

C-68 Management of Intraoperative CVA after TAVR Deployment

Moderator(s)/Facilitator(s): Anna Jankowska, M.D., Jennie Ngai, M.D., FASA

Objective

After completion of this session, the participant will be able to:

- Manage patients who develop a CVA during TAVR deployment.

Case Stem Question

What is the best practice management for intraoperative CVA after TAVR deployment?

Guiding Questions for Discussion

Who are the important teams to notify upon recognition of event?

What evaluation is necessary prior to any intervention?

Is an angiogram sufficient prior to proceeding with an intervention or is a CT scan required?

If there is evidence of hemorrhagic event in addition to embolic event, would intervention proceed?

Which location and what equipment is ideal for evaluation and intervention? (cardiac hybrid OR versus neuro intervention suite)

What is the appropriate disposition of the patient after the OR? (CVICU versus NICU)

References

Demchuk, Andrew M., et al. "Comparing vessel imaging." *Stroke*, vol. 47, no. 1, 2016, pp. 273–281, <https://doi.org/10.1161/strokeaha.115.009171>.

Elkin K, Khan U, Hussain M, Ding Y. Developments in hybrid operating room, neurointensive care unit, and ward composition and organization for stroke management. *Brain Circ*. 2019 Apr-Jun;5(2):84-89. doi: 10.4103/bc.bc_11_19. Epub 2019 Jun 27. PMID: 31334361; PMCID: PMC6611190.

Généreux P, Head SJ, Van Mieghem NM, Kodali S, Kirtane AJ, Xu K, Smith C, Serruys PW, Kappetein AP, Leon MB. Clinical outcomes after transcatheter aortic valve replacement using valve academic research consortium definitions: a weighted meta-analysis of 3,519 patients from 16 studies. *J Am Coll Cardiol*. 2012 Jun 19;59(25):2317-26. doi: 10.1016/j.jacc.2012.02.022. Epub 2012 Apr 11. PMID: 22503058.

Guidelines for the early management of patients with acute ischemic stroke: 2019 update to the 2018 guidelines for the early management of acute ischemic stroke: A guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*, vol. 50, no. 12, 2019, <https://doi.org/10.1161/str.0000000000000215>.

Kaplan, Joel A. *Kaplan's Cardiac Anesthesia: In Cardiac and Noncardiac Surgery*. Elsevier, 2023.

Miller DC, Blackstone EH, Mack MJ, Svensson LG, Kodali SK, Kapadia S, Rajeswaran J, Anderson WN, Moses JW, Tuzcu EM, Webb JG, Leon MB, Smith CR; PARTNER Trial Investigators and Patients; PARTNER Stroke Substudy Writing Group and Executive Committee. Transcatheter (TAVR) versus surgical (AVR) aortic valve replacement: occurrence, hazard, risk factors, and consequences of neurologic events in the PARTNER trial. *J Thorac Cardiovasc Surg.* 2012 Apr;143(4):832-843.e13. doi: 10.1016/j.jtcvs.2012.01.055. PMID: 22424519.

Rodés-Cabau J, Dumont E, Boone RH, Larose E, Bagur R, Gurvitch R, Bédard F, Doyle D, De Larochelière R, Jayasuria C, Villeneuve J, Marrero A, Côté M, Pibarot P, Webb JG. Cerebral embolism following transcatheter aortic valve implantation: comparison of transfemoral and transapical approaches. *J Am Coll Cardiol.* 2011 Jan 4;57(1):18-28. doi: 10.1016/j.jacc.2010.07.036. PMID: 21185496.