Smoking Increases Lifetime Risk of Abdominal Aortic Aneurysm

According to a study recently published in *Arteriosclerosis, Thrombosis and Vascular Biology*, an American Heart Association journal, smokers are twice as likely to develop and abdominal aortic aneurysm (AAA) than the general population, but this risk can be significantly reduced by quitting.

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AAA is an important life-threatening vascular disease in older adults. However, there is very little evidence regarding the lifetime risk of being affected by the condition. Weihong Tang, of the University of Minnesota, and colleagues examined the lifetime risk of AAA in a community-based cohort and assessed its association with midlife cardiovascular risk factors.

In total, 15,791 people aged over 45, enrolled in the national Atherosclerosis Risk in Communities Study, were recruited at first visit in 1987 to 1989 and followed up through 2013. After this follow-up period, the research team identified 590 cases of a ruptured, Surgically repaired or clinically diagnosed asymptomatic AAA and 75 cases of asymptomatic AAA detected by ultrasound screening.

The results of the study showed that smoking was strongly associated with an increased lifetime risk of AAA. Specifically, at age 45, the lifetime risk for AAA was 5.6% and was higher in men (8.2%) and current smokers (10.5%). In total, 1 in 17 among all study participants, 1 in 9 among current smokers, and 1 in 12 among current female smokers had a lifetime risk of AAA. Smokers who had quit smoking had a 29% lower lifetime risk compared with continuous smokers. However, they had a higher risk than those that had quit before visit 1. The lifetime risk of rupture or medical intervention was 1.6%.

It was also found that women who currently smoke have a similar risk as men who quit smoking. This finding is of particular importance and concern, given that the United States Preventive Services Task Force makes no recommendation for ultrasound screening for female smokers.

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Other factors linked to an increased risk of AAA were male sex, white race, greater height, greater low-density lipoprotein and total cholesterol levels. "The strongest associations, however, remain with smoking," Tang said. "And the best preventive strategy to reduce abdominal aortic aneurysms in smokers is to stop smoking."

Source: Arteriosclerosis, Thrombosis, and Vascular Biology
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