HEART ATTACK, THE DAMAGE TO HEART MUSCLE

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ABSTRACT
Heart attack is a disease that occurs when there is an impulsive thorough blockage of an artery that supplies blood to an arterial segment of any individual heart. A heart is an organ which needs a good blood amount to keep it fit.

Key word: Heart attack, arteries, blockage of an artery, myocardial infarction, chest pain, coronary occlusion, coronary thrombosis.

INTRODUCTION
A heart attack is the disease that causes the death of a part of heart muscle triggered by a loss of blood quantity. The blood is frequently cut off when an artery providing the heart muscle is congested by a blood clot. A heart attack ensues when our heart muscle is starved of oxygen-rich blood that is required for smooth functioning of heart. This damage to our heart muscle and lethality to blood pumping system.

Every 34 seconds, somebody dies from heart and blood vessel sicknesses around the world and it is America’s No. 1 killer. Most of those demises are from coronary heart disease.

Causes a Heart Attack
The heart is a muscle and a body organ like any other part in the body. Arteries source it with oxygen-rich blood therefore it can indenture and thrust blood to the rest of the body. Once there isn't enough oxygen movement to a muscle, its role begins to suffer. Chunk the oxygen source wholly, and the muscle starts to perish.

Causes
- Heart muscle gets its blood supply from arteries that create in the aorta just as it plants the heart.

Fig. 1: Heart attack

Fig. 1: Heart attack and myocardial infarction

1. The coronary arteries route laterally the surface of the heart and supply oxygen-rich blood toward the heart muscle.
2. The right coronary artery provisions the right ventricle of the heart and the lesser (lower) portion of the left ventricle.
3. The left anterior descendent coronary artery provide the majority of the left ventricle, while the circumflex artery materials the backbone of the left ventricle.
4. The ventricles are the inferior chambers of the heart; the right ventricle drives blood to the lungs and left pumps it to the other part of the body.
5. With time, plaque can figure up along the course of an artery and narrow the channel finished which blood movements. Plaque is complete up of cholesterol buildup and finally may harden calcium deposits. If the artery develops too narrow, it cannot stock enough blood to the heart muscle when it becomes harassed. This pain is called angina. It is significant to distinguish that angina can manifest in many different ways and does not continuously need to be qualified as chest pain.
6. If the plaque disagreements, a small blood clot start to develop within the blood vessel, acting like a barrier and intensely obstructive the blood flow outside the clot. When that part of the heart loses its blood source totally, the muscle expires. This is called a heart attack, or an MI - a myocardial infarction (myo=muscle +cardial=heart; infarction=death due to lack of oxygen).
Symptoms of Heart attack

A cardiac arrest or heart attack occurs when our heart stops propelling blood around our body. Though a heart attack can outcome in a cardiac arrest, if somebody who has had a cardiac arrest will be short of breath normally. Most heart attacks are produced by coronary heart disease (CHD) is when our coronary arteries which means the arteries that source our heart muscle with oxygen-rich blood) develop narrowed by a slow build-up of fatty material within their walls. heart attack also so labelled as acute coronary disorder, myocardial infarction (MI) or coronary thrombosis. Other fewersources of a heart attack comprise spontaneous coronary artery dissection (SCAD) where one or more of the coronary arteries slit.

Tests done to classify a heart attack which are

1. Electrocardiogram (ECG).
2. Blood tests. Certain heart enzymes gradually leak out into our blood if your heart has been hurt by a heart attack. Emergency room medics will take samples of our blood to test for the occurrence of these enzymes.

Additional tests

1. Chest X-ray. An X-ray image of our chest lets our medic to squared the size of our heart and its blood vessels and to appearance for fluid in our lungs.
2. Echocardiogram. During this test, sound waves absorbed at our heart from a wandlike maneuver (transducer) detained on our chest recoil off our heart and are treated electronically to deliver video pictures of our heart.
3. Coronary catheterization (angiogram). A liquid dye is vaccinated into the arteries of our heart finished a long, thin tube (catheter) that's nourisheddone an artery, usually in our leg or groin, to the arteries in our heart. The dye makes the arteries noticeable on X-ray.
4. Exercise stress test. In the days or weeks after our heart attack, we may also experience a stress test. Stress tests degree how our heart and blood vessels reply to action.

Treatments during a heart attack:

Most of time a person who is suffering a heart attack will stop breathing. In this circumstance, cardio-pulmonary resuscitation, or CPR, should be initiated immediately. This procedure involves:

- manual chest compressions
- a defibrillator

Treatments following a heart attack

Most people will need numerous kinds of medicines or handlings after a heart attack. The aim of these events is to stop upcoming heart attacks happening. They may include:

- aspirin and other antiplatelets
- beta blockers
- ACE (angiotensin converting enzyme) inhibitors
- statins
- angioplasty
- CABG or coronary artery bypass graft

Advance Treatments of a heart attack

- A gene therapy that uses a patient’s own cells to treat heart failure.
- A medicine that blocks the transfer of good (HDL) cholesterol to bad (LDL).
- A genetically-engineered medicine that dissolves clots to treat stroke.

How to Reduce risk for a heart attack

Even if you are suffering from heart disease, there’s a lot you can do to recover your heart’s health. Don’t smoke, even avoid second-hand smoke. Always cope with high blood pressure. Eat a healthy and hygienic diet like low in saturated fat, trans fat, and sodium.
Get at least 150 minutes of moderate-intensity physical action a week, maintain a healthy weight. Control your diabeatics and blood sugar.25-26

CONCLUSION

Every 34 seconds, somebody dies from heart and blood vessel diseases around the world so heart attack single handly kill many people around the world. A cardiac arrest or heart attack happens when someone's heart stops driving blood around his body. However a heart attack can outcome in a cardiac arrest. If someone who has had a cardiac arrest will be lifeless and won't be able to breath normally. A heart attack occurs when your heart muscle is starved of oxygen-rich blood. This grounds damage to our heart muscle. Most of time a person who is misery a heart attack will stop breathing. In this circumstance for treatment cardio-pulmonary resuscitation, or CPR, should be initiated immediately. So physical exercise, control of blood sugar healthy hygenic food is necessary for control of heart failure.

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