MRA for Carotid Artery Stenosis

To the Editor:

With interest we read the systematic review and meta-analysis on the diagnostic accuracy of magnetic resonance angiography (MRA) in measuring carotid artery stenosis of Debrey and colleagues.1 In this field with rapid technical developments, such as the increasing use of contrast-enhanced MRA (CE-MRA), a pooled estimate of the diagnostic accuracy is timely and useful. The accuracy of this review is however suboptimal, because the largest prospective and consecutive series on MRA in the assessment of carotid artery stenosis was not included.2 Our main study, published in 2002, included 350 consecutive patients who underwent duplex ultrasound, MRA, and the reference test digital subtraction angiography (DSA) to investigate the accuracy of noninvasive testing. Instead, the authors included an article which was published shortly after the main article and covered only part of the data. The objective of this article, with data of a subgroup of 202 patients, was to investigate whether the use of more MRA projections could explain its overestimation in stenosis measurements compared to DSA.3

In the original article with the main results, of each patient we included only the stenosis measurement of the carotid artery of the symptomatic side. Whereas most diagnostic studies on this topic include data of both carotid arteries in their analyses, we believe that only stenosis measurement of the vessel considered for treatment should be used to obtain results reliable for clinical decisions. Our second study, on overestimation of MRA, included available data on both arteries of each patient—because of the different nature of the research question—resulting in more vessels from fewer patients.

The authors conclude that there is lack of MRA data on 50% to 69% stenosis in particular. Our main study provides complete MRA and DSA data of 281 patients, covering all degrees of stenosis (0% to 29%, 30% to 49%, 50% to 69%, 70% to 99%, 100%). Including these data in the meta-analysis will increase the sample and provide a more reliable estimate of the diagnostic accuracy of MRA, in particular in the 50% to 69% stenosis range.

Disclosures

None.

Paul J. Nederkoorn, MD, PhD
Department of Neurology, Academic Medical Center, Amsterdam, The Netherlands

Yolanda van der Graaf, MD, PhD
Julius Center for Health Sciences and Primary Care University Medical Center Utrecht, The Netherlands
