

# Recognition and management of transient ischaemic attack

Anthony Rudd, Sharon Swain and Claire Turner

**Anthony Rudd**

FRCP, Stroke Programme Director, Clinical Standards Department

**Sharon Swain**

PhD, Research Fellow, National Collaborating Centre for Chronic Conditions

**Claire Turner**

BSc(Hons), Senior Project Manager, National Collaborating Centre for Chronic Conditions

*Clin Med*

2008;8:362–3

For any disease to be managed effectively there is an essential prerequisite that the patient should present to the health service within a time period where treatment can still be of use and that when they reach the front door of the health service they are met by someone who takes their problem seriously. The paper by Jagadeshram *et al*<sup>1</sup> in this issue of *Clinical Medicine* starkly demonstrates that transient ischaemic attack (TIA) is a condition where neither of these elements is working effectively (pp 366–70).

Transient ischaemic attack needs urgent management. The risk of progressing to completed stroke within the first month after TIA can be as high as 30% without effective treatment.<sup>2</sup> It can be difficult to diagnose with anecdotal reports that only 50% of patients referred with a diagnosis of TIA by primary care and emergency department physicians to neurovascular clinics actually have cerebrovascular disease. Common TIA mimics include migraine, peripheral vestibular disturbance, epilepsy and cardiac dysrhythmias. Nevertheless many of those who should be seen are clearly not reporting their symptoms to their doctors or if they do may not be referred appropriately.

There is now a wealth of guidance as to the standards of care a patient should expect to receive. The recently published National Institute for Health and Clinical Excellence (NICE) guidelines on acute stroke and TIA<sup>3</sup> recommend that people who have had a suspected TIA should be assessed as soon as possible for their risk of subsequent stroke using a validated scoring system,<sup>4</sup> such as ABCD<sup>2</sup> and that those at high risk of stroke (that is, with an ABCD score of 4 or above) should receive specialist assessment and investigation within 24 hours of onset of symptoms. Those at lower risk should be seen and investigated within a week. If patients are identified as having carotid stenosis of between 70% and 99% and are fit for surgery then they should have carotid intervention within two weeks of the onset of their symptoms. These seem like very ambitious targets but there are some who think that even these timescales are too lax. Indeed the Department of Health's *National stroke strategy* published in December 2007 states that carotid endarterectomy should be performed within 48 hours of symptoms.<sup>5</sup> This, however, is a 10-year strategy and the health service will need to be radically restructured to make

it a seven-day service rather than the current weekday service in order to achieve this.

## How are we going to deliver these standards?

Public awareness of stroke and TIA needs to be raised. Surveys by the Stroke Association show that consistently a large sector of the population is unable to identify common symptoms of stroke with many people confusing stroke and heart attack. Stroke and TIA are usually painless conditions which may result in people taking them less seriously than other medical emergencies. The public health message for stroke and TIA is also much more complex than for heart attack, with multiple symptoms being commonly attributable to the condition as compared to just chest pain. The British Heart Foundation is able to spend many millions of pounds on advertising campaigns, resources that are not available to the Stroke Association. However the National Stroke Strategy has allocated £12m over the next three years towards a public awareness campaign, so there is a chance that understanding of stroke will improve.

Improving the knowledge of doctors has to start in medical schools where stroke is often given a low priority in the curriculum. With hospitals being staffed by ever smaller numbers of junior doctors out of normal working hours the chances of a patient being triaged by someone with any degree of specialist expertise is small. Protocols and guidelines are of little use if the condition is not even considered as a possibility. In hospital some of this expertise can be replaced by specialist nursing staff, but in the community that is less feasible and continued education in general practice is needed to ensure that no delays are introduced that slow effective management.

Once a patient has been referred, specialist services need to be able to respond quickly. Unfortunately although there have been improvements in recent years the *National sentinel stroke audit* in 2006 showed that while 78% of trusts had a designated neurovascular clinic, the average waiting time for a clinic appointment remained far too high at 12 days (IQR 7–17).<sup>6</sup> The UK Carotid Endarterectomy Audit data from 2005–7 showed a median waiting time of 39 days from referral to surgery.<sup>7</sup>

The solution is to start treating TIA as a medical emergency, akin to acute coronary syndrome. Rapid recognition and referral from wherever the patient first contacts health services to a responsive neurovascular service and a surgical service able to provide an operating theatre slot on the next days list. This can be achieved even in the UK. There are already examples of services with daily neurovascular clinics and protocols to admit their high-risk TIA patients to clinical decision units or the stroke unit for assessment and management, and evidence to show that implementing such services can significantly reduce the risk of stroke.<sup>7</sup> Centralisation of specialist stroke care into hyperacute centres to enable delivery of thrombolysis also provides the opportunity to improve TIA care and deliver the standards defined in the NICE guidelines. The cost of stroke to the country is huge with an estimated annual expenditure of £7bn.<sup>8</sup> Stroke prevention should not be taken lightly. Although improvement in TIA management will require some initial investment, long-term savings will result, not to mention the benefit for many people of a longer disability-free life.

## References

- 1 Jagadeshram VP, Aparajita R, Gough MJ. Can the UK guidelines for stroke be effective? Attitudes to the symptoms of a transient ischaemic attack among the general public and doctors. *Clin Med* 2008;8;366–70.
- 2 Coull A, Lovett J, Rothwell P on behalf of the Oxford Vascular Study. Population based study of early risk of stroke after transient ischaemic attack or minor stroke: implications for public education and organisation of services. *BMJ* 2004;328:326–8.
- 3 National Institute for Health and Clinical Excellence. *Guideline on diagnosis and initial management of acute stroke and transient ischaemic attack*. London: NICE, 2008.
- 4 Rothwell PM, Giles MF, Flossman E *et al*. A simple score (ABCD) to identify individuals at high early risk of stroke after transient ischaemic attack. *Lancet* 2005;366:29–36.
- 5 Department of Health. *National stroke strategy*. London: DH, 2007.
- 6 Royal College of Physicians. *National sentinel stroke audit. Organisational audit*. London: RCP, 2006.
- 7 Rothwell PM, Giles MF, Chandratheva A *et al*. Early use of Existing Preventive Strategies for Stroke (EXPRESS) study. Effect of urgent treatment of transient ischaemic attack and minor stroke on early recurrent stroke (EXPRESS study): a prospective population-based sequential comparison. *Lancet* 2007;370:1432–42.
- 8 National Audit Office. *Reducing brain damage: faster access to better stroke care*. London: Stationery Office, 2005.