Aneurysm screening should be revisited, say experts

Data suggest considerable harm

Aneurysm screening for men over 65 should be revisited as it is unknown whether the benefits outweigh the harms, argue researchers in The BMJ this week.

This article is part of a series on overdiagnosis looking at the risks and harms to patients of expanding definitions of disease and increasing use of new diagnostic technologies. An interactive graphic illustrating the risks of overdiagnosis among men invited for aneurysm screening is also available.

An abdominal aortic aneurysm (AAA) is a swelling (aneurysm) of the aorta – the main blood vessel that leads away from the heart, down through the abdomen to the rest of the body. It usually occurs in men over 65 years old and is more common among smokers.

If the artery wall ruptures, the risk of death is high, but aneurysms at risk of rupture can be detected by screening and surgically repaired.

The decision to introduce AAA screening was based on four randomised controlled trials from the 1980s and 1990s. Over the last 15 years Sweden, the UK and the USA have introduced AAA screening programmes. But researchers based at the Universities of Gothenburg and Copenhagen argue that that
screening almost doubles AAA prevalence, yet most AAAs are small and at low risk of rupture.

They estimate that 176 of every 10,000 men invited to screening are overdiagnosed.

“These men are unnecessarily turned into patients and may experience appreciable anxiety throughout their remaining lives. Moreover, 37 of these men unnecessarily have preventive surgery and 1.6 of them die as a consequence,” they explain.

They also point to several studies showing a drop in AAA prevalence over recent decades, probably because the prevalence of smoking has fallen. “When the incidence of the condition screened for decreases, the potential benefits also decrease,” write the authors. “Furthermore, the benefit:harm ratio is likely to be worse in current screening programmes than in the trials on which they were based.”

And they warn that plans to lower the diagnostic threshold for AAA “will double AAA prevalence and substantially increase the rate of overdiagnosis.”

“Screening programmes have changed the meaning of an AAA diagnosis from a life threatening condition to a risk factor,” argue the authors. “AAA screening programmes should be revisited because of reduced benefits in modern populations and because data suggest considerable harm,” they conclude.

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Analysis: Estimating overdiagnosis in screening for abdominal aortic aneurysm: could a change in smoking habits and lowered aortic diameter tip the balance of screening towards harm?
www.bmj.com/cgi/doi/10.1136/bmj.h825

Interactive graphic:
www.bmj.com/content/350/bmj.h825/infographic
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*When screening tests turn healthy people into patients* - Medical News Today

*Screening For Abdominal Aortic Aneurysms May Have Benefits and Harms* - MedicalResearch.com

*Benefits of aneurysm screenings doubtful, say researchers* - McKnights

*Aneurysm screening should be revisited, say experts* – Medical Xpress