

Teaching NeuroImages: Malignant cerebral venous thrombosis and pulmonary emboli

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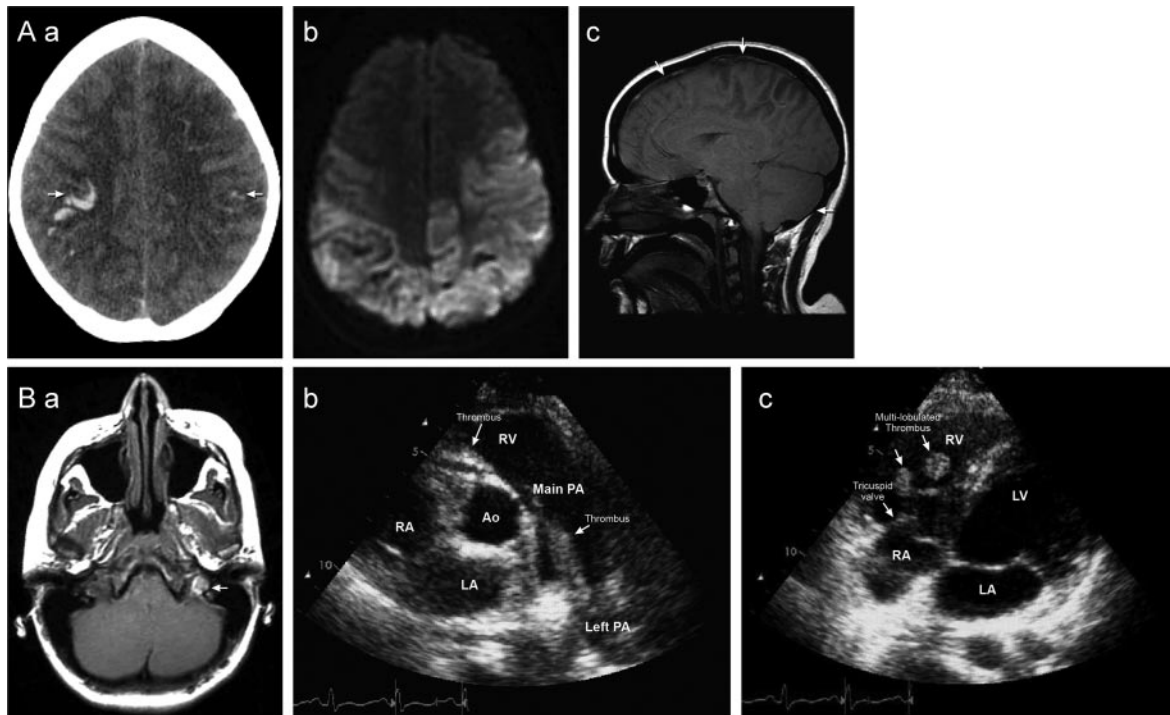
A 23-year-old woman on oral contraception developed headache and seizures. Hemorrhagic infarcts with early swelling resulted in coma with no response to osmotic diuretics (figure, A). On arrival, she had lost most brain-stem reflexes and met the criteria of brain death within 3 days of onset. Factor V Leiden and prothrombin gene mutation were absent, and activated protein C resistance ratio was negative. Oxygen desaturations were noted from pulmonary emboli from clot extending into the internal jugular vein (figure, B). Rapid onset of hemorrhagic infarcts with swelling in cerebral venous thrombosis can be fatal and too late for endovascular

intervention and has been observed in 5 of 20 cases referred for endovascular thrombolysis.¹ Cerebral venous thrombosis has been associated with pulmonary emboli in 11% of 1 series and may be an unrecognized complication or early manifestation.²

REFERENCES

1. Stam J, Majoie CB, Van Delden OM, et al. Endovascular thrombectomy and thrombolysis for severe cerebral sinus thrombosis. *Stroke* 2008;39:1487–1490.
2. Diaz JM, Schiffman JS, Urban ES, Maccario M. Superior sagittal sinus thrombosis and pulmonary embolism: a syndrome rediscovered. *Acta Neurol Scand* 1992;86:390–396.

Figure Imaging results



(A.a) Initial CT scan shows multiple hemorrhages in both hemispheres. (A.b) T2 MRI shows large territorial infarcts with early swelling. (A.c) T1 MRI. Clot is present in sagittal sinus and confirmed at autopsy. (B.a) T1 MRI shows clot in the internal jugular vein. (B.b and B.c) Two-dimensional echocardiography shows thrombus right ventricle and main pulmonary artery.¹

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