

Response to the reviewers

Reviewer #1:

Response:

We really appreciate your comments. Thank you for your time and effort

Reviewer #2:

Thank you for your time. Below are the responses for your comments

“How do the authors interpret that in the case of emergency CABG in the two described case reports, an ultrasound examination of the carotid arteries was performed, given that it was ACS (one STEMI!) Also, these are patients with significantly different LVEF and other comorbidities (DM, advanced CKD, etc.), which definitely represents a different perioperative risk for possible complications.”

- Two of the 4 patients presented with NSTEMI (case 3-4), and one case presented with unstable angina (case 1). The timing of surgical intervention in this patient population is dependent on the patient's clinical status, if they are hemodynamically stable and with no mechanical complications, the surgery can be done on an urgent basis (on the same hospital admission).
- According to the American Heart Association (AHA) 2021 coronary revascularization guidelines emergency CABG In patients with NSTEMI-ACS (Non-ST elevation- Acute coronary syndrome) who have failed PCI and have ongoing ischemia, hemodynamic compromise, or threatened occlusion of an artery with substantial myocardium at risk, who are appropriate candidates for CABG, emergency CABG is reasonable (Class 2a)
- According to the European Society of cardiology (ESC) 2023 revascularization guidelines for the management of acute coronary syndrome “In some patients with ACS undergoing ICA, an initial conservative management strategy with optimized guideline-directed medical therapy may be considered on a case-by-case basis.”
- In our institution, if a patient presented with ACS and failed PCI or PCI is not suitable for his coronary anatomy, and with no hemodynamic instability or mechanical complications, we aim to stabilize the patient's clinical condition with optimal medical therapy, with CABG planned on an urgent basis.
- In addition, given that those patients had high risk profile, we tried to avoid emergency surgeries, as it would increase the risk of mortality.
- Regarding the performance of carotid artery examination, it was done bedside while the patient was being monitored in the ICU waiting for the surgery.

“As some of the presented patients were followed up after the operation for 5 years, I am interested in whether there are patients from the author's clinical practice who underwent the same operation and had unfavorable outcomes (stroke, death)?”

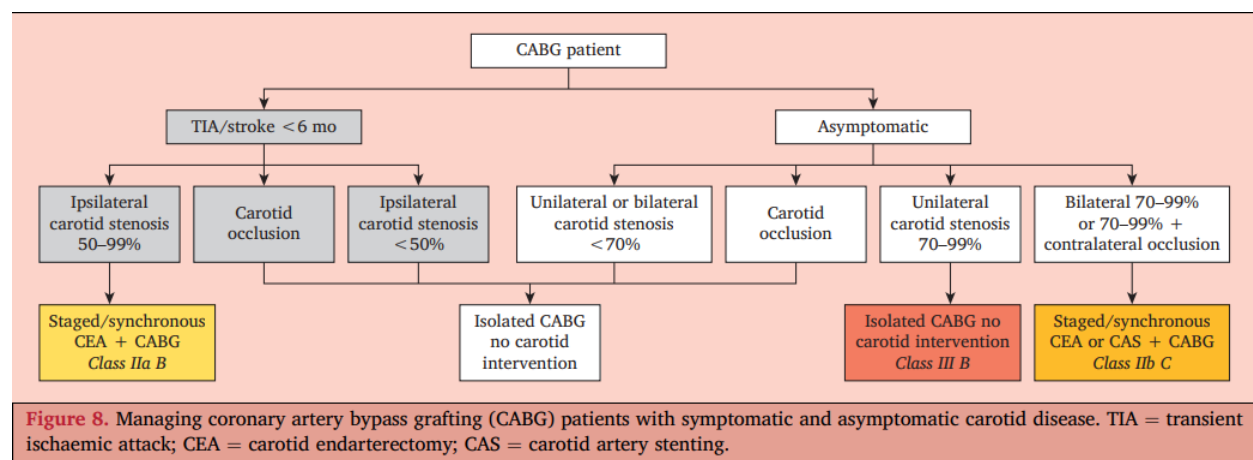
Fortunately, no. Our center’s experience involved these 4 patients with good outcomes.

