

New tests needed to predict cardiovascular problems in older people more accurately

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A long-standing system for assessing the risk of cardiovascular disease amongst older people should be replaced with something more accurate, according to a study published today on bmj.com.

The Dutch study looked at several hundred people with no history of cardiovascular disease aged 85 over a five year period to see which of them died of cardiovascular disease (such as stroke and heart disease), and whether different ways of assessing their risk of such disease at the start proved to be more accurate.

The Framingham Risk Score system has been used for decades to predict the 10-year risk of developing coronary heart disease in people with no history of such disease. It uses classic risk factors including sex, systolic blood pressure, cholesterol, diabetes, and smoking.

The ability of these classic risk factors to identify a person at high risk of heart disease diminishes as the person gets older.

In recent times, several new biomarkers for cardiovascular disease have been shown to be effective at indicating high risk of such disease, including C-reactive protein and homocysteine.

The researchers studied 302 people aged 85 years old (215 men and 87 women) who had no history of cardiovascular disease. The people were taking part in the existing Leiden 85-plus Study and were followed up for five years.

As well as using the Framingham Risk Score, the researchers also measured plasma levels of the new biomarkers homocysteine, folic acid, C-reactive protein and interleukin-6 in the people.

During the follow-up period, 108 of the 302 participants died and 32% of the deaths were from cardiovascular disease.

The researchers found that classic risk factors were unable to predict cardiovascular deaths accurately, neither by using the Framingham Risk Score nor by using the classic risk factors in a newly calibrated model.

From the new biomarkers used, homocysteine had the best ability to predict deaths.

Of the 35 people who died from cardiovascular disease during the five years studied, the Framingham Risk Score had classified just 12 people as being at high risk. However, the homocysteine-based model had classified 20 people as being high risk—nearly a quarter more of all individuals who died from cardiovascular disease.

The authors conclude that a single homocysteine measurement can accurately identify very elderly people who are at high risk of dying from cardiovascular disease. They call for a larger study to be carried out as their findings could lead to a change to current guidelines.

The researchers say: "Possibly, plasma homocysteine, and not classic risk factors, could be used to select very elderly people for primary preventive interventions."

Source: British Medical Journal

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