

Lay Summary

BRAIN UK Ref: 15/018

A morphological assessment of the white matter in CAA

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The build-up of waste products like amyloid plaques, which are protein pieces, in the walls of arteries is a common cause of stroke and is also commonly observed in Alzheimer's disease. The build-up of amyloid is an indicator of the brain's failing ability to remove waste along the walls of blood vessels. Some arteries do not develop amyloid deposits but rather have enlarged spaces around them that can be observed on MRI scans. We are fortunate to have brain tissue from two patients with amyloid deposits. In this project we propose to apply our expertise in the analysis of blood vessels of the brain together with advanced microscopy to compare the structure of blood vessels in the same patient between amyloid-laden arteries and arteries with enlarged spaces around them. We will also compare this tissue with some from 'healthy' brains. The findings will allow to identify unique differences that will shed light on why the enlarged spaces appear around some vessels in the same patient that also has amyloid deposits.