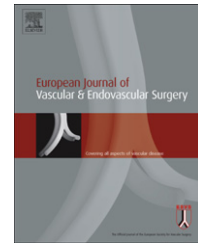




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SHORT REPORT

Should Asian Men be Included in Abdominal Aortic Aneurysm Screening Programmes?

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Submitted 9 March 2009; accepted 21 July 2009
Available online 8 August 2009

KEYWORDS

Abdominal aortic aneurysm;
Screening;
Asian

Abstract *Introduction:* A national AAA screening programme for men aged 65 is shortly to be implemented in England. Trials that have provided evidence for this screening programme have not included information on ethnicity. Hence their findings may not be applicable to ethnically diverse populations.

Report: This study retrospectively looked at the prevalence of AAA in men aged 65, from different ethnic backgrounds in our city's current screening programme. 19014 men (Caucasians $n = 18,431$, Asian $n = 446$, others $n = 137$) were screened. Prevalence was 4.69% (4.39–5% 95% CI), and 0.45% (0.054–1.161% 95% CI) in Caucasians and Asians respectively (Fisher's exact test: $P < 0.0001$).

Discussion: Prevalence of AAAs in men aged 65 of Asian origin appears to be low and so increases uncertainty about cost-effectiveness of screening Asian men.

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Introduction

An AAA screening program for men aged 65 is to be introduced this year in England. Evidence of benefit for AAA screening in men has come from 4 randomised trials, showing a highly significant reduction in aneurysm-related mortality in the

screened population.¹ The above trials provided no data on race or ethnicity of the participants and therefore their findings may not be applicable to ethnically diverse populations. Our city has a higher than average population of Asians from the Indian sub-continent. The aim of this study was to establish whether the prevalence of AAA amongst Asian men is different to Caucasian men in our screening programme.

Report

We have been undertaking AAA screening in participating general practices in Leicester since 1993. According to the

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data in the last census, approximately 30% of the population in Leicester classed themselves as Asian,² (with Asian defined as those originating from the Indian sub-continent).

A total of 66 general practices (40% of total practices, covering approximately 60% of the city's population) participate in our screening programme. All men aged 65 were invited for an abdominal USS at their local general practice. Ethnic origin data was obtained by direct questioning and recorded in all men who attended. Data was collected prospectively from 1993 to 2008 and was analysed with the help of a medical statistician.

During the 15-year period between 1993 and 2008, 19,014 men were screened (Caucasians $n = 18,431$, Asian $n = 446$, Afro-Caribbean $n = 102$, other $n = 35$). An AAA was detected in 871 participants (Caucasians $n = 865$ (4.69%) (4.39–5% 95% CI) OR = 1, Asian $n = 2$ (0.45%) (0.054–1.61% 95% CI) OR = 0.091 (95% CI 0.023, 0.367), Afro-Caribbean $n = 4$ (3.9%) (1.07–9.7% 95% CI) OR = 0.829 (95% CI 0.304, 2.258), other $n = 0$). Caucasians were used as the baseline group for the odds ratios, which were calculated by logistic regression. There was a statistically significant difference in the prevalence between Caucasian and Asian men ($P < 0.0001$, Fisher's exact test).

Discussion

This study confirms that the prevalence of AAA in Caucasian men (4.69%) is similar to that reported previously.³ However, the prevalence in Asian men is significantly lower and this is consistent with the observations of other authors^{4,5} who also reported a variation in prevalence of peripheral arterial disease in different ethnic groups. AAA appears to be predominantly a disease of Caucasians, but Asians have a greater tendency towards distal-occlusive disease and coronary artery disease.

A lower rate of participation by Asian men in the screening programme could account for the difference in prevalence seen, and one major limitation of our population screening programme is that attendance rates were not recorded. We have confirmed that 40% of GP practices involved in our screening programme were from areas with a high Asian population density ensuring that Asian men were being sampled appropriately, but attendance rate is not known. One possible reason for the low number of Asian men screened could be the difference in the Asian population demographics. Data from the last census showed that only 5% of Asians are over 65 compared to 9% and 16% of Afro-Caribbean's and Caucasians respectively.²

The evidence for the national AAA screening programme is derived from 4 randomised trials.¹ The participating

centres in the two trials conducted in the United Kingdom were Chichester, Oxford, Portsmouth, Southampton and Winchester. According to the last census data, all of these cities have an Asian population of less than 5%, whereas in Leicester the Asian population is around 30%. As the above trials did not record data on ethnic origin, it is not clear whether their findings are applicable to ethnically diverse populations and in particular to cities in England with a very high proportion of Asians such as Blackburn, Wolverhampton and several boroughs of London.²

A study by Lindholt et al.⁶ found equal efficacy in screening high risk and low risk individuals for AAAs, and so given the relatively low cost of scanning, cost-effectiveness of a national screening programme may be largely unaffected as only 15% of non-Caucasians are over 50-years old.²

Therefore given the lack of robust data on AAA prevalence in different ethnic groups, the increasing population of mixed-race individuals and the ethical dilemmas around excluding individuals based on ethnicity, Asian men at present cannot be excluded from the national AAA screening programme.

Conflict of Interest/Funding

None.

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