Commentary Regarding Uptake of Carotid Artery Stenting in England and Subsequent Vascular Admissions: An Appropriate Response to Emerging Evidence?

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Several randomized controlled trials have shown the superiority of carotid endarterectomy (CEA) over carotid artery stenting (CAS) to prevent stroke or death in the short term in patients with symptomatic carotid artery stenosis. Since there is a gap between science and the real world, administrative data are frequently used to evaluate how evidence from trials is translated into daily clinical practice, to verify the external validity of trial results, and to identify opportunities to improve quality of care. In this issue of the journal, Lee et al. present an interesting study on the uptake of CAS in the UK between 2006 and 2012.1 Whereas they found an absolute increase in CEA, the proportion of patients treated with CAS remained stable, being <5% of all carotid artery interventions. Patients treated with CAS were younger, lived more often in areas of higher deprivation, had more often amaurosis fugax as qualifying symptom, more co-morbidities, and had a shorter hospital stay. Although the low proportion of CAS does justice to the trial outcomes, the authors can only speculate about the reasons for its slow uptake. CAS was endorsed by National Institute for Health and Care Excellence guidelines during the study period, but maybe physicians were cautious to use CAS in asymptomatic patients because of the increased risk of adverse events, or maybe reimbursement issues hampered the diffusion of CAS.

The results are comparable to a recent report on variation in clinical practice among countries contributing to the VASCUNET registry.2 Analysis of UK VASCUNET data showed that a steady proportion of 0.6% of patients had CAS between 2005 and 2010. Wide variation was noted in the utilization of CAS between countries, ranging from 0.1% of cases in Denmark to 17.4% in Italy. There was also wide variation in the indication for a carotid intervention with proportions of asymptomatic patients ranging between 0% (Denmark) to 69% (Italy). Although CAS is increasingly used to treat asymptomatic carotid artery stenosis, especially in the United States, analysis of administrative data indicates that the risk of postoperative stroke or death is higher than after CEA.3

The study by Lee is an example of the limitations of using administrative data for audit of contemporary practice and to identify opportunities for quality improvement.4 Although length of stay might be an interesting outcome for policy makers, information on procedure-related complications or prevention of strokes is much more important to clinicians and patients. The Hospital Episodes Statistics (HES) database clearly falls short to address these more meaningful issues for carotid artery disease. HES could not provide reliable data on the indication for the intervention, nor did it allow verification of the indication for re-admission, or whether a re-intervention was on the ipsilateral side. In addition, finding associations between the use of CAS and patient characteristics did not allow drawing inference on the relative effectiveness of CAS and CEA in the study population. Despite all inherent limitations to databases, prospectively maintained registries such as VASCUNET or a national audit are better suited for quality control of interventions for carotid artery disease.

CONFLICT OF INTEREST
None.

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REFERENCES