GLOSSARY

NATIONAL INSTITUTES OF HEALTH STROKE SCALE (NIHSS)

A structured, clinician-rated scale incorporating physical examination, preset questions, and language assessment to quantify neurological deficits following stroke

non-enhanced CT scan, followed by either CT or catheter angiography. Their stroke symptoms were also assessed according to the NATIONAL INSTITUTES OF HEALTH STROKE SCALE (NIHSS).

Of the TGT patients, 11 died or could not be discharged from hospital because of neurologic deterioration ($n=6$) or a persistent neurologic deficit ($n=5$). Neurologic deficits were diagnosed as cognitive impairment ($n=1$), gait impairment associated with hemiparesis ($n=2$) or ataxia ($n=2$). Importantly, those patients whose stroke symptoms had shown rapid improvement after hospital admission had an elevated risk of subsequent neurologic deterioration.

According to the investigators, a re-evaluation of the stroke-severity criteria for tPA treatment might be warranted, with assessment of gait as a potential predictor of patients' short-term outcomes.

Claire Braybrook

Original article Smith EE *et al.* (2005) Poor outcomes in patients who do not receive intravenous tissue plasminogen activator because of mild or improving ischemic stroke. *Stroke* 36: 2497–2499

Obesity increases risk of postoperative atrial fibrillation

Development of atrial fibrillation (AF) is linked to obesity, the rising prevalence of which in the general population might have implications for AF rates; however, it is not known whether prevalence of new-onset AF occurring after cardiac surgery is higher in obese patients than in nonobese patients. Postoperative AF is the most common complication after cardiac surgery and has a considerable effect on patients' outcomes.

To investigate the association of postoperative AF with body size, Zacharias *et al.* performed a retrospective analysis of consecutive cardiac-surgery patients admitted to hospital from 1994 to 2004; 3,164 were obese and 4,887 were nonobese. Patients were divided into six subgroups according to their BMI, and covariate-adjusted odds ratios for AF were calculated. The risk of developing postoperative new-onset AF was incrementally greater for patients with higher-than-normal BMIs, with adjusted odds ratios ranging from 1.18 (95% CI 1.00–1.40) for a BMI of 25–30 kg/m², to 2.39 (95% CI 1.81–3.17) for a BMI of >40 kg/m².

In summary, the authors show that there is a strong and independent link between increasing BMI and the development of new-onset AF after cardiac surgery. Additional studies are required to investigate the link between AF, left atrial dilatation (which correlates with obesity) and BMI, and to test whether prophylactic measures can prevent AF in overweight patients. Identification of patients at risk of postoperative AF could enable prophylactic intervention and might reduce the utilization of resources and the rates of mortality and morbidity following cardiac surgery.

Kate Matthews

Original article Zacharias A *et al.* (2005) Obesity and risk of new-onset atrial fibrillation after cardiac surgery. *Circulation* 112: 3247–3255

Population-based changes in acute vascular events and implications for health services

The Oxford Vascular Study has assessed all acute vascular events in 91,106 people in Oxfordshire, UK, from 2002 to 2005, with the intention of determining the comparative epidemiology of acute vascular disease and the potential effect of an aging population on future event rates.

A total of 2,024 acute vascular events occurred in 1,657 individuals. Cerebrovascular events comprised 45% of the total, with cardiovascular and peripheral vascular events accounting for 42% and 9% of events, respectively; the remaining 4% of events were unclassifiable. The rates of fatal and nonfatal incidents rose steeply with age, but no difference in age of onset between cerebrovascular, cardiovascular and peripheral vascular events was noted. More than 75% of acute vascular events occurred in the 14% of the study population who were aged 65 or over, more than half of which occurred in the 6% aged 75 or over. At current event rates and with the aging of the UK population, the authors expect the total of nonfatal vascular events in people aged 85 and over to increase by 30% by 2011, and by 280% by 2051.

As cerebrovascular events were at least as common as cardiovascular events and had the same age profile, the authors call for a reappraisal of funding needs for