

New Canadian guideline is wrong to say acetylsalicylic acid is only for patients with symptomatic vascular disease

There are important problems with a recent Canadian guideline, published in *CMAJ*,¹ that recommended prescribing acetylsalicylic acid (ASA) only to patients with symptomatic vascular disease. In excluding ASA for patients with asymptomatic carotid stenosis, the guideline panel relied on 2 studies. The first, involving patients with asymptomatic carotid stenosis,² was clearly underpowered. The second was not a study in asymptomatic carotid stenosis; it was a study in patients with an ankle-brachial index of less than 0.95.³ The risk of the primary outcome was only 10.7%.³ However, the risk of vascular events is much higher in patients with asymptomatic carotid stenosis.

Patients with asymptomatic carotid stenosis have a high risk of coronary and other vascular events. In patients with asymptomatic carotid stenosis but no history of coronary artery disease, the 4-year risk of a myocardial ischemic event was 33%.⁴

Among patients with asymptomatic carotid stenosis enrolled between 2000 and the end of 2002, the 2-year risk of stroke, death, myocardial infarction or carotid revascularization was 17.6%.⁵ This dropped to 5.2% after 2003, with very intensive medical therapy, but given that it is only a 2-year risk, it is still very high. Among 3057 Swedish men screened for carotid stenosis at age 65 years in 2007–2009, after 5 years only 22% were taking antiplatelet agents and only 29% took statins. The authors stated that the risk of carotid events over 5 years among patients with severe stenosis was 42%, “despite optimum medical treatment.”⁶

A 2015 meta-analysis involving patients with asymptomatic carotid stenosis reported that, in one cohort, cardiac mortality over 5 years was 14.8%.⁷ In another

cohort with 2 years of follow-up, the average cardiac mortality was 2.9% per year (i.e., a 5-year risk of 14.9%).⁷ Besides cardiac mortality, undoubtedly there would be additional risks of nonfatal coronary events and coronary revascularization.

If patients with coronary artery disease should receive ASA, then so should patients with asymptomatic carotid stenosis, because their risk of a vascular event is very high. Furthermore, besides carotid stenosis, there are additional ways of identifying very high-risk patients. A high coronary calcium score identifies patients with a very high risk of vascular events,⁸ as does high carotid plaque burden, which correlated strongly with coronary calcium score⁹ and is as predictive of vascular risk.¹⁰ Carotid plaque burden is as predictive of cardiovascular risk as coronary calcium, and more predictive of risk than carotid stenosis.^{11,12} Carotid plaque burden is better than coronary calcium for a number of reasons.¹³

Among patients attending vascular prevention clinics, the 5-year risk of stroke, myocardial infarction or vascular death was 5.6%, 10.7%, 13.9% and 19.5%, by quartile of carotid total plaque area, after adjustment for risk factors.¹⁴

Absent contraindications, withholding ASA in high-risk patients simply because they are asymptomatic would be foolish. The guideline written by this committee is not good evidence-based medicine. Patients at very high cardiovascular risk should be given ASA; this includes patients with asymptomatic carotid stenosis.

J. David Spence MD

Professor of Neurology & Clinical Pharmacology, Western University; Director, Stroke Prevention & Atherosclerosis Research Centre, Robarts Research Institute, London, Ont.

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