

***Anesthesiology Rounds***  
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**Transesophageal echocardiography in the ICU and during noncardiac surgery: Part 1**  
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**Objectives:**

After studying this article, the reader should be able to:

- recognize that transesophageal echocardiography (TEE) has applications and indications during noncardiac surgery and in the ICU;
- appreciate the unique diagnostic potential of TEE during noncardiac surgery and in the ICU.

**Questions: (Only one response is correct)**

1. In diagnosing the causes of hemodynamic instability, which is true:

- a) Transesophageal echocardiography can generally determine the etiology within a few minutes.
- b) The pulmonary artery catheter has proven to be a reliable tool.
- c) Transesophageal echocardiography has the same constraints as the pulmonary artery catheter.
- d) Ventricular pressures always vary in proportion to volumes.

2. Concerning myocardial ischemia and left ventricular dysfunction:

- a) Regional wall motion abnormalities are rarely associated with myocardial ischemia.
- b) 7-lead ECG is more sensitive than TEE for detecting ischemia.
- c) The severity of cardiac abnormalities correlates with the severity of neurological damage in the brain-heart syndrome.
- d) Detection of cardiac abnormalities does not influence the treatment of subarachnoid hemorrhage.

3. Concerning transesophageal echocardiography (TEE):

- a) No certification is presently available in this area for anesthesiologists.
- b) A Category 3 indication is a case where the use of TEE is supported by extensive clinical evidence.
- c) When used with a Category 1 indication, TEE is more likely to lead to a therapeutic change.
- d) The use of TEE in orthopedic surgery is highly recommended.

4. What is the best sign of hypovolemia?

- a) Right atrium pressure reduced or below 10 mm Hg
- b) Systolic variation in arterial pressure under positive-pressure ventilation
- c) An image showing an empty left ventricle in systole (end-systolic obliteration)
- d) Pulmonary capillary wedge pressure stuck below 10 mm Hg.

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