

Matters of the Heart – Salam Ghanapriya

How many times have we watched in movies the elderly father or the mother dying of a heart attack? We had been brought up to believe, thanks to these movies, that heart attacks happen to old people because of a sudden bad news or an event. And that, it happens in equal measure to both the poor and the affluent. While these generalisations aren't entirely true, at least, we have an idea of how widely prevalent and dangerous heart attacks can be.

Also called the heart diseases, the cardiovascular diseases (CVDs) are a group of disorders of the heart and blood vessels. They include the coronary artery/heart diseases – disease of the blood vessels supplying the heart muscle, cerebrovascular disease – disease of the blood vessels supplying the brain, peripheral arterial disease – disease of the blood vessels supplying the arms and legs, and rheumatic heart disease – damage to the heart muscle and heart valves from rheumatic fever. Included in the list also are the congenital heart disease – malformations of the heart at birth, and deep vein thrombosis and pulmonary embolism which are clots in the leg veins, which can dislodge and move to the heart and lungs.

PREVALENCE OF HEART DISEASE

Cardiovascular diseases are the leading cause of death globally, with an estimated 17.3 million deaths in 2008. Of these deaths, an estimated 7.3 million were due to heart attacks and 6.2 million of stroke. It is estimated that by 2030, over 23 million people will die from CVDs annually. Cardiovascular ailments like the coronary heart disease (which causes heart attack) and cerebrovascular disease (which causes stroke) are generally considered "lifestyle diseases", suggesting these are problems of affluence. This perception is, however, not valid.

WHO IS AT RISK?

Anyone, including children, can develop heart disease. It occurs when a substance called plaque builds up in the arteries. When this happens, the arteries can narrow over time, reducing blood flow to the heart. Using tobacco, an unhealthy diet, physical inactivity, harmful use of alcohol all increase one's risk for having heart disease. Having high cholesterol, obesity, stress or hypertension, high blood pressure, or diabetes also can increase the risk for heart disease.

HEART ATTACK AND STROKE - SIGNS AND SYMPTOMS

The symptoms vary depending upon the type of the heart disease. Someone having a heart attack may experience several symptoms, including:

- Chest pain or discomfort that doesn't go away after a few minutes.
- Weakness, light-headedness, nausea (feeling sick in the stomach), or a cold sweat.
- Pain or discomfort in the jaw, neck, or back.
- Pain or discomfort in the arms or shoulder.
- Shortness of breath.

A stroke, on the other hand, occurs when a blood clot blocks the blood supply to part of the brain or when a blood vessel in or around the brain bursts. The most common symptoms of stroke are:

- Sudden numbness or weakness of the face, arm or legs.
- Sudden confusion or trouble speaking or understanding others.
- Sudden blurring of vision in one or both eyes.
- Sudden dizziness, trouble walking, or loss of balance or coordination.

- Sudden severe headache with no known cause.

HOW IS HEART DISEASE DIAGNOSED?

Based on one's medical and family history, risk factors, a physical examination, and the results from several tests and procedures, a doctor can diagnose a heart disease. No single test can diagnose a heart disease and a combination of the following tests may be recommended by the treating physician:

- **Electrocardiogram (ECG)** – An ECG is a simple, painless test that detects and records the heart's electrical activity. The test shows how fast the heart is beating and its rhythm (steady or irregular). An ECG also records the strength and timing of electrical signals as they pass through the heart.
- **Holter Monitoring** – A Holter monitor is a portable device that one wears to record a continuous ECG, usually for 24 to 76 hours. It is used to detect heart rhythm irregularities that aren't found during a regular ECG examination.
- **Stress Test (or Treadmill Test)** – During stress test, one exercises (usually by running on a treadmill) to make the heart work hard and beat fast while heart tests are done.
- **Echocardiography** – Echocardiography (echo) uses sound waves to create a moving picture of one's heart. The test provides information about the size and shape of the heart and how well the heart chambers and valves are working. It can also show areas of poor blood flow to the heart, areas of heart muscle that aren't contracting normally, and previous injury to the heart muscle caused by poor blood flow.
- **Blood Tests** – Blood tests check the levels of certain fats, cholesterol, triglycerides, sugar, and proteins in the blood. Blood tests also help detect anaemia, a risk factor for coronary heart disease. There are also cardiac markers which indicate heart muscle damage such as CKMB, LDH, Troponin T, Troponin I, etc.
- **Chest X-ray** – A chest x-ray creates pictures of the organs and structures inside one's chest, such as the heart, lungs, and blood vessels. It can reveal if the heart is enlarged, a sign of some forms of heart disease.
- **Coronary Angiography and Coronary Catheterisation** – This test uses dye and special x-rays to look inside the coronary arteries. The dye lets the doctor study the flow of blood through the heart and blood vessels.
- **Cardiac CT Scan** – Cardiac CT is useful in the diagnosis of suspected coronary heart disease and for evaluation of cardiac masses. Besides, CT coronary angiogram is used to assess the conditions of the blood vessels supplying the heart.
- **Cardiac MRI** – Here, images of the heart are created which help doctors determine the condition of the heart.

HEART DISEASE DOESN'T SPARE THE POOR

The general perception that heart diseases are mainly a health problem of the rich is not true. In fact, people with lower levels of income and education are now more prone to heart ailments. It has been observed that people with higher incomes can purchase healthier edible oils while the poor feed on recycled hydrogenated oils. Unlike the poor, the rich can buy varieties of healthy foods, vegetables and fruits. The poor are also seriously disadvantaged by gaps in knowledge, access to and affordability of healthcare, resulting in delayed or denied diagnosis. Besides creating awareness, a comprehensive health response to do away the health inequalities is also needed to arrest the sharply rising mortality rates of the heart diseases.

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