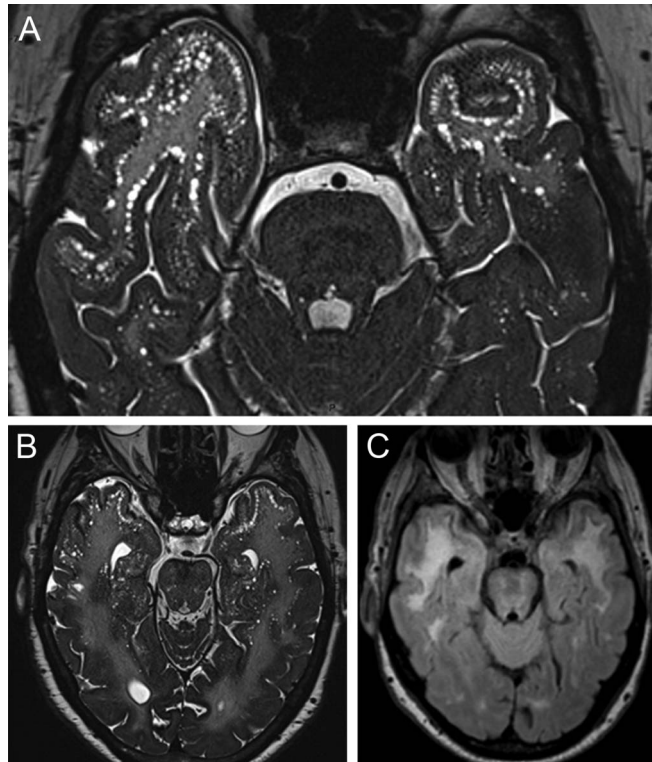


# MRI hydrographic 3D sequences in CADASIL

**Figure** Subcortical lacunar lesions in CADASIL



Brain MRI of patients with cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (CADASIL) shows hyperintense lesions on fluid-attenuated inversion recovery (C) associated with numerous subcortical lacunar lesions in the temporal lobes, best characterized by a 3D SPACE sequence (A, B).

Two patients with cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (CADASIL) (figure), evolving with cognitive deterioration, had MRI. Hydrographic 3D high-resolution turbo spin-echo (TSE) with variable flip angle sequence (SPACE) was performed to demonstrate the subcortical lacunar lesions (SLLs) (figure, A and B) considered specific in CADASIL.<sup>1</sup>

SPACE is a 3D TSE sequence similar to other hydrographic sequences, in which the water and fat have high signal, giving excellent contrast between CSF and other structures; SLLs appear as linearly arranged groups of rounded, circumscribed lesions at the junction of gray and white matter with signal intensity similar to CSF,<sup>1</sup> located mainly in the anterior temporal lobes.

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1. van Der Boom R, Lesnik Oberstein SA, van Duinen SG, et al. Subcortical lacunar lesions: an MRI finding in patients with cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy. *Radiology* 2002;224:791–796.

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