A Difficult Case

How should a patient presenting with unstable angina and a recent stroke be managed?

The occurrence of stroke in a patient with unstable angina is a common problem, particularly when preparing patients for bypass surgery. R J Davenport and colleagues present a difficult case of a man with this condition. Several experts not concerned with the case give their views on how he might be treated.

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BMJ 1995;310:1449-52

Case report

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A 60 year old right handed barman was referred to the regional cardiology service for consideration for coronary angiography. He gave a 12 month history of chest pain on exertion and recently of pain at rest. At his local hospital a 12 lead electrocardiogram had shown an old full thickness inferior myocardial infarction and exercise testing had yielded a moderately positive result. He had stopped smoking in the previous six months and did not have diabetes or hypertension. He was taking atenolol, nitrates, and aspirin. On the day before referral he suddenly developed weakness of the right arm and leg associated with difficulty finding words. These symptoms fluctuated.

Examination showed a normotensive man with intact peripheral pulses. There was a soft ejection systolic murmur but no carotid bruit. He was blind in the right eye (longstanding) and had a variable expressive dysphasia. Motor function varied with time from only reduced fine finger movements on the right hand at best to a completely paralysed arm at worst. The right leg was mildly affected and there were no sensory features.

Coronary angiography was postponed and he was transferred to a neurological unit. Computed tomography showed an area of low attenuation in the right cerebellum consistent with an old infarct but no other abnormality. A carotid ultrasound scan suggested an occlusion of the right internal carotid artery and a greater than 90% stenosis of the symptomatic left side. Despite maintenance of adequate blood pressure and full anticoagulation with intravenous heparin his neurological state continued to fluctuate. Discussion concerning his further immediate management ensued between the neurologists, neuroradiologists, cardiologists, and vascular surgeons.

Those opposed to immediate intervention . . .

Several discussants argued that the patient's unstable neurological and cardiological state made any invasive intervention such as coronary or carotid angiography, or both, with a view to vascular surgery extremely hazardous. They pointed out that urgent

coronary angiography followed by possible coronary artery bypass surgery could lead to a perioperative stroke owing to low cerebral blood flow. They also thought that urgent carotid endarterectomy would be equally hazardous while there were fluctuations in the patient's neurological state. They therefore advised no immediate intervention, that warfarin should be considered for anticoagulation, and that the patient should be reassessed after one month.

Those for immediate intervention—but which one? . . .

Others thought that it was precisely the patient's precarious state that warranted immediate intervention. However, there were differing views on how best to proceed. The least invasive plan was urgent carotid endarterectomy based on the carotid ultrasound scan alone, delaying further cardiological investigations until recovery from surgery. Alternatively, selective carotid angiography might be considered followed by surgery if appropriate. The possibility of carotid angioplasty either as a definitive procedure or as a temporary measure to allow further investigations to proceed more safely was also raised. A further aggressive approach was postulated—namely, that the patient should have urgent carotid and coronary angiography with a view to surgery as indicated, potentially having carotid endarterectomy and coronary artery bypass surgery as a joint procedure.

Perform left carotid endarterectomy without delay

John M Porter

This patient presents a conundrum. The clinician is faced not only with the issue of propriety of carotid surgery in the face of a probable stroke in evolution but also with the prospect of carotid surgery in a patient who probably has severe associated coronary artery disease.

When encountering a patient with fluctuating neurological symptoms and high grade carotid stenosis my first objective is to see whether the patient has had a stroke. Computed tomography is notoriously unreliable in early ischaemic stroke but does rule out