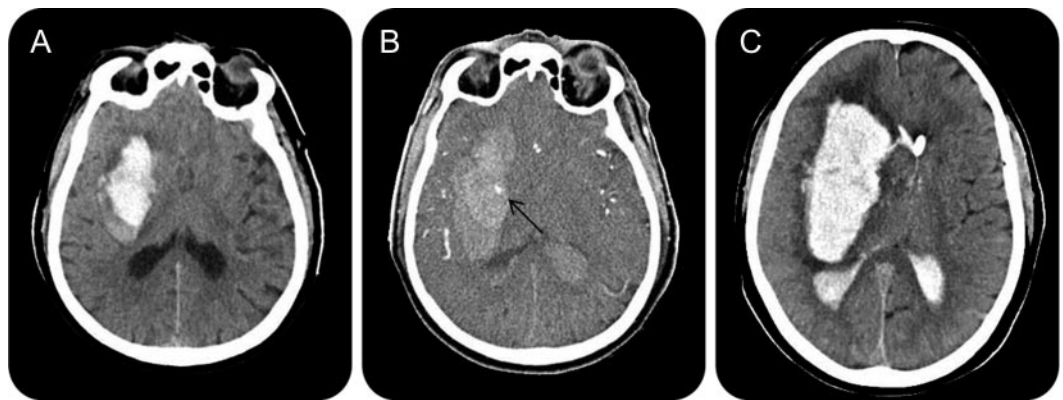


Spot sign and live-imaged dramatic intracerebral hematoma expansion

Figure CT scans



Baseline noncontrast CT shows heterogeneous right deep parenchymal hemorrhage (A). Subsequent CT angiography demonstrates hematoma progression with significant enlargement and new intraventricular extension. A small focus of enhancement is seen within the lesion consistent with spot sign (B) (arrow). Control noncontrast CT shows increased size of the hemorrhage with substantial mass effect, subfalcine herniation, and midline shift (C).

A 74-year-old man with a history of hypertension presented 1 hour after a sudden onset of a complete right hemisphere syndrome. Noncontrast CT showed a 43-mL right deep intracranial hematoma (figure, A). CT angiography (CTA) performed 10 minutes later, as per our imaging protocol, detected a dramatic hematoma growth up to 84 mL, together with intraventricular extension. A spot sign was apparent (figure, B). By the end of CT scanning, the patient's Glasgow Coma Scale score had dropped to 7. Follow-up CT scan confirmed further hematoma expansion as predicted by the spot sign (figure, C).

The spot sign, defined as 1-mm to 2-mm foci of enhancement within a hematoma on CTA source images, is typically located in the periphery of hematomas and suggests the likelihood of expansion. The pathologic basis remains unclear, but may represent primary vessel pathology such as microaneurysms.¹ Alternatively, extravasation of blood within the hematoma could occur, as suggested by slow expansion within the hematoma after contrast,² possibly due to secondary vessel disruption by the hematoma. In our case, the spot sign was already present when the hematoma was expanding and predicted further growth, supporting the mechanism of extravasation and contrast leakage related to secondary vessel damage.

P. García Bermejo, MD, J. Arribas García, MD, S. Pérez-Fernández, MD, J.F. Arenillas, MD, PhD, Valladolid, Spain

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Address correspondence and reprint requests to Dr. Pablo García Bermejo, Stroke Unit, Department of Neurology, Hospital Clínico Universitario, Avda. Ramón y Cajal 3, 47005 Valladolid, Spain; pablerah@hotmail.com

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