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WHITE MATTER LESIONS AFTER CEREBRAL ANEURYSM COILING

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White matter lesions (WML) on T2-weighted magnetic resonance imaging (MRI), particularly when extensive, are a marker of cerebral small-vessel disease (SVD). Anecdotally, WMLs were noted in follow-up imaging of patients with symptomatic cerebral aneurysms, but the underlying reason for this is unknown. In this study we investigated WMLs in patients with cerebral aneurysms.

Consecutive patients were identified who underwent endovascular coiling of cerebral aneurysms at the Royal Preston Hospital between 2008 and 2010, for whom follow-up MRI

scans were available. Scans from patients showing WMLs were anonymised and the lesion burden was estimated using the Fazekas visual rating score and by software-aided volumetric analysis. Comparison was made with an age-stratified outpatient control group who underwent brain MRI for headache.

157 patients had follow-up MRI scans. WMLs were reported in 38.2%, and 48% were scored Fazekas grade 2 or higher. The prevalence of WMLs in cases was significantly greater than that in age-stratified controls in patients aged 60–69y ($p < 0.01$) and over-70y ($p < 0.01$). The median lesion burden increased significantly between the 6-month and 18-month follow up scan in 41 patients. We believe these results reflect a potential association between cerebral SVD and cerebral aneurysms which warrants further study.