

Letter from Glasgow

ABDOMINAL AORTIC ANEURYSM (AAA) SCREENING

‘When it comes to screening, a doctor who says “Let’s err on the side of caution,” may actually err on the side of reckless ignorance and grave harm.’

—OTIS WEBB BRAWLEY¹

Health screening is one of those issues on which everyone seems to have an opinion, and not always an informed one. The number of times someone has said ‘but surely prevention is better than cure’ to justify a screening test—far less a screening programme—is lost to me. Screening, when based on the evidence of reduced morbidity and mortality for patients, is an invaluable tool in prevention. However, screening also has the potential to do harm and, as a public health doctor, I welcome informed discussion and debate screening generates in the medical and mass media.

In the UK all national population-based screening programmes have to be recommended by the UK National Screening Committee (NSC).² The longer established population screening programmes in the UK are related to cancer, i.e. breast and cervical. Many screening discussions I have participated in, or heard, focus on cancer and just recently I was listening on BBC radio to a discussion on screening for ovarian cancer.

There are also non-cancer national population-based screening programmes in the UK related to newborn blood spot, diabetic retinopathy and abdominal aortic aneurysms (AAAs). In Scotland, the Newborn Blood Spot Screening Programme tests all babies for rare but serious diseases. These are phenylketonuria, congenital hypothyroidism, sickle cell disease, cystic fibrosis and medium-chain acyl-CoA dehydrogenase deficiency. From March 2017, this was expanded to test for homocystinuria, maple syrup urine disease, glutaric aciduria type I and isovaleric aciduria. Needless to say, few babies will have these conditions but for the tiny number that do, early treatment can prevent morbidity and mortality.

AAAs have always interested me since the time, as a newly qualified surgical house officer, I assisted my consultant for most of the night, to repair a leaking aneurysm. While the surgery was heroic, the outcome, unfortunately, was not good and the patient died postoperatively. This was at a time when not all the issues regarding service provision for AAAs were settled. This included who should undertake this type of surgery (vascular surgeons or ‘those with an interest in vascular surgery’), the support required postoperatively and where should the surgery be undertaken, e.g. in specialist centres by specialist teams. Consequently, I followed the research on AAA screening and was pleased when the conclusion of the NSC in 2009 was to recommend screening in the UK. This was to be undertaken on the basis of informed consent, i.e. that screening participants were provided with information on the advantages and disadvantages of AAA screening including the risks of surgery. The NSC also noted the need to develop networks of vascular surgical services to ensure greater specialization and increased throughput for units and surgeons based on the volume and outcomes evidence.

The AAA screening programme in Scotland is coordinated by the National Services Scotland National Services Division (NSS NSD) although each health board has responsibility of undertaking the screening process for their population.³ The programme started in 2012 and covered all areas of Scotland by 2014.

Of course, AAA screening is also different in that the programme is for men only because the risk is highest for older men. It is most common in the UK with men aged 65 years and over, and these men are more than six times more likely to be diagnosed with AAA than women. The other risk factors include smoking, atherosclerosis, hypertension and a family history of AAA. Patients may have no symptoms but aneurysms have significant mortality if they rupture.

The aim of the AAA screening programme is to reduce deaths in men aged 65 years and over. It does this by inviting men aged 65 for AAA screening by a one-off ultrasound scan. The scan is painless, takes about 15 minutes and can be done by radiographers (with appropriate training) or specially trained screeners. If no AAA is seen, the man is discharged from the programme. Men with large AAAs (i.e. 5.5 cm or larger) are referred for treatment by vascular surgeons, while men with smaller aneurysms (<5.5 cm) remain in the programme under surveillance.

In Lanarkshire, AAA screening started in April 2013 and so there is now four years’ experience of the programme. About 6600 men are invited for screening in Lanarkshire each year, and the national target of 80% uptake is exceeded with an uptake of 83% in Lanarkshire. There are a set of nationally agreed key performance indicators (KPIs) and quality assurance (QA) processes to which all health boards must conform.

As with any screening programme, the epidemiology, treatment and other aspects of the disease do not remain constant. So, for example, with the decrease in prevalence of smoking among men in the UK, the risk for men will change, affecting the cost–benefit equation of the programme. Therefore, the answer to the question ‘Is the programme worthwhile?’ may also change. However, there is no evidence currently that the balance has shifted away from benefit for AAA screening in the UK.

This highlights the need for ongoing monitoring and evaluation of all screening programmes so that decisions can be made on reshaping, reviewing and, if necessary, discontinuing the programme. Issues of clinical effectiveness, cost-effectiveness, organizational challenges, patient preferences, professional views, sustainability and treatment options are never carved in stone but require constant critical appraisal. The onus is upon us to ensure that we assess the evidence continually so that, in Brawlett’s parlance, we do no harm.

REFERENCES

- 1 Brawlett OW, Goldberg P. How we do harm—a doctor breaks ranks about being sick in America. New York: St Martin’s Press; 2012.
- 2 UK National Screening Committee. Available at www.gov.uk/government/groups/uk-national-screening-committee-uk-nsc (accessed on 21 Mar 2017).
- 3 National Services Scotland National Services Division (NSS NSD). Available at www.nsd.scot.nhs.uk/services/screening/index.html (accessed on 21 Mar 2017).

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