Comparison of SVS and ESVS Carotid Disease Management Guidelines

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Both the Society for Vascular Surgery (SVS) and the European Society for Vascular Surgery (ESVS) have now published clinical practice guidelines for the management of carotid artery atherosclerosis. While the documents differ slightly in the methods employed and in the level of detail, they reveal transatlantic consensus in most key areas. The SVS document employs the GRADE system which rates strength of recommendations (I = Strong and II = weak) separately from the quality of the data on which these recommendations are based (High, Moderate, Low, Very Low). In this system recommendations are based not just on data but on prevailing values and preferences. The ESVS document employs a simpler system in which only the quality of the supporting data are graded (A: supported by at least one high quality randomized controlled trial (RCT), B: supported by good clinical trials but no RCTs, and C: supported only by expert opinion or experience). Despite this fundamental methodological difference, the guidelines that emerge are quite similar (Table 1).

First, in symptomatic patients there is a consensus that carotid endarterectomy (CEA) is most appropriate for patients with carotid territory TIA or minor stroke with 50% or greater (NASCET criteria) ipsilateral stenosis (SVS: Grade 1/High, ESVS: A). The ESVS adds a guideline that CEA in symptomatic patients should take place within two weeks of the symptom, based on an analysis of pooled data from ECST and NASCET (ESVS: A). There is equally strong consensus that CEA is inappropriate for symptomatic patients with <50% stenosis (SVS: Grade 1/High, ESVS: A). There is a general consensus as well on the role of carotid artery stenting in symptomatic carotid stenosis. Both the SVS and the ESVS documents support consideration of carotid stenting (CAS) in "high risk" symptomatic patients, although the recommendation and supporting data (SVS: Grade 2/Low, ESVS Grade C) are much weaker than those supporting CEA. The ESVS adds a recommendation that CEA is the preferred treatment in symptomatic patients (Grade A) and that mid-term stroke prevention with CEA and CAS are equivalent, based on mid-term results of SPACE and EVA-3S (Grade A).

In the recommendations for the management of asymptomatic patients there are some subtle differences between the SVS and ESVS documents. The threshold degree of stenosis for intervention in asymptomatic patients in the SVS document is 60%, based on ACAS, while in the ESVS document it is 70%, based on ACST. The SVS and ESVS documents recommend carotid endarterectomy for asymptomatic patients with stenoses exceeding these threshold values (SVS: Grade 1/High, ESVS: A). Recommendations in both documents, however, include caveats: (SVS) "as long as perioperative risk is low" and (ESVS) "males <75 if risk <3% and younger, fit women". Based on the available RCT's the ESVS gender-related caveat seems appropriate, although data of lower quality suggest no gender-related differences in risk or stroke prevention benefit. The ESVS age related caveat is more problematic as there are scant data supporting an absolute age threshold over which benefit is lost.

The SVS and ESVS guidelines on the role of CAS in asymptomatic patients reflect the considerable uncertainty and controversy shrouding this area. The SVS document does not support CAS for asymptomatic patients (Grade 1/Low).
The ESVS supports CAS in asymptomatic patients only as part of an RCT or in high volume centers with documented excellent results (Grade C). In reality, as stated in their discussion, the SVS authors could not reach consensus on this recommendation which might more properly be Grade II/low. The caveat added by the ESVS writing group is most appropriate: “The assumption that a patient can be treated with CAS when he has an (evidence based) indication for CEA (carotid stenosis >50% in symptomatic or >70% in asymptomatics) has not been validated.”

The differences between the two documents are primarily in their scope. The ESVS authors chose to include much more detail on the techniques of CEA and CAS. In general their technical recommendations for CEA are vague and support surgeon preference (eversion vs longitudinal technique, general vs regional anesthetic, cerebral monitoring and protection, and completion quality control studies). It should be noted, however, that these vague recommendations are based on meta-analyses from the Cochrane Library, reflecting the best currently available data. A more definitive recommendation is made for carotid closure, where patch closure is recommended over primary closure (Grade A). Also, routine shunting is not supported (Grade A), but the origin of this recommendation is unclear since the authors present no data suggesting that routine shunting is inferior to selective shunting or non-shunting. The SVS writing group felt that the quality of the data and the likely strength of recommendations with respect to the technical aspects of CEA and CAS were such that inclusion of only brief technical notes was appropriate. The SVS writing group espoused a broad range of technical options, especially for CEA, and consensus was elusive.

The ESVS writing group also included a detailed analysis of technique for carotid stenting. The only Grade A recommendation to come from this analysis was for the use of dual antiplatelet therapy (aspirin plus clopidogrel) for the periprocedural period. Other technical recommendations including the development of validated training programs, the use of cerebral protection devices, and the duration of dual antiplatelet therapy were given grade B or C. The SVS writing group did not attempt a systematic review of the evidence supporting technical aspects of CAS, though the brief technical notes and recommendations from the SVS group are nearly identical to those of the ESVS group.

Finally, the ESVS group evaluated evidence on the management of concurrent carotid disease and peripheral arterial disease (PAD) and on the management of concurrent carotid disease and coronary disease. Only Grade C recommendations for not deferring PAD treatment in the setting of asymptomatic carotid disease and for individualizing the management of concurrent carotid and coronary disease resulted.

Comparison of the SVS and ESVS carotid disease management guidelines reveals transatlantic consensus regarding the role of CEA in the management of symptomatic and asymptomatic patients. This should not be surprising, since the relevant data are both high quality and explicit in their clinical application. Less clear and much less explicit are the data supporting CAS, especially in asymptomatic patients. It is not surprising, therefore, that the emerging role of CAS is, as of now, much less clearly defined in both North America and Europe.
References


