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CEREBRAL PERFUSION PARAMETERS IN ACUTE, SUBACUTE, OR CHRONIC MIDDLE CEREBRAL ARTERY TERRITORY ISCHAEMIA
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Aims: We sought to measure perfusion parameters in patients with acute or subacute middle cerebral artery (MCA) ischaemic stroke, and in patients with chronic MCA territory ischaemia due to severe stenosis or occlusion of the internal carotid artery (ICA).

Materials and methods: A dynamic CT perfusion method is used to quantitatively measure cerebral blood flow (CBF), cerebral blood volume (CBV), and mean transit time (MTT) from the brain regions supplied by the major cerebral arteries on both sides and from the ischaemic zone in patients with acute or subacute ischaemia.

Results: CT perfusion parameters were obtained from 15 patients with acute MCA ischaemic stroke within 6 h of onset, and 11 patients with subacute stroke between 0.5 and 30 days of onset, 47 patients with unilateral severe ICA stenosis, and 39 patients with unilateral ICA occlusion. In patients with acute ischaemia, the CBF (in mL/100 g/min), CBV (in mL/100 g) and MTT (in s) over the acute ischaemic zone were 13.3 ± 4.7 (p < 0.001), 1.37 ± 0.47 (p < 0.005), and 8.79 ± 3.94 (p < 0.05), and those of the mirror sites of the non-ischaemic side were 59.6 ± 12.8, 2.72 ± 0.75, and 3.99 ± 0.59 (p < 0.05). In patients with subacute ischaemia, the perfusion parameters of the infarct gradually "normalised" over time, representing luxury perfusion. Patients with unilateral severe stenosis or occlusion of the ICA had "chronic ischaemia" over the MCA territory with a mild (20%) reduction in CBF, a compensated CBV, and a moderate (60%) prolongation in MTT.

Conclusions: CT perfusion parameters may be useful in acute or chronic cerebral ischaemia. The perfusion abnormalities may guide the acute stroke management of acute ischaemic stroke and influence our decision on revascularisation procedures, especially in asymptomatic patients.

024 QUANTITATIVE ANALYSIS OF ARTERIOLOPATHY BETWEEN DIFFERENT ARTERIOLES AFTER CEREBRAL INFARCTION
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Purpose: To find out the difference of arteriolarisclerosis between different arterioles.

Method: Observe the pathological change of the arterioles in cerebral infarct case and contrast case. Analysis of the sclerotic index of the different arterioles quantitatively.

Result: The SI of arterioles whose external diameter (R) is smaller than 50 μm is much higher than other groups. The SIs of arterioles (R, 100 μm–300 μm) has no significant deviation between infarct groups and contrast groups. The SIs of arterioles (~50 μm) in white matter of infarct groups are much higher than grey matter.

Conclusions: The smaller arterioles of cerebral atherosclerotic infarct cases have higher SI, and the arterioles in white matter are easy to be suffered.

025 THE CLINICAL, MRI FEATURES AND PERIPHERAL VASCULAR CHANGES IN CHINESE CADASIL
Y. Yuan, W. Zhang, L. He, Z. Wang, Y. Huang. Department of Neurology, First Hospital of Peking University, China

Objectives: Cerebral autosomal dominant arteriopathy with subcortical infarcts and leucoencephalopathy (CADASIL) is pathologically characterised by appearance of granular osmiophilic material (GOM) in basilar lamina of vascular smooth muscle cells. Although the extracerebral biopsy is very useful for the pathological diagnosis we are not clear what pathological changes occur in extracerebral arterioles with different calibre. Moreover we need to see if the clinical and MRI features are similar to the report in Caucasian patients.

Conclusions: CADASIL is mainly associated with HTN. In contrast FHxIHD is mainly associated with LVA but less strongly with HTN. It is likely that the apparent heritability of stroke is partly accounted for by heritability of HTN. Analyses of heritability of stroke and candidate gene studies should be adjusted accordingly.

026 DISTRIBUTION AND OUTCOMES OF ISCHAEMIC STROKE SUBTYPES BY OCSP CLASSIFICATION
M. Liu, Y. Zhang. Department of Neurology, West China Hospital, Sichuan University, Chengdu 610041, China

Objectives: To analyse OCSP subtypes and to understand the relationship between OCSP classification and outcomes in a group of Chinese ischaemic stroke patients.

Methods: We registered all the stroke patients consecutively admitted in the wards of Department of Neurology, West China Hospital, Sichuan University, Chengdu from March 2002 to March 2003. We classified 321 patients with ischaemic stroke using OCSP criteria into four subtypes (total anterior circulation infarction TACI, partial anterior circulation infarction PACI, lacunar infarction LACI, and posterior circulation infarction POCI). The patients were followed up at 1, 3, and 6 months after stroke. Outcome measures included death, disability, and recurrence. Interobserver agreement was assessed by Kappa value. The relationship between OCSP subtypes and outcomes were analysed by logistic regression models.

Results: The interobserver agreement of using OCSP classification was good (κ = 0.679, 95% CI = 0.561–0.797). Of the 321 included patients, 127 (39.6%) were LACI, 121 (37.7%) were PACI, 41 (12.8%) were POCI; and 32 (10%) were TACI. TACI had the highest case fatality rate. At 6 months the case fatality rate of TACI was 5.4 times higher than that of PACI, and was 7.4 times higher than that of POCI. At 3 and 6 months, LACI had the lowest death or disability rate, and TACI had the highest ones. Total number of recurrence at 6 months was 15 (15/212, 7.1%). Corrected for other prognostic factors, OCSP classification was associated with the outcomes of ischaemic stroke (p < 0.05).

Conclusions: The interobserver agreement of OCSP classification was good. In this study LACI was the most common subtype of ischaemic stroke and TACI was the least common. TACI had the worst outcome. OCSP classification can be used to predict outcomes of ischaemic stroke.

027 CLINICAL CHARACTERISTICS OF MOYAMOYA DISEASE SCREENING WITH TRANSCRANIAL DOPPLER
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Objectives: To document the age of onset, the period of diagnosis needed, symptom of onset, symptom on diagnosis, and clinical features of Moyamoya disease screening with transcranial Doppler (TCD).