Prominent anterior temporal artery

Menon et al. identified a vascular imaging sign, presence of “prominent anterior temporal artery” on computed tomography (CT) angiography (CTA) and investigate whether it predicts mortality in acute M1-MCA occlusions.

One hundred and two patients with acute M1-MCA occlusions from 2003-to 2007 were included in the study. A prominent anterior temporal artery arising from proximal M1 MCA was identified by two readers blinded to clinical outcome. Primary clinical outcome was survival (modified Rankin Scale [mRS] 0-5) at 3 months.

An anterior temporal artery arising from M1 MCA was present in 20/102 (20%). Eighteen of 20 (90%) patients with this sign survived at 3 months (mRS 0-5) when compared to 66/82 (80.4%) patients without the sign (odds ratio 2.2 CI(95) .5-10.4). The sign has a sensitivity of 21% (CI(95) .13-.25) but specificity of 89% (CI(95) .64-.98) in predicting survival at 3 months. Positive predictive value was 90% with likelihood ratio of 1.9 (CI(95) .9-7.6).

Presence of prominent anterior temporal artery in M1-MCA occlusions on CTA identifies a group of patients with reduced case fatality. The mechanism is likely related to a reduced chance of malignant cerebral edema [1)].

1)
Menon BK, Bal S, Modi J, Sohn SI, Watson TW, Hill MD, Demchuk AM, Goyal M. Anterior temporal artery sign in CT angiography predicts reduced fatal brain edema and mortality in acute M1 middle cerebral artery occlusions. J Neuroimaging. 2012 Apr;22(2):145-8. doi: 10.1111/j.1552-6569.2010.00566.x. Epub 2011 Jan 11. PubMed PMID: 21223432.