

**Harvard Medical School Department of  
Continuing Education and the Cardiovascular  
Division of the Department of Medicine,  
Brigham and Women's Hospital**



***Cardiology Rounds***  
**February 2003**

**Minimally Invasive Cardiac Valve Surgery**

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**Objectives:** Advances in surgical practice often start as an innovative approach, which is then evaluated by critical assessment of experiences with the procedure rather than randomized, controlled trials. The adoption of minimally invasive cardiac valve surgery is an excellent example of a new technology that becomes rapidly incorporated into clinical practice based on positive experiences. In this issue of *Cardiology Rounds*, Dr. Lawrence Cohn, Chief of the Division of Cardiac Surgery at the Brigham and Women's Hospital, provides an update on the Brigham experience with close to 1,000 minimally invasive valve operations. The objective of his Rounds was to provide the rationale for this recent modification of valve surgery. Readers will gain a better understanding of both the pros and cons of the procedure and will be brought up-to-date on the evolving technology. Cardiologists will also gain a better understanding of the types of patients that are appropriate for this type of surgery.

**Test:**

1. The objectives of minimally invasive valve surgery are to:
  - A. Decrease pain and trauma
  - B. Reduce blood transfusion
  - C. Reduce hospital stay
  - D. Improve patient satisfaction
  - E. All of the above
2. Minimally invasive valve surgery should be considered for any patient who requires either aortic or mitral valve surgery, or both, as long as concurrent coronary artery bypass is not required.  
True       False
3. For aortic valve surgery, the type of valve replacement that can be used in minimally invasive surgery includes:
  - A. Bioprosthetic
  - B. Prosthetic valve
  - C. Homograft root replacement
  - D. Stentless porcine valves
  - E. All of the above

4. Transesophageal echocardiographic (TEE) monitoring is considered both very useful and critically important because it provides an assessment of the adequacy of air removal.

True  False

5. Minimally invasive valve surgery has been shown to decrease the incidence of post-operative atrial fibrillation.

True  False

6. Minimally invasive aortic valve replacement should only be considered in low-risk patients under age 65 years.

True  False

7. Although randomized data are not available in comparison to the standard larger incisions, long-term freedom from reoperation with minimally invasive surgery appears similar.

True  False

To receive AMA category 1 credit, you must correctly answer 60% of the test questions.

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