



Title	Unilateral carotid territory ischaemia and carotid artery atherosclerosis
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EARLY EXPERIENCE OF THE ACUTE STROKE UNIT. Windsor MAK, Raymond TF CHEUNG, SL HO. Division of Neurology, Department of Medicine, Queen Mary Hospital, Hong Kong.

Background The Acute Stroke Unit (ASU) was recently established. We reported here our early experience over a four-week period.

Method Admission of patients to the ASU was unselected during this run-in period. Routine demographic and clinical data were collected. The stroke type, subtype, and probable aetiology of each patient were determined according to the clinical picture and results of initial investigations. The severity of stroke was assessed with a 36-point National Institute of Health Stroke Scale (NIHSS) on admission and discharge, and upon deterioration. Complications were also recorded.

Results 31 patients were admitted in this period: 27 emergency cases from the general medical wards and 4 cases from the other wards whose strokes occurred while receiving treatment for unrelated problems. The mean age of patients was 70.7yrs (range 25-90). The average time in the general medical wards before transferral to the ASU was 32.7hrs (range 2-98). The mean length of stay in the ASU was 4.8 days (range 1-10). There were 3 total anterior circulation infarcts, 6 partial anterior circulation infarcts, 15 lacunar infarcts, and 4 intracerebral haemorrhages. Their respective mean NIHSS scores were 23, 10.5, 3.3, and 14.5 on admission and 16.7, 7.7, 2.6, and 14.3 on discharge. In addition, there were 2 patients with reversible ischaemic neurological deficits and one with posterior circulation infarct. These admission figures represented 58% and 33% of all patients managed under the Department of Medicine during this period who had cerebral infarcts (n=43) and intracerebral haemorrhages (n=12), respectively. Maximum improvement was seen in total anterior circulation infarcts with an average reduction in NIHSS score of 5 (range 4-7). Two patients, one with lacunar infarct and the other with intracerebral haemorrhage, deteriorated neurologically. The former patient's NIHSS score increased from 5 to 9 on day 4 and became static afterwards. The latter patient was taken over to neurosurgery on day 2 when his NIHSS score rose from 20 to 33. No patient died during this period. Complications identified included constipation (n=5), pneumonia (n=1), seizure (n=1), and gastrointestinal bleeding (n=1).

Conclusion From our preliminary observations, early improvement after acute stroke was common and the magnitude of improvement was related to the stroke subtype and initial severity.

UNILATERAL CAROTID TERRITORY ISCHAEMIA AND CAROTID ARTERY ATHEROSCLEROSIS Windsor MAK, Raymond TF CHEUNG, SL HO. Division of Neurology, Department of Medicine, Queen Mary Hospital, Hong Kong.

Background Carotid territory ischaemic events may be secondary to extracranial or intracranial carotid artery atherosclerosis. Although carotid arteries are affected bilaterally, the severity of atherosclerosis is often asymmetric with more marked involvement on one side. The use of non-invasive techniques permits an assessment of extracranial and intracranial carotid artery disease.

Hypothesis Non-cardioembolic unilateral carotid territory ischaemia is associated with ipsilateral carotid artery atherosclerosis.

Methods Patients with unilateral carotid territory ischaemic events were routinely referred to have both transcranial and extracranial carotid Doppler examination if there was no clinical evidence of cardioembolism. Extracranial disease (ECD) was defined as $\geq 50\%$ circumferential stenosis or presence of ulcerated atheromatous plaques in the common or extracranial internal carotid artery. Intracranial disease (ICD) was defined as presence of segmental change in the mean flow velocity or abnormal pulsatility index in the absence of severe ECD ($\geq 80\%$ stenosis). Fisher's exact test was used in statistical analysis.

Results From January to October 1996, 27 patients (54 sides) were available for this study. The mean age was 58.3 years (range=34-77). Fifteen had cerebral infarction and twelve had transient ischaemic attack. There were 18 and 13 stenotic lesions on the symptomatic side (ECD=10, ICD=8) and asymptomatic side (ECD=9, ICD=4), respectively. The presence of ECD alone, ICD alone, or either condition had no significant correlation with the side of ischaemic symptoms. The corresponding 2-tailed p values were 1.00, 0.33, and 0.41.

Conclusion Although ECD and ICD are common in carotid territory ischaemia, the side of disease may not predict the side of symptoms. Presence of ECD or ICD may be an indicator of the underlying generalized atherosclerotic process predisposing to cerebrovascular events.