

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



Cardiology Rounds
October 2003

**Left Ventricular Remodeling and Synchronized Biventricular Pacing
in Advanced Heart Failure**

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Objectives:

Despite the advances in medical therapy, patients with heart failure remain at heightened risk for premature mortality as well as the morbidity associated with this progressive and symptomatic disorder. In this issue of *Cardiology Rounds*, Dr. St. John Sutton provides his overview of the importance of cardiac resynchronization therapy (CRT) as a novel treatment for a subset of patients with symptomatic heart failure and depressed ejection fraction. The objectives of this issue are to provide the reader with the background rationale for CRT with particular emphasis on the effects of CRT on ventricular remodeling and mitral regurgitation. The reader should develop a greater understanding of the appropriate patient populations for CRT as well as mechanistic insights into this novel therapy for heart failure.

TEST:

1. Cardiac resynchronization therapy (CRT) employs both atrial sensing and pacing as well both left and right ventricular pacing.
True False
2. CRT has been demonstrated to be of benefit in patients with heart failure irrespective of QRS duration.
True False
3. In patients with prolonged QRS durations, CRT has been shown to result in improvements in symptoms and quality-of-life, as well as 6-minute walking distance.
True False
4. Functional benefits of CRT were only demonstrated in patients that were not being concurrently treated with an ACE inhibitor or beta-blocker.
True False

5. Chronic treatment with CRT up to 6 months has been associated with a reversal of ventricular remodeling as manifest by smaller left ventricular end-diastolic and end-systolic volumes compared to baseline.

True False

6. Chronic treatment with CRT has been shown to reduce mitral regurgitation.

True False

7. Ventricular pacing using initiation sites in both the right and left ventricle augments global cardiac oxygen consumption.

True False

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

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This program was issued in October 2003. All tests must be returned by January 31, 2004.

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