Response to Letter Regarding Article, “Periprocedural Myocardial Infarction After Aorto Icarotid Endarterectomy and Stenting: Systematic Review and Meta-Analysis”

We thank Dr Galyfos et al1 for their comments on our article. Unfortunately, the diagnostic criteria for myocardial infarction (MI) was unspecified in most of the included studies, leaving the possibility of misclassification bias. However, it is unlikely that differential misclassification bias based on carotid intervention has occurred and all except one of the studies, which described MI criteria met the latest definition of MI.2 When pooling absolute risks, heterogeneity is common and can result from variation in outcome definition, but most commonly from case mix. Random models are used to take this into account.

Despite variations in MI definition by international guidelines and improvement of periprocedural management, no statistically significant difference in the 30-day absolute risk of MI between CAS and CEA.3 Thus, it seemed difficult to conclude on the potential influence of the type of anesthesia on the risk of MI between CAS and CEA.

Most of the studies reporting a higher risk of long-term mortality in patients with postprocedural cardiac biomarkers elevation included noncarotid procedures, or combined carotid and noncarotid procedures. In Carotid Revascularization Endarterectomy Versus Stenting Trial (CREST), a significant association was identified between postprocedural MI and cardiac biomarkers elevation only and long-term mortality after CEA and CAS, compared with the absence of biomarkers elevation or MI.4 However, the numbers of cardiac events were small (42 MI and 20 biomarkers elevation only), which is more likely to introduce chance findings and several biomarkers were measured and interpreted by various laboratories instead of a central core laboratory. Although patients with carotid stenosis are likely to die from atherosclerosis complications, all-cause mortality was reported. We think that further investigation would be desirable to further understand the association between post-procedural cardiac events and long-term mortality after carotid procedures. However, numbers of cardiac events are small and stratification by factors such as age and previous coronary artery disease, requires a large sample size to show any significant difference.

Disclosures

None.

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