

Analysis of Cardiovascular Risk factors in Male and Female patients with Abdominal Aortic Aneurysm (AAA)

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Introduction

Abdominal Aortic Aneurysm (AAA) is 4 to 6 times more common in men than in women, but with higher rate of rupture in women. We analyzed the cardiovascular risk factors in men and women with AAA.

Methods

730 subjects consisting of 404 with AAAs (65 women and 339 men) with Median (Interquartile range [IQR]) aortic diameter of 4.3cm (3.5-5.4) and 326 controls (59 women and 267 men) with Median (IQR) aortic diameter of 1.9cm (1.7-2.2) were recruited between 2003 and 2010.

Results

The AAA group was older than the control group for both women (74.7 ± 7.0 vs. 71.06 ± 8.7 years, $p < 0.05$) and men (74.0 ± 7.3 vs. 70.1 ± 6.9 years, $p < 0.05$).

Logistic regression analysis of age adjusted risk factors between the AAA and control groups in men showed that the following were associated with increased risk of AAA incidence: history of Myocardial Infarction (MI) (OR=1.88, CI=1.20-2.96), hypertension (OR=1.45, CI=0.98-2.15), Deep Vein Thrombosis (DVT) (OR=4.69, CI=1.10-19.91) and smoking (OR=2.79, CI=1.70-4.57).

Logistic regression analysis of age adjusted risk factors in women showed that history of smoking (OR=7.13, CI=1.66-30.66), high triglyceride levels (OR=3.66, CI 1.25-10.66) and high Low Density Lipoprotein (LDL) (OR=10.82, CI 1.48-79.09) levels were associated with increased risk of AAA incidence.

In both male and female cholesterol was associated with lower incidence of AAA (OR=0.63, CI 0.41-0.97 and OR=0.13, CI 0.02-0.90 for men and women respectively), this was probably due to higher use of statins in the AAA group especially in the men (OR=2.31, CI 1.66 to 3.21).

Conclusion

In Conclusion these results clearly demonstrate a higher incidence of AAA in men with a history of a DVT, hypertension and MI and compared to women and as such represent a "target" population for ultrasound based screening programmes. In both sexes history of smoking increased the incidence of AAA significantly.