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Cardiology-2018 : Drugs used to treat of heart failure with reduced ejection fraction - Emmanuel Teryila Tyokumbur - University of Ibadan Ibadan, Oyo Nigeria

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Abstract:
Heart failure patients need multiple medications to treats a different symptom or contributing factor. Individuals diagnosed with heart failure typically take 5 or more different medications daily. Treatment may help live longer and reduce your chance of dying suddenly. This review describes the main drugs used to treat heart failure with reduced ejection fraction.

Keywords

Heart failure, Drugs, Treatment.

Introduction:

Heart failure (HF) is the common final pathway of most diseases that affect the heart, being one of the most important current clinical challenges in health. HF is characterized by intolerance to exercise, fluid retention and congestive phenomena, and in its later stages has high morbidity and mortality rates. These patients those with preserved systolic function, are referred to as heart failure with preserved ejection fraction (HFpEF). HF is associated with left ventricular dysfunction, and in symptomatic patients with left ventricular ejection fraction (LVEF) ≤ 40%, this condition is called heart failure with reduced ejection fraction (HFrEF) or systolic heart failure. In this brief review we will focus on drug treatment of HFrEF

Angiotensin-Converting Enzyme (ACE)

Inhibitors:

All patients with HFrEF should receive ACE inhibitors. It is seen an improved in symptoms between 4-12 weeks, as well as reducing the incidence of hospitalization, and increased patient survival. Blood pressure, renal function and serum potassium levels should be monitored, and also must be used with caution in patients with stenosis bilateral renal artery systolic blood pressure <80 mmHg, serum creatinine >3 mg/dl the serum potassium >5.0 mEq/L. They are contraindicated in patients with a history of angioedema and pregnancy .

Digitalis Glycoside:

Digoxin can reduce the rate of hospitalization and heart failure symptoms, increase exercise tolerance, but has no results on the survival rate. Doses are adjusted according to renal function, age and concomitant medications.

Vasodilators:

It could be beneficial in patients intolerant of an ACE inhibitor or an ARB or those that need additional control of blood pressure, despite the maximum standard dose therapy. It should not be used in conjunction with sildenafil because of the risk of hypotension.

Aldosterone Antagonists (AA):

It is recommended for patients with heart failure NYHA class II-IV with an LVEF ≤ 35%, and has been shown to reduce the risk of hospitalization and death. Renal function and serum creatinine concentrations should be monitored during treatment. AA should be avoided in patients with serum potassium >5.0 mEq/L and in those with reduced renal function (baseline serum creatinine >2.0 mg/dl for women or >2.5 mg/dl for men, or an estimated GFR.

Loop Diuretics:

Most patients with heart failure have fluid retention. Diuretics in such patients may alleviate pulmonary and peripheral symptoms, but its effect on survival is controversial. Diuretics (furosemide or bumetanide) acting on the loop of Henle, are more effective for the treatment of heart failure than thiazide diuretics (furosemide, bumetanide), acting on the distal tubule.

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Beta-Adrenergic Blockers (BB):
Its combination with an ACE inhibitor consistently leads to a 30-40% reduction in hospitalization and mortality in adults with heart failure class III-IV (NYHA) class. Should be started at low doses and its increase is gradual, usually at 2-week intervals until the maximum tolerated dose.

Angiotensin Receptor Blockers (ARBs):
Therapy with an ARB reduces the risk of death in patients with HFrEF; and can be used in patients who cannot tolerate mainly due to coughing an ACE inhibitor. Blood pressure, renal function, and serum potassium concentrations should be monitored.

Serelaxin is a recombinant human relaxin-2 vasoactive peptide that causes systemic and renal vasodilation. The clinical benefits may including improving systemic, cardiac, and renal hemodynamics, and protecting cells and organs from damage via neurohormonal, anti-remodeling, anti-fibrotic, anti-ischemic, anti-inflammatory, and pro-angiogenic effects.

Recent studies with the novel agent LCZ696, a dual-acting angiotensin receptor blocker and neprilysin inhibitor (ARNi), with the well stablished ACE inhibitor enalapril and found significant reduction in mortality among the chronic HFrEF. Drugs used to HFrEF can reduce the rate of hospitalization and heart failure symptoms, increase exercise tolerance and patient survival.

Biography:

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