Heart attack reasons and cure

Fiji Sun · 18 Mar 2024 · 19

Heart attack, very commonly used words in our day-to-day life has a great impact on the physical, financial and mental health of our society. Heart attack is a sequelae of coronary artery disease.

Coronary arteries are the main source of nutrition and oxygen for our heart which works continuously throughout the day and night.

We have two coronary arteries - right and left which supplies the heart muscles with different branches.

Any factor which results in hardening and narrowing of these arteries result in heart attacks or Myocardial infarction.

What causes coronary artery disease?

Coronary artery disease occurs due to hardening of coronaries which is the result of deposition of atherosclerotic plaque.

This plaque is primarily made up of cholesterol. The accumulation of plaque depends on multiple factors. These are called risk factors for coronary artery disease.

These risk factors are categorised in modifiable and non-modifiable category.

Non modifiable factors are advance age, gender, race etc. Modifiable risk factors are smoking, Diabetes, Hypertension, obesity and stress etc.

We can control the risk factors as primary and secondary level prevention.

What are symptoms of coronary artery disease?

The symptoms are variable in coronary artery disease. Symptoms are chest pain (angina), often associated with exertion, radiating to hand, neck and jaw.

Some patients especially diabetics or patients with kidney disease may not have any symptoms (silent MI).

The patients with significant narrowing may present pain in the chest (Unstable angina).

Some patients may present with shortness of breath with or without chest pain.

How to diagnose coronary artery disease?

Heart attack can be diagnosed with cardiac enzymes, namely Trop I, Trop T, CPKMB.

ECG (EKG) is an important test in determining coronary artery disease and heart attack. Any changes in ECG suggest detail cardiac evaluation. When resting ECG is normal in high-risk category patient stress ECG or TMT is advised. TMT has 60 to 70% accuracy in determining heart disease. When patient is not able to perform TMT, stress Echo or Thallium scan is helpful in assessing coronary artery disease. The accuracy of these is 80 to 90 %. In this artificial stress is created with the help of medicines and nuclear dye is injected. An area of heart with normal blood at rest and reduced blood flow during exercise signifies coronary artery disease. Similarly in stress Echo area of reduced movement is identified to diagnose coronary artery disease.

Coronary angiography is the gold standard for diagnosis and management of coronary artery disease.

It not only helps in identifying site of blockage but also helps in planning of treatment.

CT Coronary angiogram or Cardiac CT is the new modality for diagnosing coronary artery disease.

It gives detail picture of coronary anatomy and blockages.

How to treat coronary artery disease?

The most important measure in treatment of coronary artery disease is lifestyle modification.

Avoid smoking, healthy food, good sleep, control weight, avoid stress and exercise are few important points to adapt.

Medicines has important role in controlling heart disease.

Coronary artery disease is a lifestyle related progressive disease.

Different medications help in controlling progression of disease.

Medicines includes anti diabetics, antihypertensive, statins (lowers cholesterol), antianginal, dilators, diuretics and blood thinners.

Definitive management for coronary artery disease is coronary revascularisation.

There are two widely accepted and scientifically proved methods.

These are percutaneous coronary angioplasty (PTCA) and coronary artery bypass grafting (CABG).

In current situation CABG is accepted as better method in various sets of disease.