

# Invited commentary on “Risk Factors for Cerebrovascular Accident after Isolated Coronary Artery Bypass Grafting in Veterans”

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## Abstract

This paper, among other findings, affirmed Society of Thoracic Surgeons’ published risk model for stroke after isolated CABG, that pre-existing cerebrovascular disease, prior MI, reduced EF and poor renal function as independent risk factors for perioperative CVA.

## Invited commentary

I would like to thank the authors LaPiano et al for taking an updated look at the risk factors for cerebrovascular accident (CVA) after isolated coronary artery bypass grafting in Veterans. This study, other than mostly male, is applicable to the general population. CVA, particularly stroke, can be devastating in patient outcome. Therefore, its findings are important in verifying our existing knowledge on the topic. This retrospective study included 28,757 Veterans undergoing isolated CABG from 2008-2019 queried from the VASQIP database. Its multivariate analysis showed pre-existing cerebrovascular disease, prior MI, reduced EF and poor renal function as independent risk factors for perioperative CVA, which affirmed the Society of Thoracic Surgeons’ published risk model for stroke after isolated CABG in 2018.

This study also showed increase bypass time (more than 104 minutes), and preop IABP use as significant independent risk factors for perioperative CVA. On pump CABG involves aortic manipulation, and intuitively would increase CVA risks. However, results have been mixed on on- versus off- pump CABG with their CVA rates. Variations in off-pump techniques on the graft-to-aortic anastomosis (using biting clamp vs heart string device, etc) and selection bias might play a role in different results in those studies.

Contrary to existing literature, this study did not show peripheral vascular disease (PVD) as a significant risk factor for postoperative CVA. The authors contributed this to the definition of PVD within VASIP which included patients who have previously undergone peripheral revascularization. One way to verify these findings would be to look specifically into the cohort of PVD patients, and compare CVA rates on those who had revascularization versus those who had not.

Again, I congratulate the authors on the important findings of this paper, applicable not only to our Veterans, but also largely in the general population.

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