

1. What is " Heart Attack " (Myocardial Infarction)"

When the already existing cholesterol block (atheroma or plaque) inside the arteries supplying blood to heart ruptures leading to accumulation of platelets and other coagulative cells in the blood to obstruct the flow towards heart muscle (myocardium) causes heart attack.

2. What are the symptoms of heart attack ?

Most of them experience severe chest pain, retrosternally with profuse sweating and pain radiating towards left arm, jaw, back or upper abdomen. This chest pain is unusual and severe usually never experienced before.

However about 20-25% of patient develop heart attack without chest pain. They may have unusual symptoms like, unusual sweating, giddiness, vomiting, breathlessness, extreme fatigue or sense of impending doom. Silent heart attacks common in diabetes and old age people > 70yrs. Most of the time, this is confused by common man as acidity ("GAS")

3. Can heart attack occur in younger age?

Yes, it can attack in younger age < 40yrs of age. It is a myth to think that it occurs in old age only. Youngest man presenting to me with heart attack is 21yrs.

4. Who are prone for heart attacks?

Those with coronary risk factors are more prone for heart attack. But it is true that those without these factors can also get heart attack.

5. What are the coronary risk factors ?

a. Non modifiable

- ✧ Genetic inheritance
- ✧ Sex : male

b. Modifiable

- ✧ Smoking
- ✧ Hypertension (increased blood pressure)
- ✧ Diabetes
- ✧ Lipid (cholesterol) abnormalities
- ✧ Obesity
- ✧ Physical activity (Sedentary)
- ✧ Mental stress
- ✧ Others: - Lipid Lp(a)
 - Inflammation
 - Homocysteine

coronary risk factors

6. What is the prevalence of Ischemic Heart Disease (IHD)?

India – about 7.6 – 12.6% of total population have IHD

U.S.A. - > one million citizens develop heart attack every year

7. Why sharp rise of IHD (Heart attack) in India?

Reasons quoted
are:

Economic progress

Better standard of living

Lifestyle change towards western culture

Change of food habits

Genetically more prone

Small vessel coronary artery disease

Highest incidence of diabetes

More people smoking

8. Why it is important to recognize “Heart attack”?

50% of those who die after heart attack will do so within 1st hr (golden hour). If they don't reach hospital, they may not survive.

Most of them die due to “arrhythmias” ie. heart beating at faster rate with or without less pumping of heart.

9. How treatment helps to survive after massive attack?

- ❖ Patient who reaches hospital within 6hrs after heart attack symptoms will receive an injection called streptokinase / Urokinase / Tenecteplase which is thrombolytic. It dissolves the blood clot accumulated over the ruptured atheroma plaque (cholesterol block).
- ❖ The maximum benefit of this injection is within 3hrs and as the time elapses the efficacy of the drug decreases. Hence it is very important to reach hospital when ICU facilities are there for starting the treatment immediately.
- ❖ At the same time, as the complications are high in initial hours after attack despite treatment, should be admitted in hospital where all facilities including coronary care units (CCU) are available.

10. How different heart attacks can be treated now with so much advance in technology?

If patient can reach hospital within 6hrs and preferable 3hrs after the onset of heart attack, patient can undergo immediate coronary angiogram followed by primary coronary angioplasty(PAMI) if the

facilities are available in the hospital .

11. Is PAMI better than thrombolysis?

Yes, PAMI is better than thrombolysis because the blocks as well as the blood clot are tackled simultaneously so that blood flow is restored immediately and heart muscle damage can be minimized.

In many patients, thrombolysis can't be given due to various contraindications. In them PAMI is the choice of treatment.

Only 65% of patients who receive thrombolysis within 6hrs of onset of symptom have restored blood flow; hence PAMI is ideal.

12. Why most of the patients don't seek medical attention early?

This is because of self diagnosing that these symptoms are due to acidity / 'gas' in the stomach / indigestion. A simple ECG will diagnose it in most patients.

Sometime initial ECG may be normal and subsequent ECG's may show heart attack.

13. How early treatment helps the patients?

Early admission in CCU's will help to diagnose and treatment heart attack and its complications.

Thrombolysis / PAMI helps in restoring blood flow immediately so that heart muscle (myocardium) does not get damaged and become scar tissue

14. Which type of hospitals is better?

Those hospitals (tertiary centres) where all facilities are available are better to handle the situations. These hospitals have fully equipped CCU's, 24hr open Cath lab and skilled personnel to operate.

15. What are ICU ambulance and its importance?

In U.S.A and Europe, any person can ring up 911 to ask for help. Within 10mins the patient is transferred to the hospital immediately. The transit time may be varying depending on nearby tertiary center. During this transit time, patient gets an ECG and skilled personal to diagnose myocardial infarction. They receive thrombolytics (Tenectaplaste) immediately (within 5mins) so that the damage to heart is almost



negligible and arrhythmia causing deaths also come down substantially. These ICU ambulances are well equipped to treat complications after heart attack.

16. Has ICU ambulance reduced mortality after myocardial infarction?

Yes, it has brought down the mortality very much. After initial thrombolysis patients will be taken up for rescue / facilitated angioplasty to restore blood flow. These measures help in reducing myocardial damage and preventing re-infarctions

17. What "FIRST AID" can be given to patients who have suspected heart attack?

- ✦ If possible to call home a general practitioner / Family physician
- ✦ To take ECG and identify the problem.
- ✦ If heart attack is proved, to give T. Aspirin (Disprin) 325mg 1 tablet immediately
- ✦ If available, 4 tablets of Clopidogrel is ideal to be given along with T. Isordil / Sorbitrate 5mg 1 tablet to be kept below tongue immediately.
- ✦ To call for ICU ambulance or shift to nearby hospital preferable where all facilities are available.
- ✦ If patient not breathing properly or feeble pulse, a thump version (i.e. hard hit on the left part of chest), cardiac massaging, mouth to mouth breathing till ICU ambulance and personnel reach the place.