VASCULAR DISEASE

Now official: smoking promotes peripheral artery disease in women

Smoking is a potent risk factor for the development of peripheral artery disease (PAD) in women. “The risk associated with smoking was striking and increased with both number of cigarettes and duration of smoking,” says Aruna Pradhan, senior investigator of the study that demonstrated this association.

Clinicians long suspected that smoking has a role in the pathogenesis of PAD but the strength of this association was largely unknown. In a cohort of almost 40,000 initially healthy women, about half of whom were smokers or former smokers, Pradhan *et al.* identified 178 cases of PAD over a period of 12.7 years. When adjusting data for age, they found that women who smoked more than 15 cigarettes at study entry had a 16.5-fold higher risk of developing PAD than women who never smoked. Smoking cessation substantially reduced the risk for PAD, but even women who quit smoking over 20 years before the study still had

a higher risk for PAD than nonsmokers. The team also measured markers of inflammation in baseline plasma samples from 71% of participants. Subclinical inflammation could only account for some of the PAD risk, suggesting that other adverse effects caused by smoking contribute to the development of PAD.

As the association between smoking and PAD seems to be even stronger than that between smoking and coronary artery disease, Pradhan speculates that the mechanisms by which smoking promotes PAD might differ from those driving CAD. Whether smoking accelerates plaque development preferentially in the peripheral vasculature might be a topic of future studies by the team.

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Original article Conen *et al.* Smoking, smoking cessation, and risk for symptomatic peripheral artery disease in women. *Ann. Intern. Med.* 154, 719–726 (2011).