Is Someone You Know at Risk of Heart Attack?

For older people without dementia, fuzzy thinking and lack of self control may be signs of higher risk for heart attack or stroke, a new European study suggests.

Older people who scored badly on a test of decision making and problem-solving – so-called executive function skills – had nearly double the risk of heart attack and 50 percent higher risk of stroke compared to people who did better on the tests.

Since lower scores on cognitive function tests might indicate previous vascular damage in the brain, the researchers expected a connection to stroke risk, but were surprised to see an increased risk for heart attack as well, said Dr. Behnam Sabayan of Leiden University Medical Center in the Netherlands.

“This might reflect that damage to the vessels is a global phenomenon in our body and when we see abnormalities in one organ we should think about the other organs as well,” Sabayan, a coauthor of the study, told Reuters Health by email. “This is another line of evidence showing that pathologies at the levels of heart or the brain are not independent.”

Neurologists and cardiologists should collaborate for early detection of older people at risk for either cardiac or brain vascular disorders, he said.

Researchers studied 3,926 older people in the Netherlands, Ireland and Scotland. The average age was 75 years old, and participants had either a history of heart disease or an increased risk for it due to high blood pressure, diabetes or smoking, but no history of an actual heart attack or stroke.

The researchers used four tests to assess the participants' selective attention, decision processing speed, immediate memory and delayed memory.

Over three years of follow-up there were 375 coronary events, including heart attacks or deaths due to heart disease, and 155 strokes in the group.

The researchers divided the participants equally into three groups based on their executive function skills scores at the beginning of the study. Those in the lowest-scoring third were 85 percent more likely to develop coronary heart disease and 51 percent more likely to have a stroke than those in the highest-scoring third.

Those with lower scores were at higher risk even when the researchers accounted for age, gender, education, body mass index, blood pressure, total cholesterol, current smoking and history of diabetes.

There were 69 strokes in the low-scoring group, compared with 48 strokes among those with high scores.

Scores on the memory tests did not appear to be related to heart attack or stroke risk, the study team reports in Neurology.

"This is just adding to the evidence to support what we already know, there is a relationship between cardiovascular risk factors and cognition," said Dr. Olaoluwa Okusaga of the University of Texas-Harris County Psychiatric Center in Houston, who was not part of the new study.

"This study is novel in that they identified a specific domain, executive function, as being predictive of cardiovascular risk," Okusaga told Reuters Health.

Executive function includes making decisions and weighing options, so it could be that people with lower decision-making

scores make poorer decisions in their daily lives that make them more prone to heart attack or stroke, he said.

Before doctors change what they do, this study should be replicated, he noted, but in the meantime, keeping mentally active by doing things like puzzles may help prevent cognitive decline.

Unlike innate intelligence, or IQ, cognitive abilities can change over time and are more vulnerable to exposure to factors like uncontrolled blood pressure in midlife, Sabayan said.

Older people with slower thought processing are less likely to follow physicians' lifestyle and medical recommendations, he said.

"Therefore, our findings highlight that older subjects with impaired cognition need closer attention in terms of cardiovascular risk management," he said.

"This does not mean that everyone should undergo cognitive assessment to determine their heart attack or stroke risk, instead it means when older patients present with cognitive problems their physician should take into account risk of future cardiovascular events and provide preventive care," he said.

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