A Fresh Look at the Pharmacoeconomics of Congestive Heart Failure: New Trial, New Implications

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**Learning Objectives**
- **Describe** how previous heart therapies focused on the traditional treatment method of drug versus placebo in patients with systematic heart failure
- **Discuss** how testing of heart-failure drugs now transpire not only in patients with mild, moderate and severe heart failure but also in patients who have damaged heart muscles or left ventricular dysfunction after myocardial infarction, even if they do not have symptoms.
- **Evaluate** the repertoire of treatments for heart failure including digoxin, angiotensin receptor blockers (ARBs), diuretics for symptomatic relief, spironolactone/eplerenone and statins.
- **Identify** why ACE inhibitors and beta blockers are considered the foundations of heart failure therapy

David L. Pearle, MD
David L. Pearle, MD is a professor of medicine in the Department of Medicine, Division of Cardiology at Georgetown University Hospital. He also serves as the director of the hospital’s Coronary Care Unit and the Georgetown Heart Failure Service. Dr. Pearle is certified by the American Board of Internal Medicine, subspecialties of interventional cardiology and cardiovascular diseases. He is a member of the American Heart Association, Intersociety Commission for Heart Disease Resources and a Fellow of the American College of Cardiology and the American Heart Association, Council on Clinical Cardiology.

Dr. Pearle serves as a consultant to or is a member of the speakers bureau for AstraZeneca, GlaxoSmithKline, and Pfizer.
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Post Test

1. Heart failure affects fully 10 percent of adults in their
   a. 70s
   b. 60s
   c. 80s
   d. 90s

2. The mortality of heart failure remains high and almost half of all heart-failure patients die within ___ year(s) of diagnosis.
   a. 2
   b. 10
   c. 5
   d. 1

3. Heart remodeling includes
   a. Change in the shape and size of the heart
   b. Change in function of the heart
   c. Leads to arrhythmias, pump failure and mortality
   d. All of the above

4. The knowledge of remodeling has an important implication on how heart studies are now conducted.
   a. True
   b. False

5. Although treatment has historically focused on blocking the effects of norepinephrine and angiotensin II, many studies are currently being conducted to determine the effectiveness of drugs that block
   a. vasoconstricting neurohormones
   b. vasodilating and growth-inhibiting neurohormones
   c. endothelins

6. ACE inhibitors may actually prevent vascular disease.
   a. True
   b. False

7. Given the research, the guidelines indicate that patients with post-myocardial infarction and left ventricular dysfunction, whether or not they have symptoms, should be on a
   a. ARB
   b. ACE Inhibitor
   c. Beta-blocker
   d. Diuretic

8. The focus on early risks of beta-blockers rather than on their significant long-term benefits may be largely to blame for their
   a. overutilization
   b. underutilization
   c. underprescribed

9. In mild/moderate heart failure patients, there is strong evidence for carvedilol, metoprolol and bisoprolol.
   a. True
   b. False
10. The gold standard for deciding what beta-blocker dose to use has to do with
   a. how fast the heart rate increases with exercise
   b. how fast the heart rate returns to normal after exercise
   c. how fast the patient becomes symptomatic after exercise
   d. none of the above

11. ARBs are not indicated for heart failure therapy in patients who are tolerant of ACE inhibitors.
   a. True
   b. False

12. Per the EPHESUS and RALES trials, aldosterone antagonist on top of ACE inhibitors and beta-blockers will reduce mortality by _______ to _______ percent.
   a. 20 to 40 percent
   b. 10 to 20 percent
   c. 15 to 30 percent
   d. none of the above

13. The study of stem cells reinjection into the heart muscle has shown the potential to radically improve the life expectancy of patients with even the most severe heart failure.
   a. True
   b. False

14. In resynchronization therapy, the progression of heart failure has halted and regressed.
   a. True
   b. False

15. The implantable cardioverter defibrillator (ICD) functions by means of endocardial lead systems and advanced rhythm discrimination.
   a. True
   b. False

16. When used in conjunction with medical therapy, the ICD decreased mortality by an additional ____ percent.
   a. 13 percent
   b. 15 percent
   c. 28 percent
   d. 23 percent
Evaluation

1. This article was well written and easily understandable
   - [ ] Strongly agree
   - [ ] Agree
   - [ ] Disagree
   - [ ] Strongly Disagree

2. This article achieved the learning objectives
   - [ ] Strongly Agree
   - [ ] Agree
   - [ ] Disagree
   - [ ] Strongly Disagree

3. This article will change my practice patterns by
   - [ ] Changing the method I use for treating heart failure
   - [ ] Changing my perception of the non drug therapies
   - Will encourage me to research benefits for each patient before treating heart failure
   - [ ] Will not change my behavior

4. This article was fair, balanced and did not present any commercial bias toward any organization or method.
   - [ ] Agree
   - [ ] Disagree

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