“How was it decided in patient 4. which ICA will be operated on first in view of bilateral high-grade stenosis?”

Great question, according to the ESVS (European Society for Vascular Surgery) published on 2023, CEA in CABG patients is indicated for

- Asymptomatic
 - o Bilateral stenosis 70-99% or 70-99% and contralateral occlusion
 - o Unilateral carotid stenosis 70-99%
- Symptomatic (TIA or stroke <6 months)
 - o Ipsilateral carotid stenosis 50-99%

Regarding the patient of case number 4, the patient was planned for staged intervention, the left was performed synchronously with the CABG procedure, but the other carotid was done after 12 months of his CABG, to avoid high mortality and morbidity of bilateral CEA and CABG. We chose the left side because it had features of high risk on the ultrasound images for late stroke.



Reference:

Naylor R, Rantner B, Ancetti S, et al. Editor's Choice - European Society for Vascular Surgery (ESVS) 2023 Clinical Practice Guidelines on the Management of Atherosclerotic Carotid and Vertebral Artery Disease. Eur J Vasc Endovasc Surg. 2023;65(1):7-111. doi:10.1016/j.ejvs.2022.04.011

“Did all patients really undergo left-sided CAE (Case 2 and 3)?”

We apologize, not all the patients underwent left CEA.

After revision of the patients' charts

- The patient in case 2 underwent right CEA
- The patient in case 3 underwent right CEA, as he had normal Left internal carotid artery. In addition, his stroke happened 3 months before his presentation for CABG.

“Significant stenosis is clinically considered to be > 70%, the authors state in the introduction (> 80% stenosis)?”

Carotid stenosis is considered significant once there is ≥50% stenosis. It was corrected in the manuscript.

References:

Naylor AR, Bown MJ. Stroke after cardiac surgery and its association with asymptomatic carotid disease: an updated systematic review and meta-analysis. Eur J Vasc Endovasc Surg. 2011;41(5):607-624. doi: 10.1016/j.ejvs.2011.02.016

“In the Discussions chapter, the need to treat the carotid arteries before elective CABG is discussed. Today, it is good clinical practice in most centers to routinely perform an ultrasound of the carotid arteries before CABG.”

- We agree with your opinion about the importance of preoperative carotid screening in patients who are planned for CABG surgery, and this is what we perform in our center.
- But according to the ESVS 2023 guidelines
 - o For patients undergoing open heart surgery, routine screening for carotid disease is not recommended. (Class III)
 - o For patients undergoing coronary artery bypass surgery, duplex ultrasound screening for carotid disease should be considered in patients aged >70 years, and those with a history of transient ischaemic attack or stroke or who have a carotid bruit or left mainstem disease, so that the patient can be better informed of the increased risks associated with coronary artery bypass if they have concurrent carotid disease. (Class IIa)
- Reference:
Naylor R, Rantner B, Ancetti S, et al. Editor's Choice - European Society for Vascular Surgery (ESVS) 2023 Clinical Practice Guidelines on the Management of Atherosclerotic Carotid and Vertebral Artery Disease. Eur J Vasc Endovasc Surg. 2023;65(1):7-111.
doi:10.1016/j.ejvs.2022.04.011

“In the paragraph Laboratory testing Case 2, state the value of eGFR, not only creatinine.”

Added to the manuscript, it was calculated to be 8.4 ml/min/1.73m²

“The article would be significantly improved if the authors included in the imaging and postoperative views of operated ICA, either ultrasound or MSCT.”

This is a great point, but the follow up imaging showed no stenosis, and the clinical status of our patients was stable. To avoid cluttering our article with redundant information, we chose to just mention these facts without the images.