

World Stroke Day 2008 “Little Strokes, Big Trouble”

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See World Stroke Day Proclamation Appendix, pages 2409–2420.

World Stroke Day is a day with a message for every day: “Stroke is a treatable and preventable catastrophe.” This year and every subsequent year it will be on October 29th. The theme for this year is “Little strokes, big trouble”.

During the World Stroke Congress in Vancouver in 2004, a working group was organized to develop a global agenda for stroke. This agenda was subsequently incorporated into a World Stroke Proclamation launched in Cape Town on October 26, 2006 (supplemental video, available online at <http://stroke.ahajournals.org>).

The 2007 World Stroke Day theme was “Stroke is a treatable and preventable catastrophe and hypertension is its most common and treatable factor”. This year the stroke global agenda will be highlighted at the forthcoming 6th World Congress of Stroke, Vienna, September 24 to 27, 2008.

Although each year all aspects of stroke are addressed, a particular theme is selected for emphasis. This year it emphasizes one of the items of the World Stroke Day Agenda: “Recognize, treat and prevent vascular cognitive impairment. Subclinical (silent) strokes occur five times as often as clinical (obvious) strokes and may affect thinking, mood and personality” (World Stroke Day Proclamation appendix).

By now it has become evident that “silent” strokes are the most common type of strokes. Results from 3 longitudinal studies suggest that 770 000 clinical strokes, about 9 000 000 “silent” infarcts and approximately 2 000 000 “silent” hemorrhages occurred in the United States in 1998.¹ A recent article from the Framingham Study suggests that 1 in 10 individuals, stroke free and living in the community, with a mean age of 62±9 years have a “silent” stroke.²

The word “silent” is a misnomer. When subjects with “silent” infarcts are examined they have subtle neuropsychological and neurological deficits.^{3,4} It is preferable to talk about “subclinical strokes”. Subclinical strokes correlate with the Framingham Stroke Risk Profile,² but other factors may contribute to vascular cognitive impairment.

If ignored, little strokes could spell big trouble. One subclinical stroke is associated with increased chance of having others and of experiencing a clinical stroke and/or dementia.³ The combination of subclinical strokes and subclinical Alzheimer lesions may be a background for the association of stroke and dementia given that the lifetime risk of developing either or both is one in three.⁵

From a practical viewpoint it becomes important to recognize that some of the symptoms that elderly individuals manifest, such as changes in judgment, in intellectual ability, personality change, particularly depression, may be associated with subclinical strokes and white matter changes in the brain.^{3,6}

A 5-minute screening instrument for vascular cognitive impairment and Alzheimer disease is recommended, which can be followed-up by a 30- and 60-minute battery if required.⁷ If the patient shows executive dysfunction, it may justify brain-imaging and identification of possible subclinical strokes which then should be treated and prevented based on the cause, ie, cardiac, cervical and cerebral and associated risk factors.

We should treat risk factors with renewed vigor and at that same time commit ourselves to discover whatever differences that may exist between clinical and subclinical strokes. It may not be simply a question of infarct size, but of mechanisms and actions on different brain substrates, eg, the presence of amyloid, which experimentally can magnify the size and inflammatory response of cerebral infarction.⁸

We need to implement what we know and learn as we do it, so that we can continue to improve the treatment and prevention of all types stroke.⁹

World Stroke Day, by focusing on “Little strokes, big trouble”, emphasizes the likelihood that the earlier we intervene, the more likely we are to be successful and we will be acting on an ancient injunction, “Act before disease has gained strength” (Publius Ovidius Naso, Roman poet, 43 BC-17 AD).

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The opinions in this editorial are not necessarily those of the editors or of the American Heart Association.

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