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CHD: A COMMON LIFESTYLE DISEASE

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Abstract: *Cardiovascular disease is usually assumed to include coronary heart disease (CHD) or ischaemic heart disease (IHD), cerebrovascular disease and peripheral arterial disease. A similar pathological process underlies each of three groups of conditions which respectively affect the heart, the brain and peripheral arteries. Coronary artery disease, stroke, and peripheral artery disease involve atherosclerosis. This may be caused by high blood pressure, smoking, diabetes, lack of exercise, obesity, high blood cholesterol, poor diet, and excessive alcohol consumption, among others. Prevention of atherosclerosis involves improving risk factors through: healthy eating, exercise, avoidance of tobacco smoke and limiting alcohol intake. Treating high blood pressure, blood lipids and diabetes is also beneficial. Treating people who have strep throat with antibiotics can decrease the risk of rheumatic heart disease.*

Keywords: *…….?*

Introduction: The term 'Atherosclerosis' is used to denote a condition in which lipid is deposited in the intima of blood vessels. Progression of the atherosclerotic process results in narrowing of the blood vessel and may lead to intravascular thrombosis. The term 'Ischaemic Heart Disease' (IHD) (coronary heart disease) implies cardiac damage as a result of inadequate coronary blood supply. In majority of cases, this is due to narrowing of coronary artery due to atherosclarosis. The atheromatous lesions contain free cholesterol, cholesterol ester, triglycerides and highly insoluble lipid material known as ceroid, deposits of calcium and iron, red blood cells and fibrous tissue. The lesions may ulcerate resulting in the formation of clot which occludes partially or completely lumen of the artery [1].

Cause: The important contributory causes of the development of atherosclerosis [1] are:

- High calorie intake
- High saturated fat and cholesterol intake
- Increased level of cholesterol in blood
- Sedentary life
- Stress and strain

Type: There are many cardiovascular diseases involving the blood vessels. They are known as vascular diseases [2].

- Coronary artery disease (also known as coronary heart disease and ischemic heart disease)
- Peripheral arterial disease–disease of blood vessels that supply blood to the arms and legs
- Cerebrovascular disease–disease of blood vessels that supply blood to the brain (includes stroke)
- Renal artery stenosis
- Aortic aneurysm

There are also many cardiovascular diseases that involve the heart.

- Cardiomyopathy–diseases of cardiac muscle
- Hypertensive heart disease – diseases of the heart secondary to high blood pressure or hypertension
- Heart failure- a clinical syndrome caused by the inability of the heart to supply sufficient blood to the tissues to meet their metabolic requirements
- Pulmonary heart disease–a failure at the right side of the heart with respiratory system involvement
- Cardiac dysrhythmias–abnormalities of heart rhythm
- Inflammatory heart disease

Cardiovascular Risk Factors and their Nutritional Determinants: Attempts to explain the pathological process underlying CHD and to identify individuals at risk suggest that there is no single cause of the disease. An understanding of the characteristics which put individuals at particular risk of developing CHD provides a useful background against which to examine in more detail the role of diet in the aetiology. The term 'risk factor' is used to describe features of lifestyle and behavior, as well as physical and biochemical attributes which predict an increased likelihood of developing CHD.[3]

The most important behavioural risk factors of heart disease and stroke are unhealthy diet, physical inactivity, tobacco use and harmful use of alcohol. The effects of behavioral risk factors may show up in individuals as raised blood pressure, raised blood glucose, raised blood lipids, and overweight and obesity. These "intermediate risks factors" can be measured in primary care facilities and indicate an increased risk of developing a heart attack, stroke, heart failure and other complications [4].

Clinical Aspect: The basic pathological lesion underlying CHD is the atheromatous plaque which bulges on the inside of one or more of the coronary arteries that supply blood to heart muscle (myocardium). In addition, a superimposed thrombus or clot may further occlude the artery [3].

Common Symptoms of Cardiovascular Diseases

- Pain or discomfort in the centre of the chest;
- Pain or discomfort in the arms, the left shoulder, elbows, jaw, or back.
- Numbness of the face, arm, or leg, especially on one side of the body;
- Confusion, difficulty speaking or understanding speech;
- Difficulty seeing with one or both eyes;
- Difficulty walking, dizziness, loss of balance or coordination;
- Severe headache with no known cause; and
- Fainting or unconsciousness [4].

Diagnosis: Diagnosis of coronary heart disease can be made using several different tests including:

ECG: A test called an ECG (electrocardiogram) will be carried out to determine whether a heart attack has occurred, what type of heart attack it was and which part of the heart is damaged. An ECG also determines how fast your heart is beating and whether it's beating in a regular rhythm or not [5].

Blood Test: A blood test can be used to find out the level of cholesterol in the blood. As cholesterol levels tend to vary, the test will usually be repeated again on different days and at different times to find an average level. LDL cholesterol is known as "bad cholesterol" and is linked to the development of atherosclerosis (the development of fatty plaques which cause narrowing of blood vessels and impaired blood flow) and subsequently increased risk of CVD [5].

Principles o Treatment: The principles of treatment [3] are as follows:

- Rest in bed and drugs as prescribed by the physician
- Ingestion of modified diet
- Miscellaneous precautionary factors

Rest ad Drugs: The subjects should take complete rest in bed and avoid mental and psychological worries. Drugs prescribed by the physician will help to [1]

- Relieve pain
- Reduce the blood cholesterol level
- Prevent thrombosis

Modification in the Diet: Diet is most important factor in the treatment of coronary heart disease. The diet will have to be modified with respect to calories, fat and cholesterol, carbohydrates, proteins, vitamins and minerals. The calorie intake should be just adequate to meet the requirements. Excessive calorie intake will lead to overweight and cause elevation of cholesterol and other lipids in plasma [1]. Regulation use of nuts (provided excessive energy intake is avoided) may also confer additional benefit. Replacing food rich in saturated and trans-saturated fatty acids with whole grains, lightly lightly processed cereals, legumes, fruits, and vegetables provides a means of increasing non-starch polysaccharides as well as potentially protective antioxidant nutrients and folate [3].

Miscellaneous Precautionary Factors: Studies carried out in many countries have shown that smokers are prone to develop coronary heart disease than non-smoker. Hence, smoking should be completely avoided. Since, alcohol increases calorie intake, consumption of alcoholic drinks should be reduced to the minimum [1].

Medication: Aspirin has been found to be of only modest benefit in those at low risk of heart disease as the risk of serious bleeding is almost equal to the benefit with respect to cardiovascular problems. In those at very low

risk it is not recommended. Statins are effective in preventing further cardiovascular disease in people with a history of cardiovascular disease. As the event rate is higher in men than in women, the decrease in events is more easily seen in men than women. In those without cardiovascular disease but risk factors statins appear to also be beneficial with a decrease in the risk of death and further heart disease [2].

Conclusion: Exercise is also beneficial for everyone in preventing heart disease. When considering human development, including the negative effects of heart disease, humans still have a lot to learn about the human body and the interaction of diet, the environment, and genetics.

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