

Older adults often inaccurately report their own stroke history

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The responses of older adults who are asked whether they had a stroke frequently do not agree with diagnoses obtained by magnetic resonance imaging (MRI) of the brain, according to a report posted online today that will appear in the July print issue of *Archives of Neurology*.

Self-administered questionnaires are frequently used to obtain information about an individual's history of [stroke](#), according to background information in the article. "In general, self-reports on medical conditions that are well defined and relatively easy to diagnose often have a high positive predictive value, in contrast to conditions characterized by complex symptoms," the authors write. "Stroke is associated with motor impairment but can also be accompanied by impairments in memory, sensation and speech or language, diminishing the ability of an individual to accurately report a history of stroke."

Christiane Reitz, M.D., Ph.D., of Columbia University Medical Center, New York, and colleagues acquired MRIs for 717 Medicare recipients 65 years and older (average age 80.1) living in northern Manhattan. Participants underwent an in-person interview about general health and functioning, medical history, a physical and neurological examination and psychological testing. They or their caregivers also completed an eight-question survey about stroke history, including whether they had ever had symptoms of or been told by a physician they had a stroke.

A total of 85 individuals (11.9 percent) reported a history of stroke. On the MRI, evidence of a stroke was observed in 225 participants (31.4

percent). The sensitivity of self-reported stroke—meaning number of individuals who reported having had a stroke divided by the total number of individuals with stroke detected on MRI—was 32.4 percent. The specificity, or the number of individuals who reported having no history of stroke divided by the total number of individuals who had no evidence of stroke on MRI, was 78.9 percent.

"Lower-functioning memory, cognitive or language ability or presence of hypertension [high blood pressure] or myocardial infarction [heart attack] were associated with an increased frequency of false-negative reports," the authors write.

In addition, younger individuals were more likely to accurately report their stroke history than older adults, and sensitivity was higher among African American than white or Hispanic individuals. Older adults may have more difficulty recalling prior events, contributing to lower sensitivity, the authors note. Rates of cerebrovascular disease are higher among African Americans, so individuals in this population may have an increased awareness of stroke signs and symptoms due to previous discussions with clinicians or contact with individuals who have had strokes.

"Our results indicate that sensitivity and specificity of stroke self-report are low when using MRI scans as validation," the authors conclude. "In stroke research, sensitive neuroimaging techniques rather than stroke self-report should be used to determine stroke history."

More information: Arch Neurol.
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