

A Transcarotid Artery Revascularization (TCAR)-first Approach in Patients Requiring Surgery for Cervical Carotid Disease

Chan, SM, Chen, JF, Nagarkatti, N, Loh S, Tonnessen B, Fischer U, Nassiri N

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Yale SCHOOL OF MEDICINE

Background

- Transcarotid artery revascularization (TCAR) has evolved into a viable surgical alternative in patients deemed high-risk for carotid endarterectomy (CEA).¹
- Despite recent FDA approval for standard-risk patients, its role as a first-line surgical option for treatment of cervical carotid disease remains unknown.²

Objectives

- To present our experience with a TCAR-first approach in patients requiring cervical carotid surgery.

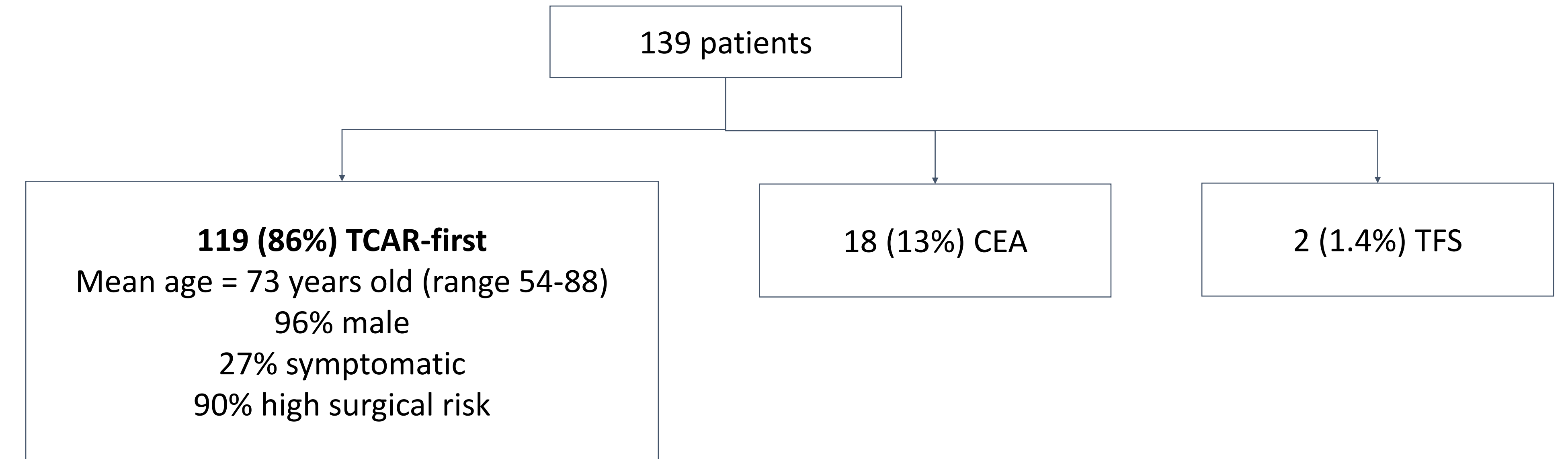
Methods

- 3 year period, from 2020 to 2023
- Consecutive patients with symptomatic and asymptomatic cervical carotid disease meeting criteria for surgical intervention based on SVS guidelines were treated with a TCAR-first approach by a single operator.
 - TCAR was offered outside IFU later in the experience in select patients with employment of operative and non-operative adjunctive maneuvers.
- Best medical therapy continued
 - Routine use of perioperative DAPT when indicated

Analysis

- Primary end points:
 - Stroke
 - MI
 - Death within 30 days
- Secondary end points:
 - Ipsilateral stroke beyond 30 days
 - Post-operative complications

Results



Results

- Primary composite endpoint: n = 0
- Secondary endpoint: n = 9 (mean follow up: 14.5 months, range 1 – 50 months)
- TCAR complications:
 - 4 (3.3%) cases of incisional infection
 - 2 (1.6%) of which required surgical incision and drainage
 - 2 (1.6%) case of transient hoarseness.
- Primary composite endpoint: n = 0
- Secondary endpoint: n = 9 (mean follow up: 14.5 months, range 1 – 50 months)
- In 32 (27%), TCAR was performed outside the IFU due to short (< 5 cm) CCA length initially by surgical conduit creation in 2 (1.6%) patients, and later by a surgeon-devised thoracic hyperextension (THE) maneuver (n=30; 25%) with an average accessible CCA length gain of 1.5 cm (range 0.5 - 3 cm) (Figure I).



References

1. Luk Y, Chan YC, Cheng SW. Transcarotid Artery Revascularization as a New Modality of Treatment for Carotid Stenosis. *Ann Vasc Surg.* 2020 Apr;64:397-404. doi: 10.1016/j.avsg.2019.11.001. Epub 2019 Nov 6. PMID: 31705988.

2. <https://www.fda.gov/medical-devices/recently-approved-devices/enroute-transcarotid-stent-system-p140026s016>