ABSTRACT

Cardiovascular diseases are the diseases of the heart (cardiac muscle) or blood vessels (vasculature). It is mainly caused due to the development of atheroma - a fatty deposit within the inside lining of arteries. The lifestyle factors that can reduce the risk of forming atheroma are smoking; choosing healthy foods; a low salt intake; regular physical activity; keeping your weight and waist size down; drinking alcohol in moderation. The mostly commonly occurring cardiovascular diseases are Coronary artery diseases (narrowing of the arteries), Heart attack, Abnormal heart rhythms or arrhythmias, Heart Failure, Heart Valve disease, Congenital heart disease, Heart muscle disease, pericardial disease etc. ACE inhibitors, Aldosterone inhibitors, Angiotensin receptor blockers, beta blockers, calcium channel blockers are the commonly used drugs for the treatment of cardiovascular diseases.

INTRODUCTION

CARDIOVASCULAR SYSTEM

The Cardiovascular system, also called the Circulatory system or the vascular system. It is an organ system that permits blood to circulate and transport nutrients (such as amino acids and electrolytes), oxygen, carbon dioxide, hormones, and blood cells to and from the cells in the body. The study of the blood flow is called hemodynamics [1-8]. The study of the properties of the blood flow is called hemorheology [9-11]. The circulatory system divided into 2 systems: the cardiovascular system, which distributes blood, and the lymphatic system. The cardiovascular system consists of the heart, blood vessels, and the approximately 5 liters of blood that the blood vessels transport. The cardiovascular system is powered by the body’s hardest-working organ-the heart.

Etiology of Cardiovascular Diseases

There are many risk factors that contribute to the development of cardiovascular disease such as poor diet, lack of physical activity and smoking etc. The lifestyle factors that can reduce the risk of forming atheroma are smoking; choosing healthy foods; a low salt intake; regular physical activity; keeping your weight and waist size down; drinking alcohol in moderation [12-16]. It is mainly caused due to the development of atheroma - a fatty deposit within the inside lining of arteries and high blood pressure. Many of the risk factors for cardiovascular disease cause problems because they lead to atherosclerosis [17-20].

Arrhythmia

A condition in which the heart beats with an irregular or abnormal rhythm. During an arrhythmia, the heart can beat too fast, too slow, or with an irregular rhythm. A heartbeat that is too fast is called tachycardia [21].
A heartbeat that is too slow is called bradycardia. During an arrhythmia, the heart may not be able to pump enough blood to the body [25-27].

**Congenital Heart Disease**

Congenital heart disease is a general term for a range of birth defects that affect the normal workings of the heart. The term "congenital" means the condition is present at birth. Congenital heart disease is one of the most common types of birth defect [28-31]. Congenital heart defects change the normal flow of blood through the heart. There are many types of congenital heart defects. They range from simple defects with no symptoms to complex defects with severe, life-threatening symptoms.

**Atherosclerosis**

Atherosclerosis is defined as narrowing and thickening of arteries without causing symptoms. It can happen in any part of the body [32-40]. Around the heart, it is known as coronary artery disease, in the legs it is known as peripheral arterial disease. The narrowing and thickening of the arteries is due to the deposition of fatty material, cholesterol and other substances in the walls of blood vessels. The deposits are known as plaques. The rupture of a plaque can lead to stroke or a heart attack.

**Cardiomyopathy**

Chronic disease of the heart muscle is called as Cardiomyopathy. In cardiomyopathy, the heart muscle becomes enlarged, thick, or rigid [41-46]. In rare cases, the muscle tissue in the heart is replaced with scar tissue. As it worsens, the heart becomes weaker and it will be unable to pump blood through the body and maintain a normal electrical rhythm. This can lead to heart failure or arrhythmia. In turn, heart failure can cause fluid to build up in the lungs, ankles, feet, legs, or abdomen.

**Myocardial Infarction**

Myocardial infarction is also called heart attack. It is caused when the flow of blood to the heart becomes blocked, it may lead to tissue damage and can even be life-threatening. A number of different factors may increase risk for a heart attack, including high blood pressure, high cholesterol, and diabetes etc.

**Myocardial ischemia**

The reduced blood flow is usually the result of a partial or complete blockage of your heart's arteries (coronary arteries). Myocardial ischemia, also called cardiac ischemia, can damage your heart muscle, reducing its ability to pump efficiently.

### DRUGS USED IN THE PREVENTION OF CARDIOVASCULAR DISEASES

**Beta Blockers:** Atenolol, Carvedilol, Metoprolol, Nadolol, Propranolol, Timolol  
**Calcium Channel Blockers:** Amlodipine, Bepridil, Felodipine, Isradipine Nicardipine , Nifedipine , Nimodipine  
**ACE Inhibitors and ARBs:** Benazepril Captopril, Enalapril, Vasotec, Fosinopril, Lisinopril Prinivil, Moexipril  
**Fibrates:** Clofibrate, Fenofibrate, Gemfibrozil  
**Statins:** Atorvastatin, Fluvastatin, Lovastatin, Pravastatin, Rosuvastatin, Simvastatin

### CONCLUSION

Cardiovascular system is an organ system that permits blood to circulate and transport nutrients (such as amino acids and electrolytes), oxygen, carbon dioxide, hormones, and blood cells to and from the cells in the body. Cardiovascular diseases are caused due to the development of atheroma - a fatty deposit within the inside lining of arteries. It can be prevented by choosing healthy foods; a low salt intake; regular physical activity; keeping your weight and waist size down; drinking alcohol in moderation. If it is ignored it may lead to heart failure or arrhythmia.
REFERENCES


