SHORT REPORT

Prevalence of Abdominal Aortic Aneurysms in Chinese Coronary Artery Disease Patients

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Aneurysm; Aorta; Abdominal; Coronary artery

Abstract
Introduction: In Caucasian population, the frequency of AAA was very high (14%) in coronary artery disease (CAD) patients over 60 years of age. However, little information is available on AAA incidence for Asian patients with CAD.

Report: We studied the prevalence of AAAs in 209 CAD patients > 60 years of age. A group of 261 patients without CAD served as controls. The prevalence of AAAs in patients with CAD was 0.48%, compared to 0.77% in controls (P > 0.05).

Discussion: These findings demonstrate a low incidence of AAA in Chinese patients with CAD.

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Introduction
Abdominal aortic aneurysm (AAA) is a common cause of morbidity and mortality among Caucasians and the incidence increases rapidly after age 60. It was reported by Madaric et al that the prevalence of AAA was much higher (14%) in coronary artery disease (CAD) patients over 60 years of age.1 However, little information is available on the incidence of AAA for Asian patients with CAD. Therefore, we studied the frequency of AAA in patients with CAD in a Chinese Han senior population.

Report
Study participants were selected from patients referred to coronary angiography for routine evaluation of established or suspected CAD. Significant CAD was diagnosed if there

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was ≥50% stenosis in ≥1 coronary artery. 209 consecutive patients who were >60 years of age with documented significant CAD and 261 age-matched control subjects who did not have angiographic CAD were recruited in this study. The local research ethic committee approved the study protocol and all participants gave their informed consent.

Ultrasonographic measurements of the abdominal aorta were performed by an experienced ultrasonographer using commercially available ultrasound system equipped with 2.5- and 3.5-MHz transducers (Vivid 7 digital ultrasound system, GE VingMed). Detailed methods for abdominal aortic ultrasound evaluation were described previously. Presence of systemic hypertension, diabetes mellitus (DM), hyperlipidemia, peripheral arterial disease (PAD), and carotid atherosclerosis were recorded. Data on tobacco and alcohol use were obtained from participant report.

A SPSS 11.5 software package was used for statistical analysis. The data are presented as mean ± SD for continuous data and as a ratio for categorical data. Comparisons were performed by a nonpaired t test for continuous variables, and χ²-test for categorical variables. A P value < 0.05 was considered statistically significant.

The baseline characteristics are shown in Table 1. There were no differences in the prevalence of AAAs in the CAD group and control group (0.48%, 1 of 209, vs 0.77%, 2 of 261, P = NS). All three patients (males, mean 77 yrs, 75–78 yrs) who had AAAs were of the infrarenal type (with aortic diameter was ≥3 cm) and partly thrombosed. No episodes of distal embolization were clinically detected and no patients were found with ruptured AAAs. One patient whose IAD was >5 cm were referred for open surgery. The other two who had an IAD <5 cm were followed by ultrasonography.

Discussion

Our findings demonstrated that there is low prevalence of AAAs in Chinese patients with CAD, which was regarded as a high risk group for AAAs in Caucasians. The results from our study are consistent with the previous findings of low prevalence of AAAs in UK Asians.

It had been established that people of certain ethnic groups experience a disproportionately greater burden of cardiovascular disease. Conventional cardiovascular risk factors do not fully account for the differences in risk between ethnic groups, suggesting that alternative explanations might exist. The marked differences across racial and ethnic groups in disease risk are likely due in part to genetic, host susceptibility and environmental factors, and can provide valuable etiological clues to differences in patterns of disease presentation, therapeutic needs and response to treatments. Therefore, it might be meaningful to further examine whether Chinese appears to be genetically resistant to AAA disease regardless of CAD disease or what is the ethnic-specific predictors of susceptibility to AAAs.

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Ethical Approval

Yes.

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Conflict of interest

No.

References