

SHORT REPORT

Screening for abdominal aortic aneurysm by general practitioners and practice-based ultrasonographers

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Aim To find out if aortic aneurysm screening could be successfully organized from a general practice with ultrasound facilities, and to offer a screening service to surrounding general practices within a primary health care trust (PHCT) in Surrey.

Methods The study screened men between the ages of 65 and 80 years for abdominal aortic aneurysm (AAA). The screening project was set up and carried out entirely in primary care (in local practices). Funding was received from the PHCT; the costs of the screening programme had to fit within this budget.

Results There was a 71.7% attendance rate and 4.1% of the screened population had an AAA. The screens cost approximately £17.39 per scan.

Conclusions The costs for the screening programme were low, although it is hard to find direct comparisons. The attendance rate could be improved, but the prevalence of AAA in this study was comparable to those found in hospital-led screening trials.

INTRODUCTION

Screening for abdominal aortic aneurysm (AAA) has recently been shown to be cost-effective in large trials such as The Multicentre Aneurysm Screening (MASS) Study.¹ Screening for AAA by ultrasound scans is a straightforward, reproducible, non-invasive test, identifying a disease with a latent period where surgical intervention can make a difference to mortality. A reduction in mortality of 42% in the screened group compared with controls has been shown in the MAAS trial, with similar reductions in other trials.^{1–3} In this paper, we demonstrate the feasibility of conducting a screening programme for AAA in general practice surgeries. The study was designed to ascertain whether AAA screening could be successfully organized from a general practice with ultrasound facilities, and to offer a screening service to surrounding general practices within a Primary Health Care Trust (PHCT) in Surrey. Screening was set up and carried out entirely in primary care, unlike most other screening projects for AAA, which have been hospital-led. The study screened men between the ages of 65 and 80 years for AAA.

METHODS

The purpose of this project was not to prove the value of screening but to prove that it could be done equally well in a primary care-led project. Ten practices with a total list size of 76,077 patients were offered screening. Each practice was visited by the doctor coordinating the project, the ultrasonographer and a practice receptionist. The uptake for the scan was found to improve if the General Practitioner (GP) and Practice Manager understood the screening process and also the protocol for managing patients who had an AAA.

A poster was designed for the surgery waiting room, together with a patient information leaflet to go out with each invitation and a map of the screening centre's location.

Each practice was asked for a list of their male patients aged between 65 and 80 years, together with their contact details. These patients were then invited for a scan. It was found that inviting patients using letters with the patients own GP details on the header increased attendance, as patients appeared to perceive that their own GP had given their approval.

If a patient had an AAA identified, their GP was contacted in writing and the patient was told to take an appointment.

Protocol for management of identified AAA

- Define AAA as diameter of the abdominal aorta of ≥ 3 cm;
- Refer any new AAA of ≥ 5.0 cm to the vascular surgeon of your choice;
- Refer to hospital any AAA expanding at >1 cm/year;
- Refer to hospital any symptomatic AAA. (i.e. back pain);
- Monitor AAA between 3 and 5 cm every six months for two scans initially, then yearly if not expanding.

The local GP was free to choose whichever hospital and vascular surgeon they would normally use for referring AAA of ≥ 5 cm. The patients with smaller aneurysms were referred to the local hospital for further monitoring. Ten-minute slots were allocated for the screening scans, which were performed on a Kretz Sonoace 6000C; the aorta was assessed in longitudinal and transverse section and the diameter measured at the widest point in longitudinal section.

RESULTS

Results are summarized in Table 1. Ten practices with a list size of 76,077 patients were involved in the study. Of this population, 4000 were in the chosen screening group and

Table 1 Results of screening for abdominal aortic aneurysm in men aged 65–80

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Invited	4000
Attended	2870 (72% of invited)
Aortic diameter >3.0 cm (range 3.1–7.6 cm)	118 (4.1% of 2870 screened)

the attendance was 71.7% overall; an improved attendance was noted after the invitation letter was altered and after we started practice visits. Aortic diameter was increased (range 3.1–7.6 cm) in 118 patients (4.1%). Other conditions, including renal tumours and gross bladder distension, were noted in 102 men. Other hospital-led screening trials have shown a similar prevalence of AAA in men in the age range 65–80 years (3.4–8.4%).^{2,4–6} The attendance rate could be improved: some screening projects have had over 75% attendance.^{2,4–6}

Cost

The costs for the screening programme were low, although it is hard to find direct comparisons. The total funding allocated to this project by the Health Authority and PHCT was £69,550 to screen 4000 patients (£17.39 per screen). This is likely to be a significant underestimate of the true cost, as some costs were absorbed within general practice running costs (heating and other costs of the premises, depreciation of the ultrasound machine and administrative time), and the cost of the surgery is not included. The lead doctor was not reimbursed for his time but the practice benefited from setting up general ultrasound services, which would not have happened without the impetus of the screening project.

DISCUSSION

This practice was able to offer a screening service for AAA to the local population. Ultrasound facilities were already in

place. The interest in providing such a service came from two of the GPs having attended ultrasound training courses in Chichester, where early work on aneurysm screening had taken place.⁴

As the population screened spread further away from the screening centre, we found it essential to have good communication and education with the practices to maintain good attendance rates. Local knowledge of transport available for older patients without access to cars was also useful (i.e. voluntary sector transport groups such as that provided by Age Concern). Attendance rates could be improved by patients' better understanding of AAA.

When a National Screening Programme is designed, the target population should be well informed of the purpose of the screen. General practice makes a good setting for performing this screen and other practices and health centres could become screening centres – Better Care Closer to Home!

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