

## Attenuation of Brain White Matter Lesions After Lacunar Stroke

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### ABSTRACT

White matter lesions (WMLs) are commonly observed in stroke patients with small vessel disease (SVD) and are thought to result from a progressive, irreversible disease process following arteriolosclerosis. In this study, we report a case of partial disappearance of WMLs 1 year after a lacunar stroke in a 69-year-old man with evidence of SVD. We also discuss possible mechanisms associated with this observation.

**Keywords:** Brain white matter hyperintensities, leukoaraiosis, stroke

### INTRODUCTION

White matter lesions (WMLs) are commonly observed as hyperintensities on T2 and fluid attenuated inversion recovery (FLAIR) magnetic resonance imaging (MRI) sequences in stroke patients with small vessel disease (SVD)<sup>[1]</sup> and may reflect the ischemic components of vascular brain injury.<sup>[2]</sup> Although the precise disease mechanism has yet to be determined, age- and vascular risk factor-related WMLs are thought to be symptomatic of a progressive, irreversible process that follows on from arteriolosclerosis.<sup>[3]</sup>

In this study, we report a case in which WMLs had partly disappeared 1 year after a lacunar stroke in a patient with evidence of SVD and receiving optimal secondary prevention. We also discuss the potential mechanistic implications of this finding.

### CASE REPORT

A 69-year-old, right-handed man suddenly developed right-side weakness. There was no significant medical or medication history and his only vascular risk factors were arterial hypertension and obesity. The patient was referred to our acute stroke unit 3 days after symptom onset.

In a neurological examination, the patient was found to be alert. There was no lower facial or arm paresis but a motor examination revealed decreased muscle tone in his right leg and slight dysarthria. The results of a sensory examination







