Will screening for aortic aneurysm be effective?

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Pilot screening programmes for abdominal aortic aneurysms in men aged 65 are due to be launched in England this year, but is this move too hasty? Two experts debate the issue in this week's BMJ.

Around 90% of people with a ruptured aortic aneurysm die. But if the aneurysm is discovered before it ruptures and is repaired by an experienced vascular surgeon, mortality is around 7.4%, writes James Johnson, consultant surgeon at Halton General Hospital, Runcorn.

Around 5% of men aged between 65 and 74 have abdominal aortic aneurysms, but they rarely cause symptoms, so screening in this age group would potentially ensure that most aortic aneurysms are diagnosed and repaired.

But the case for screening is not clear-cut claims Johnson.

He points to wide variations in the mortality for surgical repair between hospitals in England. In addition, many patients will not be fit enough to have a repair—aneurysm is a disease that rarely exists in isolation. Most patients will also have hypertension, or a history of myocardial infarction, stroke or diabetes.

As a result, many patients will be left with the knowledge that they have a life threatening condition that is liable to cause sudden death and that nothing can be done about it, writes Johnson.

Aneurysms of less than 5.5cm in diameter are unlikely to burst, and because the mortality from operating on them is greater than the likelihood of rupture, people with an aneurysm of less than this size will have to be monitored and sent for regular ultrasound examinations. Many of these patients will find it intolerable to have a "timebomb" inside them which might go off at any time and without notice, he says.

In addition, screening will show up much more than aortic aneurysms, and the cost of dealing with the comorbidity needs to be included in the cost-benefit analysis, he argues.

At the very least, he concludes, any person being tested will need intensive counselling about the possible consequences that screening might have for their future lives and psychological wellbeing.

But Stephen Brearley, consultant general at Whipps Cross University Hospital, London, argues that a national screening programme has the potential to save up to 2000 lives a year in England and Wales at a similar cost to other screening programmes.

He points to a large body of scientific evidence that shows that aneurysm screening programmes are effective. For example, an analysis by the Centre for Reviews and Dissemination at the University of York concludes that the likelihood of such a screening programme being cost effective is greater than 95%.

Furthermore, recent data from four trials in the UK, Australia and Denmark showed that uptake of invitations to be screened ranged from 63% to 80%. And a review of the data from all four trials showed a highly significant reduction in aneurysm related mortality.

In light of these findings, the UK National Screening Committee has backed the abdominal aortic aneurysm screening programme.

The argument for screening has already been won, he concludes, and attention now needs to be focused on making the screening programme as efficient and effective as possible.

Source: British Medical Journal