

Stroke prevention and treatment series

PART 4: TREATMENT & GROUP RECOMMENDATIONS

In this final segment highlighting the report by the *Stroke is a Catastrophic Illness Action Group*, we review the countries whose treatment approaches are currently achieving the most impressive results, introduce a new study on statins for secondary stroke prevention, and outline the 8 points of recommendation for action.



Best Practice in Treatment

As detailed in part 3 of the series, France has the lowest rate of stroke among the 8 countries surveyed. Data also suggest that it enjoys the best treatment response¹, with the national plan insisting upon hospitalization in specialized units. The 2003 Ministerial guidelines for dealing with stroke victims also stress the urgent nature of stroke and need for treatment in specialized units. However, studies as recent as 2004 reveal that the majority of stroke victims in France are treated in emergency/intensive care units due to an inadequate number of specialized structures.¹

Another success story is the status of treatment in the USA where, despite leading the 8 countries in total numbers of strokes and having an upward trend of chronic diseases, the death rate (31.9) is comparable to that in France (28.2).¹ Early intervention is the cornerstone of surviving a stroke as well as limiting the level of disability in the USA, with the National Institute of Neurological Disorders and Stroke (NINDS) reporting that the efficacy of treatment disappears after 6 hours, i.e. “time is brain”. The growth in development of specialized stroke units and centres has been bolstered by accreditation of qualified stroke centres by the Joint Commission on Accreditation of Hospitals and by individual state bodies.¹

Statins: A New Strategy for Secondary Prevention?

Statin therapy is known to reduce the risk of stroke among patients with coronary heart disease and those at increased risk for cardiovascular disease, primarily due to the extent of low-density lipoprotein cholesterol (LDL-C) lowering achieved.² The recent Stroke Prevention by

Aggressive Reduction in Cholesterol Levels (SPARCL) trial examined whether this benefit extends to patients without known coronary heart disease and who have had a stroke or transient ischaemic attack (TIA) within the previous 6 months. This prospective, placebo-controlled trial of 4,731 randomized patients (baseline LDL-C, 2.6–4.9 mmol/L) confirmed that a daily dose of atorvastatin 80 mg significantly reduced the risk of non-fatal stroke as well as the combined risk of stroke and TIA.² The beneficial effect of statin therapy was due to a reduction in the risk of cerebral infarction, as expected from the lipid-lowering² (mean LDL-C 1.9 mmol/L atorvastatin vs. 3.3 mmol/L placebo over a median follow-up of 4.9 yr).² These results support the initiation of atorvastatin treatment soon after a stroke or TIA, albeit with caution in patients who have had a haemorrhagic stroke and therefore may be at risk of recurrent haemorrhage.²

With the proportion of ischaemic stroke in Hong Kong having risen from 62% in 1984 to 84% in 2002³, this new prevention option is particularly timely and relevant.

Call to Action

The Action Group calls for an 8-point campaign of action to raise awareness that stroke is a preventable illness.¹

1. Awareness

While all countries surveyed are slowly improving governmental and public awareness of risk factors and prevention, recognition that stroke is a medical emergency is equally crucial — earlier identification of

stroke victims enables earlier treatment and a greater chance of survival and better recovery. The Action Group aims to raise awareness of stroke and stroke risk factors to both professionals and the public through encouraging education, not just providing information.

2. Turn Knowledge Into Action

The gap between existing scientific knowledge and provision of adequate care in stroke is widening and threatens to dampen the justification for more research support and more investment in scientific progress. Let's narrow the gap between knowledge and the practical management and clinical outcome. Act to improve co-ordination of efforts and develop dialogue between government administrators, industry and the medical establishment.

3. Collect Comparable Stroke Registry Data

Available data on stroke are inadequate and incomparable. Formation of regional registries and support of global stroke registries such as the WHO/International Stroke Society Global Stroke Initiative are encouraged, and will enable the medical profession and local public health authorities to promote and implement best practice.

4. Consensus Definition of Stroke

The differing terminology used to describe stroke among the eight countries surveyed reflects the varying approaches to prevention, management and treatment. Encourage WHO to adopt a stroke-specific nomenclature of diseases, and streamline the definition and approach to stroke in national practices and policies.

5. Specialized Stroke Treatment

Recognizing that stroke has risk factors common to cardiovascular disease, specialized stroke units and stroke centres are best able to address the idiosyncrasies unique

to stroke care. Actions taken within the first 24 hours of a stroke will determine life and death and offer the best chance of full recovery.

6. Prevention Through Lifestyle and Proaction

Most of the many risk factors for stroke are modifiable. Encourage lifestyle modifications — tobacco avoidance, regular exercise, healthy diet — and proactively screen and control risk factors (hypertension, cholesterol, diabetes, heart disease) in everyone over age 20.

7. Disseminate and Support Research

Advances in cerebrovascular disease require adequate funding in line with that for heart disease and cancer in order to support the neurological research and technological innovation required to reduce the incidence of stroke. The drastic disparities between prevention and treatment in poorer regions could be reduced by greater sharing of study results with developing nations.

8. Policies, National Programmes and Legislation

The catastrophic consequences of stroke on victims and families are matched by its burden on economies and healthcare budgets. Inaction to stem the tide of current trends in developed countries will result in a 24% increase in disability due to stroke and the demand for rehabilitation and long-term care by 2030. National policymakers must make stroke prevention a priority.

References

1. Stroke Prevention & Treatment: Turning Knowledge into Practice. A Report from the 'Action Group on Stroke is a Catastrophic Disease'. May 1, 2007. [Available for free download in the Learning Centre online]
2. The Stroke Prevention by Aggressive Reduction in Cholesterol Levels (SPARCL) Investigators. High-dose atorvastatin after stroke or transient ischemic attack. *N Engl J Med* 2006;355:549–59. [URL link available in the Learning Centre online]
3. Cheung CM, Tsoi TH, Hon SFK, et al. Outcomes after first-ever stroke. *Hong Kong Med J* 2007;13:95–9.

The screenshot shows a web browser window titled "CME Online". On the left, there is a "Visit" section with the URL <http://www.hkmacme.org/hkmacme/learning.asp> and a book cover for "STROKE" by Graeme I. Hankey. To the right of the book cover, text reads: "for links to additional Elsevier resources on stroke including excerpts from the 2nd edition of Graeme Hankey's acclaimed *Stroke — Your Questions Answered*". On the right side of the window, a yellow box contains the text: "This month in a simple, easy to download PDF, the following patient questions will be answered:" followed by a list of four questions:

- What are the principles of treating stroke patients?
- What problems may arise after a stroke?
- What is tPA?
- Why is aspirin given to all patients as soon as possible after an ischaemic stroke?