**Using high field magnetic resonance imaging to assess distensibility of the middle cerebral artery**

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**Data supplement – MRI image acquisition parameters**

MRI scans were performed at 7 Tesla (whole body Philips Achieva system, Philips Healthcare, Best, The Netherlands), and included a 3-dimensional time-of-flight angiogram was performed to identify the MCA, a quantitative flow scan, planned perpendicular to the M1 segment of the MCA, and cardiac triggered T2-weighted images were acquired at 4 time points in the cardiac cycle in pseudo-random order: 200 (*t1*) and 100ms (*t2*) preceding peak-diastole, and 50 ms before (*t3*) and 50 ms after (*t4*) peak-systole.

The acquisition parameters of the time-of-flight angiogram were: TR/TE = 12.5/3.7 ms, flip angle = 20°, field of view = 180x170x50 mm2, voxel size = 0.3 mm3 isotropic.

The acquisition parameters of the quantitative flow scan were: phase contrast MR angiography, retrospective triggering via pulse oximetry, Venc = 180 cm/s, TR/TE = 20/13 ms, voxel size = 0.5x0.5x5.0 mm3, and 18 reconstructed cardiac phases.

The acquisition parameters of the cardiac triggered T2-weighted images were: prospective triggering, TR/TE = 2 heartbeats/116 ms, acquisition matrix = 1,200x900, voxel size = 0.2x0.2x5 mm3, turbo spin echo factor = 12 (+ 4 start-up echoes), read-out duration per block = 130 ms, acquisition duration = 2.5 min.