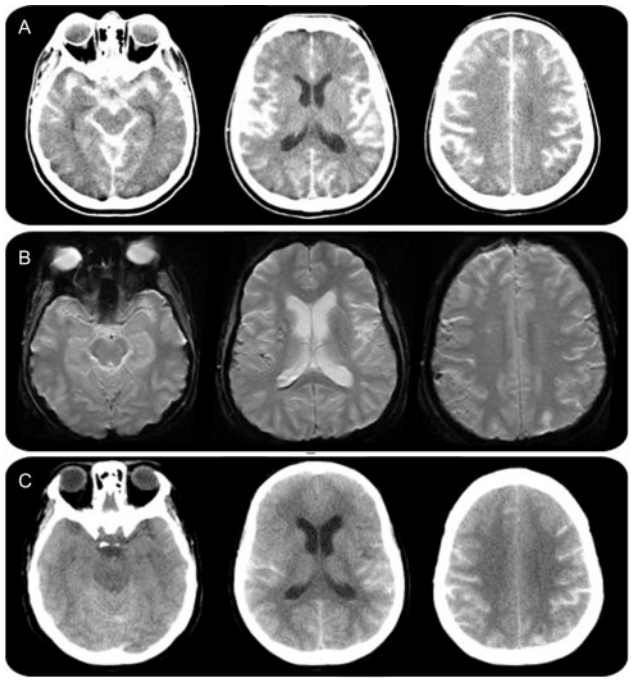
Subarachnoid contrast extravasation after intravenous and intra-arterial reperfusion therapy

Figure Postprocedure CT and MRI and 2-day follow-up CT



After successful recanalization, the subarachnoid space appeared hyperdense on CT (A), but gradient echo MRI (B) did not demonstrate corresponding susceptibility artifact. The CT hyperdensity cleared over 2 days (C). There was no renal impairment or postprocedural encephalopathy. CT angiography and angiogram totaled approximately 150 milliliters of contrast (Ultravist 240, Bayer).

A 63-year-old woman presented with acute hemiparesis from right middle cerebral artery occlusion. After IV tissue plasminogen activator and intra-arterial treatment with Merci retriever, balloon angioplasty, and urokinase, CT demonstrated diffuse subarachnoid hyperdensity (figure, A). Because the patient appeared clinically improved, subarachnoid contrast extravasation rather than hemorrhage was suspected. Hounsfield units may not reliably distinguish between diluted contrast and blood, but absence of susceptibility on gradient echo MRI (figure, B) and rapid contrast clearance on serial CT (figure, C) support the correct diagnosis.[1] Potential etiologies include blood–brain barrier breakdown[2] and microvascular injury due to device manipulation.

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