An evaluation of the effect of an angiotensin-converting enzyme inhibitor on the growth rate of small abdominal aortic aneurysms: a randomised placebo-controlled trial (AARDVARK)

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Plain English summary

The AARDVARK trial
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Plain English summary

An abdominal aortic aneurysm (AAA) is a swelling of the main blood vessel (the aorta) in the body. Large AAAs may burst, and this is usually fatal.

When an AAA is small (< 5.5 cm across), changes in size can be monitored safely using ultrasound scanning. Larger aneurysms need surgery before they burst. No drug treatments are currently available that slow AAA growth, avoid surgery or stop them from bursting.

Some studies have suggested that drugs called angiotensin-converting enzyme inhibitors (ACE-Is), which are usually used to treat high blood pressure, may reduce the risk of AAAs bursting. This trial investigated whether or not an ACE-I called perindopril reduced the growth of small AAAs.

A group of 227 patients with small AAAs from 14 hospitals in England took part in the trial. Patients were randomly allocated to receive perindopril or another drug used to treat blood pressure called amlodipine or a placebo (dummy) pill. To see whether perindopril slowed AAA growth more than blood pressure lowering with an ordinary tablet (amlodipine) or placebo, each patient had their AAA measured every 3–6 months for 2 years.

At the end of the trial we found that, on average, perindopril was about the same as amlodipine and placebo in terms of affecting AAA growth. However, the AAAs in the trial grew more slowly than expected and the accuracy of ultrasound scanning was less than expected, both of which may have reduced our ability to detect small differences between groups if they were present.
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