Selected abstracts from the Neurology Symposium

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THE IMPORTANCE OF TRIAGE AND EARLY TREATMENT IN TRANSIENT ISCHAEMIC ATTACKS

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Although recent data on the incidence of transient ischaemic attacks (TIA) are lacking, available data suggest that the burden of TIA is higher than previously estimated and may be expected to increase with the ageing of the population.

Prospective prognostic studies have shown that the early risk of stroke after TIA is approximately 5% at 7 days and 10–15% at 90 days, depending on clinical settings and study methodology. This risk can be reliably predicted by risk scores based on clinical features (ABCD system), aetiology and findings on brain imaging, although the optimal combined prognostic strategy is uncertain because the interaction between individual predictors is not established. Studies of the urgent assessment and initiation of secondary prevention in specialist centres suggest that the early risk of stroke after TIA can be reduced by up to 80%.

The risk of stroke after TIA is considerable. However, recent advances have shown that this risk can be predicted for individuals and substantially reduced by urgent secondary prevention measures.

Further reading

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- Rothwell PM, Giles MF, Chandratheva A et al. 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.

Declaration of interests None declared.

WHEN SHOULD STROKE BE SENT TO AN EXPERT?

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Which patients might benefit from management in a regional neurosciences centre?

All stroke patients present a challenge to diagnosis (clinical and radiological), and outcomes are better when managed in an organised specialist stroke unit. Some patients may require referral to a regional neurosciences centre in order to undertake immediate diagnostic investigations, some specific interventions or investigation into stroke aetiology that is not available in stroke units.

Examples of immediate diagnostic issues relate to less common causes of stroke, such as cervicocephalic arterial dissection, cerebral venous thrombosis, cardiac embolism in the young and CNS vasculitis. Acute interventions that may be specifically available in a regional service include neurosurgical treatments (decompressive hemicraniectomy, haematoma evacuation or intraventricular haemorrhage drainage), neuroradiological interventions (intra-arterial clot lysis or mechanical clot retrieval) or specialist medical treatments (e.g. immunosuppression for vasculitis).

Specialist diagnostic evaluation may be required for genetic conditions or other less common causes of stroke.

All stroke patients require expert review for diagnosis, treatment and rehabilitation.

Some stroke patients may require further expertise for difficult or uncommon diagnoses (from vascular neurologists, cardiologists, geneticists), specific treatment (neuro-surgeons, interventional neuroradiologists, cardiologists) or specific rehabilitation needs.

Declaration of interests The author is a member of the data and safety monitoring board for a clinical trial of a revascularisation device and has received travel grants from Boehringer Ingelheim (manufacturer of thrombolytic drug therapy).

SUPPORTING DECISION MAKING AT THE END OF LIFE

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Current UK health initiatives[1–4] aim to improve care at the end of life while eliciting patients' wishes and preferences for their care. Care, if possible, should be anticipatory rather than reactive. The identification of an illness trajectory or a typical pattern of illness progression in a specific disease may allow patients and doctors to have a better understanding of the likely course of illness and allow planners to provide appropriate models of care.[5–6] Advance care planning (ACP) hopes to facilitate discussions between health professionals, patients and their carers about preferences and wishes for care at the end of life.[1]

Most people with progressive chronic illness follow one of three characteristic trajectories of physical decline at the end of life: a cancer trajectory with steady progression and usually a clear terminal phase; an organ failure trajectory with gradual decline punctuated by episodes of acute deterioration and eventually assuming unexpected death; and a trajectory of prolonged gradual decline (typical of physical frailty or dementia and possibly some progressive neurological illnesses). Progressive neurological illnesses may mimic any of these patterns of physical decline, although the last one may be most common.

The origins and evidence for ACP and three Edinburgh ACP research projects (based in primary care, specialist palliative care and home cares) were described. It was concluded that:

1. Key to caring well for people who will die in the near future is to understand how they may die and plan appropriately.
2. Prognosis remains difficult to predict, but a consideration of the likely illness trajectory will help planning and provision of services.
3. Planning requires knowledge and understanding of patients' and carers' wishes for care at the end of life.
4. Advance care planning attempts to facilitate these discussions among health professionals, patients and their carers and is relevant with all patients, including those with neurological disease.

