



Superficial Cortical Siderosis

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Abstract

Cerebrovascular deposition of amyloid (cerebral amyloid angiopathy CAA) is most commonly recognized as a cause of spontaneous lobar intracerebral hemorrhage. On the basis of the noninvasive new MR imaging we would propose superficial cortical hemosiderosis and subarachnoid hemosiderosis as potentially useful new criteria to facilitate the diagnosis of CAA.

Case report

A 80 year-old man presented with an acute left-sided, brachiofacial hemiparesis. He had no other medical or family history. Cognitively he demonstrated mild episodic memory impairment.

MRI revealed a subacute, right parietal lobar hemorrhage with high signal on T1-weighted images (Fig. A). On T2-weighted image a linear low signal over the right superficial frontal cortex was depicted (Fig. B). On gradient recalled-echo T2* MR images the hemorrhagic foci in the right parietal lobe showed low signal intensity. Multiple linear and gyriform low signal intensities corresponding to

chronic microbleeds were also seen in right parietal and bilateral frontal lobes (Fig. C, D). The above findings were consistent with superficial siderosis.

Recent advances in imaging techniques especially gradient-recalled echo MRI with T2* weighting allow the detection of iron deposits that can be diagnostic markers of amyloid angiopathy without the need for a biopsy (1).

REFERENCE

1. Feldman HH, Maia LF, Mackenzie IR, Forster BB, Martzke J, Woolfenden A. Superficial siderosis: A potential diagnostic marker of cerebral amyloid angiopathy in Alzheimer Disease. *Stroke*. 2008;39: 2894-2897.

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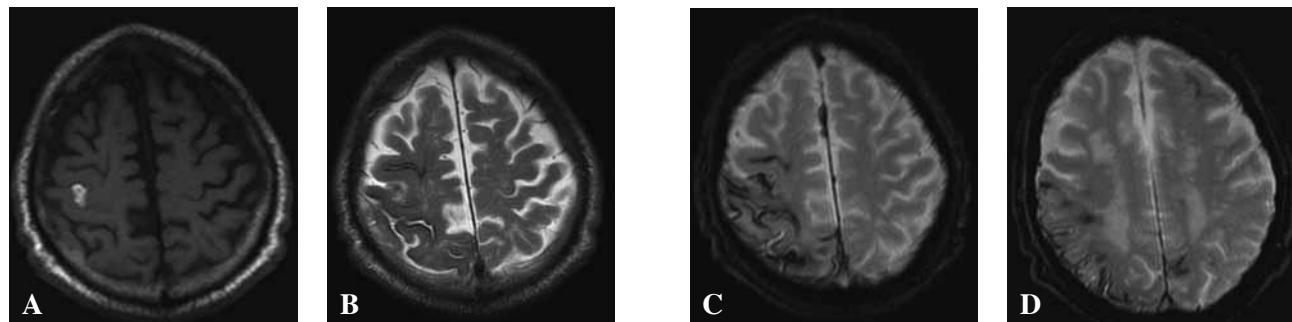


FIG. 1. — (A) Axial T1-weighted MR image showing atrophy and a subacute right parietal lobar hemorrhage with high signal; (B) Axial T2-weighted MR image showing linear low signal in the right frontal cortex corresponding to meningeal siderosis; (C, D) On GRE-T2* MR images showing a lot of linear and gyriform hypointense haemosiderin depositions around the surface of the right parietal and frontal cortex bilaterally corresponding to multiple microbleeds. Note findings of ischemic leukoencephalopathy. GRE-T2* has higher sensitivity detecting haemoglobin breakdown products than any other sequence.