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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Record Status
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Citation

Authors' objectives
Although data are inconsistent, angiotensin-converting enzyme inhibitors (ACE-Is) have been associated with a reduced incidence of abdominal aortic aneurysm (AAA) rupture in analysis of administrative databases. (1) To investigate whether or not the ACE-I perindopril (Coversyl arginine, Servier) reduces small AAA growth rate and (2) to evaluate blood pressure (BP)-independent effects of perindopril on small AAA growth and to compare the repeatability of measurement of internal and external aneurysm diameters.

Authors' conclusions
We were unable to demonstrate a significant impact of perindopril compared with placebo or amlodipine on small AAA growth over a 2-year period. Furthermore, there were no differences in the times to reach a diameter of 5.5 cm or undergo surgery among the three groups. Perindopril and amlodipine were well tolerated by this population. External AAA measurements were found to be more repeatable than internal measurements. The observed AAA growth measurement variability was greater than that expected pre trial. This, combined with slower than expected mean growth rates, resulted in our having limited power to detect small differences between growth rates and hence this adds uncertainty to the interpretation of the results. Several further analyses are planned including a multivariate analysis of determinants of AAA growth, an evaluation of the possible differential effect of perindopril on fast AAA growth and an investigation into the roles of central BP and BP variability on AAA growth.

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