

CVD-targeted screening for the "silent killer" AAA shows promise

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Targeted screening for abdominal aortic aneurysm (AAA) based on patients' cardiovascular health shows promise for improving detection and treatment of this potentially deadly condition, new University of Otago research suggests.

An AAA, often described as a "silent killer", is a bulging weakness in the aorta, which is the main artery of the body. If the bulge grows large enough and suddenly ruptures, nine out of ten of those affected will not survive. When detected early, AAAs can be repaired and rupture prevented.

In New Zealand, AAAs account for around 400 deaths per year, mainly in older men. There is currently no national screening programme for the condition.

In new research published in the *British Journal of Surgery*, Otago researchers assessed how effective targeted AAA screening based on an individual's cardiovascular disease (CVD) risk or vascular health might be.

Study lead author Associate Professor Greg Jones says that earlier research has shown a striking association between AAA and the presence of CVD and its risk factors.

The research team recruited more than 4,000 Otago-Southland men and women aged over 50 for the study. Participants were invited to attend

the screening facility at Dunedin Hospital where they underwent an ultrasound scan of their aortas.

The participants fell into one of four similarly sized groups. The first was patients undergoing coronary angiograms at the hospital, the second was people being assessed for peripheral arterial disease at the Vascular Laboratory, while the third was made up of patients whose GPs had identified them as having a heightened risk of a cardiovascular event in the next five years. The fourth comparison group consisted of healthy volunteers taking part in a vascular genetics study.

Dr Jones says that the researchers found an overall prevalence rate of 4.5 per cent with significantly higher numbers of AAA cases in the first three groups, who had increased cardiovascular risk, compared to the group with lower CVD risk.

"This suggests that including AAA screening alongside existing cardiovascular risk assessment programmes and vascular investigations should be given serious consideration," he says.

Dr Jones says the study itself identified more than 100 people with a previously undetected aneurysm, eight of whom were found to have large aneurysms which required immediate, potentially lifesaving, surgical treatment. The remaining people, with smaller aneurysms, were offered ongoing monitoring of AAAs.

The study was supported by the Healthcare Otago Charitable Trust, the Health Research Council of New Zealand, Best Practice Advocacy Centre (BPac) Education Trust, the Otago Vascular Diagnostics Laboratory and the Department of Surgical Sciences of the Dunedin School of Medicine.

Provided by University of Otago

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