

# Teaching NeuroImages: Failing to see blood on susceptibility-weighted imaging

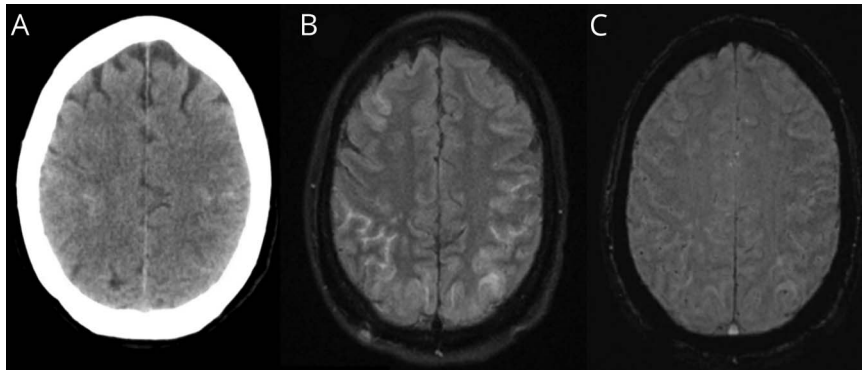
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*Neurology*® 2019;93:e1495-e1496. doi:10.1212/WNL.0000000000008246

## Correspondence

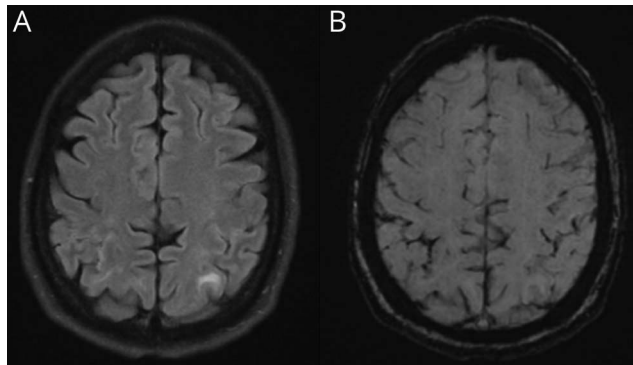
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**Figure 1** Initial neuroimaging



(A) Initial head CT with bilateral frontoparietal convexity subarachnoid hemorrhage. (B) MRI fluid-attenuated inversion recovery with bilateral frontoparietal hyperintensity. (C) MRI susceptibility-weighted imaging negative for acute hemorrhage.

**Figure 2** Follow-up neuroimaging day 3



(A) Repeat MRI fluid-attenuated inversion recovery shows resolving subarachnoid hemorrhage. (B) MRI susceptibility-weighted imaging now shows blood products.

A 49-year-old woman with depression on citalopram presented with the worst headache of her life and seizures while taking decongestants for sinusitis. Head CT 22 hours after ictus showed bilateral convexity subarachnoid hemorrhage (SAH). Initial MRI 34 hours after headache showed T2 fluid-attenuated inversion recovery sulcal hyperintensity; however, the susceptibility-weighted imaging (SWI) was negative for blood products (figure 1). Repeat MRI on day 3 confirmed the presence of convexity SAH (figure 2). SWI is sensitive for the

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## Appendix Authors

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<b>Edith Graham, MD</b>	Rush University Medical Center, Chicago, IL	Author	Primary author
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detection of deoxyhemoglobin, hemosiderin, and ferritin. A higher concentration of oxyhemoglobin in early hemorrhage may limit the sensitivity of SWI in detecting acute blood products.<sup>1</sup>

### Study funding

No targeted funding reported.

### Disclosure

The authors report no disclosures relevant to the manuscript. Go to [Neurology.org/N](http://Neurology.org/N) for full disclosures.

### Reference

1. Salmela M, Krishna S, Martin D, et al. All that bleeds is not black: susceptibility weighted imaging of intracranial hemorrhage and the effect of T1 signal. *Clin Imaging* 2016;41:69–72.

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**This information is current as of October 7, 2019**

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