

SVS Guidelines on TEVAR for Traumatic Thoracic Aortic Injury

W. Anthony Lee, MD, FACS, shares insights into the Society for Vascular Surgery's recent issuance of guidelines for this emergent application.

What were the origins of this collaboration, and who participated in the process of defining and refining these standards?

Dr. Lee: The Executive Committee of the Society for Vascular Surgery (SVS) commissioned a group of experts who possess knowledge of the clinical aspects and patients' values and preferences in key areas in endovascular therapy where it would be helpful to provide guidelines for the practicing clinician. Endovascular repair of traumatic thoracic aortic injuries was one of these areas. The interdisciplinary group, composed of both vascular and cardiac surgeons, worked in collaboration with an independent outcomes research organization to provide the best available evidence and grade the quality of that evidence, which determined the strength of the recommendation.

How were the guidelines ultimately decided upon? Please explain GRADE and how it works.

Dr. Lee: GRADE stands for Grading of Recommendations Assessment, Development and Evaluation. This method of presenting recommendations provides superior clarity and separates the quality of evidence (levels: A = high, B = moderate, C = low) from the strength of recommendations (strong, weak) and allows for the inclusion of patients' values and preferences in the recommendations.

What criteria might lead to not including a particular guideline?

Dr. Lee: If there was no evidence on which to make a recommendation, it was left out. On occasion, however,

select topics of general interest were addressed by polling the opinions of the expert group, and an attempt at consensus was made. These were reported as grade 2, level C recommendations.

How would you briefly summarize the guidelines? Which thoracic aortic injury patients should be treated endovascularly, and which should be treated with surgery?

Dr. Lee: The guidelines suggest that endovascular repair of traumatic thoracic aortic injuries be performed preferentially over open surgical repair or nonoperative management. The guidelines did not specifically address in whom or which circumstances the two competing therapies should be applied.

What evidence led to the suggestion that endovascular repair in thoracic aortic transection leads to improved outcomes?

Dr. Lee: The combined evidence of 139 studies comprising 7,768 patients showed lower rates of mortality, spinal cord ischemia, end-stage renal disease, and late graft and systemic infections as compared to open surgical repair.

Do the guidelines discuss the level of required operator experience or facility requirements to successfully implement endovascular treatment of thoracic injuries?

Dr. Lee: No. The guidelines did not address such issues.

Tell us about the issues the committee was surveyed upon that were not included in the meta-analysis.

What were the issues? Was any consensus met?

Dr. Lee: The therapy poses several unresolved or controversial issues for which supporting evidence lacks sufficient clarity in the literature due to cohort heterogeneity, size, and length of follow-up. The committee examined, among others, issues such as timing of endovascular repair in a stable patient, management of minimal aortic injury, and choice of endovascular or open repair in a young patient. Consensus was achieved in some and not in others. In the latter, both the majority and minority opinions were presented.

Do current stent grafts, which are largely designed and approved for the treatment of descending thoracic aneurysms, perform adequately in this setting?

Dr. Lee: The committee recognized that the use of current devices is off-label, each device had a number of unmet needs, and no one device was ideal for this therapy. There was no clear consensus regarding how these device-related issues should be handled.

In which areas were there clear inabilities to come to a conclusion regarding suggested courses of therapy?

Dr. Lee: As previously indicated, there was lack of con-

sensus on the optimal device to be used for this application. Opinion was further divided on routine revascularization of the left subclavian artery, heparin administration during the procedure, and the optimal postoperative follow-up strategy.

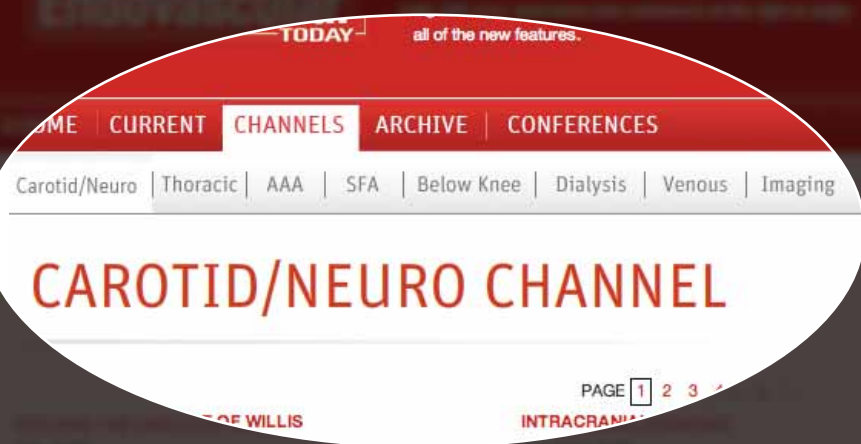
Will the committee continue to assess new datasets and update the guidelines as warranted?

Dr. Lee: There are no specific plans at this time, but that would be up to the Executive Committee of the SVS.

What needs to be done next in order to better treat patients with traumatic thoracic aortic injuries?

Dr. Lee: Device improvements clearly are the top priority. Long-term outcomes and the prospective data currently being collected from industry-sponsored clinical trials should help better define patient selection and lead to improved overall outcomes. ■

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