

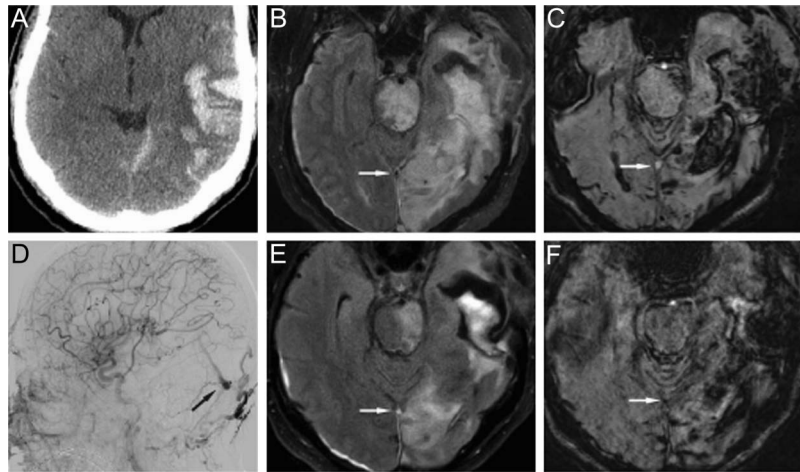
Teaching NeuroImages: Susceptibility-weighted MRI

First clue to DAVF complicating sinovenous thrombosis

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Figure Susceptibility-weighted imaging demonstrates development of a dural arteriovenous fistula 4 years after sinovenous thrombosis



(A) CT shows hemorrhage. (B) MRI fluid-attenuated inversion recovery (FLAIR) images 4 years later demonstrate progressive edema. (C) Susceptibility-weighted imaging shows hyperintense straight sinus. (D) Catheter angiography confirms a dural arteriovenous fistula (DAVF). (E) Improved brain edema on FLAIR and (F) resolved sinus hyperintensity on SWI post-treatment (white arrows, straight sinus; black arrow, DAVF).

A 61-year-old man with factor V Leiden thrombophilia presented with hemorrhage and transverse sinus thrombosis (figure, A). Four years later, he developed worsening aphasia, new hemorrhage, and hemispheric edema (figure, B). Susceptibility-weighted imaging (SWI) showed bright signal in the straight sinus (figure, C). A dural arteriovenous fistula (DAVF) was diagnosed (figure, D). The brain edema improved (figure, E) and SWI sinus hyperintensity resolved after endovascular disconnection of the fistula (figure, F).

Sinovenous thrombosis is a risk factor for DAVF.¹ SWI that demonstrates hyperintensity within a venous sinus (from an arteriovenous shunt and oxygenated, high-flow blood) suggests the diagnosis.²

AUTHOR CONTRIBUTIONS

Vivek B. Kalra performed a literature review and drafted the manuscript text. Ajay Malhotra conceived of the study, performed a literature review, and assisted in writing the final manuscript text. Charles C. Matouk conceived of the study, performed a literature review, and assisted in writing the final manuscript text.

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DISCLOSURE

The authors report no disclosures relevant to the manuscript. Go to Neurology.org for full disclosures.

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