

Advancing Health

A CASE STUDY from MedStar Heart & Vascular Institute

A Minimally Invasive Approach to Treating Carotid Artery Stenosis

Transcarotid Artery Revascularization (TCAR)

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Abstract

During a routine scan, a 75-year old male was found to be experiencing a rapid recurrence of carotid artery stenosis. As the patient had previously undergone a carotid endarterectomy on that side, a minimally invasive Transcarotid Artery Revascularization (TCAR) was performed to reduce risks of stroke and nerve damage. The procedure successfully cleared the blockage, with intraoperative imaging indicating no evidence of recurrence.

CASE STUDY

Transcarotid Artery Revascularization (TCAR)

A Minimally Invasive Approach to Treating Carotid Artery Stenosis

Patient Presentation

- A 75-year old male who had undergone a successful carotid endarterectomy for carotid artery stenosis nine years earlier was discovered during a routine follow-up scan to be experiencing a rapid recurrence of the condition.
- The patient had no other significant health issues or considerations.

Assessment

- The patient was referred to MedStar Heart & Vascular Institute (MHVI) for further evaluation and treatment.
- A second conventional open carotid artery endarterectomy would have put the patient at greater risk for nerve damage and stroke, given the likely presence of scar tissue from the earlier procedure.
- Carotid stenting would be the most appropriate means of treatment.
- A minimally invasive carotid artery revascularization (TCAR) procedure was considered a more suitable option for the patient's condition than a typical transfemoral approach. A TCAR also offered the advantage of reversing blood flow away from the brain, thereby protecting it from embolic debris that might be created during the procedure.

Diagnosis

- A CT scan confirmed that the patient was a good candidate for the TCAR stent procedure.
- The patient was advised of the procedure's benefits and risks, and gave his consent.

Treatment

- The TCAR was performed during a short procedure under general anesthetic through a 2 cm incision above the patient's clavicle.
- No problems or unexpected conditions were encountered.

Outcome

- The patient was discharged the day after surgery.
- A follow-up scan verified that the stent is performing as expected, with no recurrence of stenosis.
- The patient will continue to undergo routine monitoring.

Conclusion

Transcarotid Artery Revascularization (TCAR) is an attractive alternative option to carotid endarterectomy or the transfemoral approach for treating carotid artery stenosis.



Raghuveer Vallabhaneni, MD, FACS

“By combining surgical principles of neuroprotection with minimally invasive endovascular techniques, Transcarotid Artery Revascularization (TCAR) offers tremendous potential for the treatment of carotid artery stenosis as an alternative to conventional carotid endarterectomy and stenting procedures. Indeed, it has the potential to become the primary therapy for carotid artery stenosis, a trend that will benefit both patients and surgeons.”

Dr. Vallabhaneni is one of only a few surgeons in Maryland performing this procedure using this FDA approved device and has been using it since January 2016.

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MedStar Heart & Vascular Institute is one of the top-ranked cardiovascular programs in the mid-atlantic, offering patients access to some of the nation's most experienced specialists and the services of the 10 MedStar hospitals in Greater Washington and Central Maryland. Our hallmark is the depth and breadth of our expertise, and a long standing commitment to collaboration that brings the very best team-based thinking to each and every patient.

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Individuals with all forms of carotid artery stenosis may benefit from minimally invasive treatment options such as **TCAR**. If you would like to discuss a patient, Dr. Vallabhaneni may be reached at **412-215-7123**. Or, call **410-554-2950** to refer a patient.

To learn more please visit **MedStarHeartInstitute.org**.

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