References

1 NSH End of Life Care Programme. *Gold Standards Framework.* Available from: http://www.goldstandardsframework.nhs.uk
2 Department of Health. *End of Life Care Strategy.* London: DH; 2008. Available from: http://eolc.cbcl.co.uk/eolc
3 Scottish Government. *Better health, better care: a discussion document.* Edinburgh: Scottish Government; 2007. Available from: http://www.scotland.gov.uk/Topics/Health/Action-Plan/Discussion-Document.
4 Scottish Government. *Living and dying well.* Edinburgh: Scottish Government; 2008. Available from: http://www.scotland.gov.uk/Publications/2008/10/01091608/0
5 Murray SA, Kendall M, Boyd K et al. Illness trajectories and palliative care. *BMJ* 2005; 330:1007–11.
6 Murray SA, Sheikh A. Palliative care beyond cancer: care for all at the end of life. *BMJ* 2008; 336:958–9.

Declaration of interests None declared.

THROMBOLYSIS: IN WHOM, WHEN AND HOW?

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Intravenous recombinant tissue plasminogen activator (rt-PA) is approved for use in selected patients aged below 80 years with ischaemic stroke who can be treated within three hours of symptom onset. The results of the recent ECASS-3 trial may lead to an extension of the license to 4.5 hours for patients below the age of 80. The implementation of this treatment in the UK has been limited but is increasing.

The treatment is relatively simple to deliver, provided the stroke team members have appropriate training and the therapy is delivered in the context of a well-organised acute stroke service. Systems need to focus on a few key points and to minimise the 'door to needle time'. However, even with optimal organisation, the current licence restricts usage to a small proportion of all patients.

There are a number of questions that are still to be answered: What is the size of the reduction in death or dependency when treatment is given at different times after stroke onset? What is the latest time for worthwhile benefit? What is the effect on death? Should there be an upper age limit of 80 years for treatment? What are the key clinical and/or radiological features that identify patients most (or least) likely to benefit? The third International Stroke Trial (IST-3) seeks to address these questions and hence determine whether a wider range of patients may benefit. It is a multi-centre, prospective, randomised, open, blinded endpoint (PROBE) trial of intravenous rt-PA in acute ischaemic stroke. The trial seeks to recruit at least 3,100 patients by mid-2011 (trial registration: ISRCTN25765518).

Treatment within three hours of onset with intravenous rt-PA in selected patients aged below 80 years with ischaemic stroke is effective. IST-3 should help determine whether a wider variety of patients might benefit.

Further reading

- Hacke W, Donnan G, Fieschi C et al. Association of outcome with early stroke treatment: pooled analysis of ATLANTIS, ECASS, and NINDS rt-PA stroke trials. *Lancet* 2004; 363:768–74.
- Wardlaw JM, del Zoppo GJ, Yamaguchi T et al. Thrombolysis in acute ischaemic stroke. *Cochrane Database Syst Rev* 2000; (2):CD000213.
- Sandercock P, Lindley RI, Wardlaw J et al. The third international stroke trial (IST-3) of thrombolysis for acute ischaemic stroke. *Trials* 2008; 9:37. Available from: http://www.trialsjournal.com/content/9/1/37
- Hacke W, Kaste M, Bluhmki E et al. Thrombolysis with alteplase 3 to 4.5 hours after acute ischemic stroke. *N Engl J Med* 2008; 359:1317–29.

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Declaration of interests The author received a fee and travel expenses to give a lecture at the European Stroke Conference 2007 from Boehringer Ingelheim. He is the co-chief investigator of the Third International Stroke Trial (IST-3).

HOW I MANAGE PARKINSONIAN SYNDROMES

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The first step in the management of any Parkinsonian syndrome is getting the diagnosis correct. The initial part of my talk will therefore focus on the clinical features of Parkinson's disease and other Parkinsonian syndromes, illustrated by videos of the relevant clinical signs.

Parkinson's disease can be managed using levodopa-based treatments, or by using dopamine agonists. There are pros and cons of using either approach in the first instance, with different specialists recommending different approaches. It probably does not matter whether patients are started on levodopa or on dopamine agonists, but the dose of levodopa should be kept reasonably low where this is possible.

It is important that patients are given enough treatment to improve their disability, and that worries regarding motor complications do not lead to treatment being withheld. It is also important that physicians realise when symptoms are unlikely to respond to increasing antiparkinsonian treatment so that iatrogenic problems can be avoided.

Increasingly, it is non-motor problems that cause most disability in Parkinson's disease; I will also cover these problems in the presentation.

Declaration of interests None declared.