

C-05 What Do I Do When the Patient Is in Severe Right Ventricular Failure During a "Routine" Case?! An Evidence-Based Case Review on the Management Options of Acute Right Ventricular Failure for the Non-Cardiac Anesthesiologist

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Objective

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

- Apply the current patient management recommendations in acute RV failure.

Case Stem Question

55 year old male with a past medical history of 25 pack years of cigarette smoking, obesity (BMI 36), OSA, Diabetes mellitus type 2, hypertension, is diagnosed with ascending colon adenocarcinoma and is scheduled for a robotic hemicolectomy. On chart review, the patient has normal lab value findings, PFTs demonstrating moderate obstructive changes that normalizes with nebulizer treatment, EKG demonstrating NSR with q waves in the inferior leads and a stress test due to shortness of breath 4 months ago with normal results. The case moves along when you notice persistent hypotension refractory to vasopressors, intravenous fluids, oliguria and an acute reduction in EtCO₂.

Guiding Questions for Discussion

- 1) What do you think is going on with the patient? What are your differential diagnosis?
- 2) What are your next steps in the management of this acutely ill patient?
- 3) Will you place invasive lines?
- 4) What do you expect to see on TTE/TEE?
- 5) Why do you think this patient is in RV failure?
- 6) What are management options acute RV failure?
- 7) The cardiac anesthesiologists notices a perfusion defect in the main PA. How do you manage acute PE?

References

- 1) McGuire CW, Sullivan L, O Dish FM et al. Management Strategies for Acute Pulmonary Embolism in the ICU. Chest. 2024;166(6):1532-1545.
- 2) Konstam MA, Kiernan MS, Bernstein D et al. Evaluation and Management of Right-sided Heart Failure: A Scientific Statement from the American Heart Association. Circulation. 2018;137(20):e578-e622.
- 3) Ahsan SA, Laird R, Dooley C et al. An Update on the Diagnosis and Management of Acute Right Heart Failure. Cardiol Rev. 2024;32(6):499-506.