

Comparing TCAR to the Traditional Approach for the Treatment of Carotid Artery Stenosis: An Interview With Dr Marc Schermerhorn

Interview by Laurie Gustafson

Dr Schermerhorn presented “Outcomes of TCAR (Trans-Carotid Artery Revascularization) Compare Favorably With Those of CEA in Symptomatic and Asymptomatic Patients Despite the Higher Medical Risk of the TCAR Patients: From the SVS/VQI Registry” on November 13, 2018 at the Veith Symposium.

VDM: Can you tell me about the TCAR study?

Dr Schermerhorn: Carotid stenosis is estimated to cause up to one-third of all ischemic strokes. Similar to PAD or CAD, carotid stenosis is an atherosclerotic disease increasing in prevalence due to an aging society and Western sedentary lifestyle. Helping to prevent stroke has major societal benefits.

There are limited data on TCAR outside of the highly selected patients in clinical trials. This real-world study provides the opportunity for us to compare TCAR to the commonly used carotid stenosis surgical approaches without the constraints of most clinical trials, where highly selected patients and providers are used that may limit the generalizability of the findings to all patients and providers. This study highlights the utility of the Society for Vascular Surgery’s Vascular Quality Initiative to evaluate new technology.

VDM: What were the key study results?

Dr Schermerhorn: Despite an older, sicker patient population, TCAR did just as well as CEA – rates of in-hospital stroke or death were comparable to CEA (TCAR, 1.8%; CEA, 1.4%; $P=.09$). Of note, however, was a 10-times reduction in cranial nerve injury. In addition, shorter procedure times (by 41 minutes) and less extended hospital stays benefit hospitals by being able to increase utilization of the operating rooms.

VDM: Were there any complications?

Dr Schermerhorn: TCAR showed a small increase in bleeding complications, but that can be mitigated with proper use of protamine to reverse heparin after the procedure is completed.

VDM: What should VDM readers take away from this study for their own practices?



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Dr Schermerhorn: All surgeons should incorporate the TCAR procedure as part of their carotid practice, as it has demonstrated both safety and efficacy and is an excellent alternative to CEA. TCAR is a worthy alternative to CEA in high surgical risk populations. If excellent data continue, it’ll likely be extended to standard surgical risk patients in the future.

VDM: Do you have tips or tricks for this procedure?

Dr Schermerhorn: This hybrid procedure combines both traditional surgical techniques and endovascular catheter skills – but the procedure itself is quite elegant and simple. There is a very short learning curve of 5-10 cases. Arterial access is the most difficult part. Once neuroprotection is in place, the rest of the procedure is routine.

VDM: What are your plans for future study?

Dr Schermerhorn: We are continuing to enroll patients and plan to present more detailed 1-year data soon.

VDM: Is there anything I didn’t bring up that you’d like to mention?

Dr Schermerhorn: Our subset analysis showed that octogenarians do really well with TCAR. Typically, this is a vulnerable patient population that performs worse in terms of stroke and stroke/death with both CEA and CAS, but we saw no increase in stroke or death rates for octogenarians (<80 years, 1.8%; >80 years, 1.7%; $P=.80$). As a result, TCAR’s minimally invasive approach with excellent neuroprotection seems ideal for these patients. ■