Overestimation of Coronary Risk in Stroke Patients

To the Editor:

Coronary artery disease (CAD) is usually considered a significant cause of morbidity and mortality in stroke patients, although absolute risk of CAD in stroke/transient ischemic attack patients is still not well known and highest risk patients are not well identified. Dhamoon et al provide interesting data in this field, but we have concerns about the potential for misinterpretation of their conclusions, which are mainly based on risks of composite outcomes, without excluding patients with known CAD at baseline.1

First, including stroke in vascular deaths is questionable because it does not provide precise estimates of cardiac events risk after stroke. Yet, guidelines for assessment of cardiovascular risk, including the NCEP ATP III which the authors refer to, do not consider stroke in the cardiovascular risk.2,3 In our recent meta-analysis of 39 cohort studies (65,996 patients), the absolute risk of myocardial infarction (MI) was 2.2% (95% CI, 1.7 to 2.7) per year and that of nonstroke vascular death was 2.1% (1.9 to 2.4) per year.4 Fatal strokes accounted for 39/86 (45%) of vascular deaths in Dhamoon et al’s study, which explains why the risk of vascular death (17.4% at 5 years; ie, 3.5% per year) was higher than that in our meta-analysis.

Second, looking at MI only, the authors observed 19 nonfatal MI and 17 fatal MI, corresponding to a 5-year risk of 5.4% (3.3 to 7.4). Such a risk cannot be considered a high coronary risk according to guidelines for assessment of cardiovascular risk, which consider coronary events only.2,3 Furthermore, one third of the study population had a history of symptomatic CAD at baseline. However, only patients without known CAD are likely to benefit from additional specific strategies to prevent coronary events. Patients with known CAD accounted for 52% of those who had MI or vascular death during follow-up, making the estimates in patients without CAD far lower. Authors do not provide the absolute risk of MI in patients without known CAD at baseline. There are only very few other published data on the risk of coronary events in patients without CAD.5

Finally, by using an absolute risk of CAD in stroke/transient ischemic attack patients without CAD,6 the absolute 5-year risk of major coronary events was 4.2% (3.7 to 4.8). Similarly, preliminary analyses from the 1-year follow-up data of the large international Reduction of Atherothrombosis for Continued Health (REACH) Registry (18,992 stroke/transient ischemic attack patients) found a very similar low risk of MI at 1.0% (0.8 to 1.2) in patients without CAD at baseline, whereas that 1-year risk was 3.0% (2.5 to 3.5) in patients with known CAD.6

In conclusion, Dhamoon et al’s study does not provide evidence to designate ischemic stroke as a coronary risk equivalent. Because the vast majority of stroke/transient ischemic attack patients would not present coronary events, we consider that a stratification of the cardiac risk is required. Such an approach should allow more effective, targeted, and cost-effective preventive strategies.

Disclosures

None.

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