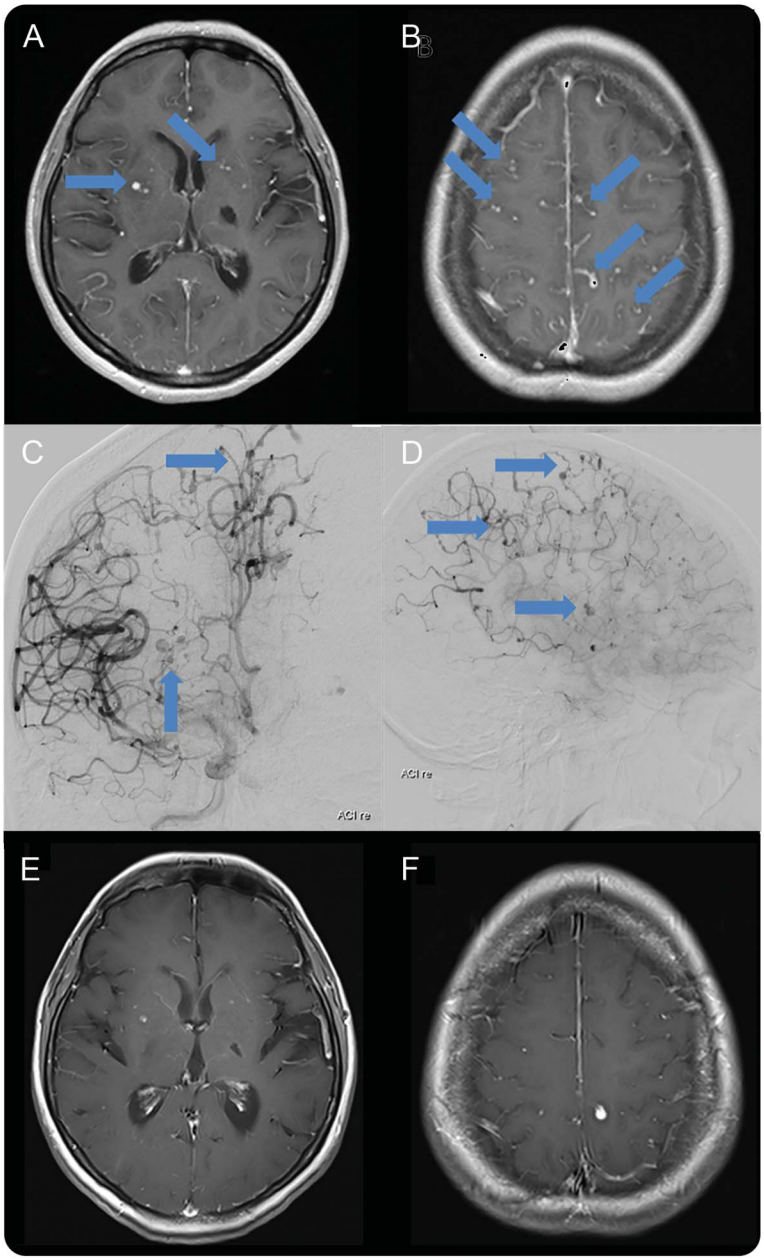
Figure Representative images from T1-weighted contrast-enhanced MRI and conventional angiography



MRI from a 40-year-old woman with first-time ischemic stroke and high CSF viral load (380,000/mL) shows multiple aneurysms involving the lenticulostriate arteries and peripheral branches of large cerebral arteries (A, B) confirmed by angiography (C, D). On therapy (13 months later), most aneurysms decreased in size (E, F).

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HIV-associated cerebral vasculopathy with multiple aneurysms has been widely reported in children[1] and has to be considered in HIV-infected patients with high CSF viral load, but only few cases in adults have been published so far. Nodular and fusiform aneurysms (figure, A–D) are a typical imaging finding[2] that may lead to suspicion of an autoimmune etiology by mimicking polyarteritis nodosa. These aneurysms might carry clinical significance with regard to the risk of subarachnoid or intracerebral hemorrhage, or causing infarction through formation of emboli. Highly active antiretroviral therapy leads to remission of these pathologic vessel alterations[2] (figure, E and F).

AUTHOR CONTRIBUTIONS

Dr. Seiler: concept and collection of data for this case report. Dr. You and Dr. Wagner: performance of cerebral angiography and image interpretation. Dr. Klein: critical revision of the manuscript for important intellectual content and supervision of the study.

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