Carotid artery plaque: how essential is imaging?

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Abstract

Measurement of carotid plaque burden and assessment of carotid plaque characteristics are very important in predicting risk of stroke/myocardial infarction/vascular death, and in management of atherosclerosis. By quartile of total carotid plaque area (TPA), the 5-year risk of these events is approximately 5%, 10%, 15% and 20%, after adjustment for a broad panel of risk factors. "Treating arteries instead of treating risk factors" markedly reduces risk. Among patients with asymptomatic carotid stenosis, this approach reduced the 2-year risk of stroke and myocardial infarction by more than 80%. Trying to treat arteries without measuring plaque burden would be like trying to treat hypertension without measuring blood pressure.