

Ace inhibitors, left ventricular remodeling and hypertrophy, mental stress and its gender specific link to coronary diseases

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An ACE inhibitor (or angiotensin-converting-enzyme inhibitor) is a medication pharmaceutical drug used primarily for the treatment of high blood pressure (hypertension) and weak heart muscle. (Congestive heart failure).

This group of drugs causes dilation of blood vessels which results in lower blood pressure. In treating heart disease ACE inhibitors are usually used with other medications. A typical treatment plan will often include an ACE inhibitor, beta blocker, a long acting nitrate and a calcium channel blocker in combinations that are adjusted to the individual patient's needs.

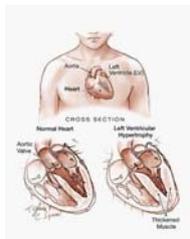
After a patient is started on an ACE inhibitor, an ECG (electrocardiogram) will be done to evaluate the effect the drug may have on the heart rhythm. Dosage may be changed after the patient's EKG is examined. Originally synthesized from compounds found in pit viper venom, ACE inhibitors inhibit angiotensin-converting enzyme (a component of the blood pressure-regulating renin-angiotensin system), thereby decreasing the tension of blood vessels and blood volume, thus lowering blood pressure.

Frequently prescribed ACE inhibitors include perindopril, captopril, enalapril, lisinopril, and ramipril.

ACE inhibitors are used primarily to treat hypertension, although they may also be prescribed for cardiac failure, diabetic nephropathy, chronic renal failure, renal involvement in systemic sclerosis (scleroderma renal crisis), left ventricular systolic dysfunction, and acute myocardial infarction.

Left Ventricular Hypertrophy

The major pumping chamber of the heart is the left ventricle. This heart chamber pumps oxygenated blood into the aorta, the large blood vessel that delivers blood to the body's tissues. If the left ventricle has to work too hard, its muscle hypertrophies (enlarges) and becomes thick. This is called left ventricular hypertrophy (LVH). Because of the increased thickness, blood supply to the muscle itself may become inadequate. This can lead to cardiac ischemia (not enough blood and oxygen at the tissue level), myocardial infarction (heart attack), or heart failure.



CAUSES OF LVH

- Hypertension (high blood pressure)
- Obesity
- Aortic valve stenosis (narrowing of the valve from the heart to the aorta)
- Obstructive cardiomyopathy (an inherited type of LVH that slows blood flow to the aorta because of overgrown heart muscle).

Biography

N Balakishore Reddy has completed his MBBS at the age of 25 years from Stavropol State Medical University. He is working as a junior doctor at Mathans Medical center in India. He worked as a doctor at Yashoda super speciality hospital, Hyderabad. As interest in cardiology, he has been researching on hypertension and Ace inhibitors and their effect and also gender related stress.

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