Understanding Atherosclerosis: Causes, Symptoms, and Risk Factors

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DESCRIPTION

Atherosclerosis is a complex and subconscious cardiovascular disease that affects millions of people worldwide. This condition develops slowly over time, with minimal symptoms until it reaches an advanced stage. Understanding atherosclerosis is crucial, as it is a leading cause of heart attacks, strokes, and other cardiovascular complications. Atherosclerosis is a chronic vascular disease characterized by the gradual build-up of fatty deposits, cholesterol, and other substances on the inner walls of arteries. These deposits, known as plaques, can restrict blood flow, leading to various cardiovascular complications. This term effectively describes the gradual process by which arteries become narrowed and hardened due to the accumulation of plaque. Atherosclerosis often begins with damage to the endothelium, the innermost layer of blood vessels. This damage can result from various factors, including high blood pressure, smoking, diabetes, and inflammation. The injured endothelium becomes inflamed, attracting white blood cells and cholesterol particles. These white blood cells, along with cholesterol and other cellular particles, accumulate within the artery walls. The combination of cholesterol, white blood cells, and cellular debris forms a plaque that protrudes into the arterial lumen. These plaques can be either soft or hard, depending on their composition. The initial accumulation of lipid-filled cells is often referred to as fatty streaks. Fatty streaks are early signs of atherosclerosis and can develop in childhood or adolescence. As atherosclerosis progresses, the accumulation of plaque within the arteries narrows the passageways for blood flow. This can reduce the supply of oxygen and nutrients to vital organs and tissues. Atherosclerosis is a significant risk factor for various cardiovascular complications, including Coronary Artery Disease (CAD), Peripheral Artery Disease (PAD), heart attacks, strokes, and aneurysms. Understanding the risk factors associated with atherosclerosis is essential for preventing and managing the condition. Several factors can increase the likelihood of developing atherosclerosis. Elevated blood pressure can damage the inner lining of arteries, making them more susceptible to plaque formation. Tobacco smoke contains harmful chemicals that can damage blood vessels, promote inflammation, and accelerate the development of atherosclerosis. People with diabetes have a higher risk of atherosclerosis, as high blood sugar levels can damage blood vessels and increase inflammation. A family history of cardiovascular diseases can increase the risk of atherosclerosis, as genetics can play a role in predisposing individuals to the condition. Atherosclerosis risk increases with age, and men are generally at higher risk than premenopausal women. However, after menopause, women's risk levels approach those of men. A heart-healthy diet is essential. Emphasize fruits, vegetables, whole grains, lean proteins, and healthy fats while limiting saturated and Trans fats, salt, and added sugars. Manage hypertension through lifestyle changes, such as a low-sodium diet and regular exercise, and, if necessary, with medication prescribed by a healthcare provider. Keep cholesterol levels within a healthy range through diet, exercise, and, if needed, medication. If you have diabetes, manage your blood sugar levels through diet, exercise, and medications as recommended by your healthcare provider.

CONCLUSION

Atherosclerosis is a common and potentially life-threatening condition that can silently progress for years before manifesting as a dangerous event like a heart attack or stroke. Understanding the risk factors, progression, and prevention strategies for atherosclerosis is essential for maintaining cardiovascular health. By adopting a heart-healthy lifestyle and working closely with healthcare providers to manage risk factors, individuals can reduce their chances of falling subjected to this silent killer and enjoy a longer and healthier life.

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Citation: Gao C (2023) Understanding Atherosclerosis: Causes, Symptoms, and Risk Factors. J Appl Pharm. 15:383.