

Influence of Sculpting Cardiovascular Wellness in Atherosclerosis

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DESCRIPTION

Atherosclerosis is a chronic inflammatory condition characterized by the buildup of fatty deposits (plaques) on the inner walls of arteries. Over time, these plaques can narrow and stiffen the arteries, reducing blood flow. Atherosclerosis can affect arteries throughout the body, including those supplying the heart, brain, and extremities. When it affects the coronary arteries, it can lead to Coronary Artery Disease (CAD) or heart disease.

Lupus, or Systemic Lupus Erythematosus (SLE), is a complex autoimmune disease. Autoimmune diseases occur when the immune system mistakenly attacks healthy tissues in the body, leading to inflammation and damage. In lupus, the immune system can target various organs and tissues, causing a wide range of symptoms and complications. It can affect the skin, joints, kidneys, heart, lungs, and other organs.

While atherosclerosis and lupus are distinct conditions, they can be related in several ways, primarily through their shared involvement with the immune system and inflammation. Chronic Inflammation is common in both atherosclerosis and lupus are associated with chronic inflammation. In atherosclerosis, inflammation plays a central role in the formation and progression of arterial plaques. In lupus, chronic inflammation is a character of the disease and can affect various organs and tissues. Immune System Dysregulation in both conditions, there is a dysregulation of the immune system. In atherosclerosis, immune cells, such as macrophages, become activated within arterial plaques. In lupus, the immune system targets healthy tissues and organs. This immune dysregulation is a common feature linking the two conditions. Endothelial Dysfunction is inflammation and immune system activation in lupus can lead to endothelial dysfunction. The endothelium is the inner lining of blood vessels, and dysfunction can contribute to the development of atherosclerosis by promoting plaque formation. Common Risk Factors are some risk factors for atherosclerosis, such as hypertension, dyslipidemia (abnormal lipid levels), and obesity, are also common in lupus patients. These shared risk factors can increase the likelihood of developing atherosclerosis in individuals with lupus.

Atherosclerosis can affect individuals with lupus similarly to the general population. However, lupus patients may be at an increased risk due to their underlying immune dysregulation and chronic inflammation. Symptoms of atherosclerosis in individuals with lupus may include chest Pain individuals with both atherosclerosis and lupus may experience chest pain or angina if coronary arteries are affected.

Atherosclerosis can lead to reduced blood flow to various organs and tissues, potentially causing symptoms related to the affected area. For example, reduced blood flow to the brain may result in cognitive changes or strokes.

Peripheral Artery Disease (PAD) is commonly noticed in lupus patients. Lupus patients with atherosclerosis may develop peripheral artery disease, which can cause pain, numbness, or weakness in the extremities. Coronary Artery Disease (CAD) is also observed. Lupus patients with atherosclerosis may be at an increased risk of CAD, which can lead to heart attacks. The symptoms of CAD in lupus patients may not always be typical, making diagnosis challenging.

Renal Complications are also commonly observed symptom. Atherosclerosis can affect the renal arteries, potentially leading to kidney dysfunction or hypertension, which are common concerns in lupus patients.

Diagnosing atherosclerosis in individuals with lupus involves a combination of clinical evaluation, risk assessment, and diagnostic tests.

Clinical Assessment by healthcare providers will assess the patient's medical history, symptoms, and risk factors for atherosclerosis, including those associated with lupus. Cardiovascular Risk Assessment, Lupus patients are often evaluated for their cardiovascular risk, considering factors such as age, gender, smoking history, blood pressure, cholesterol levels, and diabetes.

Imaging various imaging tests may be used to visualize the arteries and assess the extent of atherosclerosis. Common imaging modalities include ultrasound, Computed Tomography (CT) angiography, and Magnetic Resonance Angiography (MRA).

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Blood tests, including lipid profiles and markers of inflammation (such as C-reactive protein), may be performed to evaluate cardiovascular risk and inflammation levels. Functional tests, like stress tests or coronary angiography, may be used to assess the blood flow to the heart and detect coronary artery disease.

Managing atherosclerosis in individuals with lupus requires a multifaceted approach that considers both conditions' unique characteristics and the overall well-being of the patient. Here are some common strategies. Lifestyle changes such as maintaining a healthy diet, regular exercise, smoking cessation, and weight management are essential to reduce the risk and progression of atherosclerosis. These modifications are particularly important for lupus patients due to their increased cardiovascular risk. Medications may be prescribed to manage atherosclerosis and its associated risk factors. Common medications include statins to lower cholesterol, antihypertensive drugs to control blood pressure,

and antiplatelet agents (such as aspirin) to reduce the risk of blood clots. Immunosuppressive Therapy, in some cases, lupus patients may benefit from immunosuppressive therapy to control the underlying autoimmune inflammation, which can contribute to atherosclerosis. Blood Thinners depending on the individual's medical history and risk factors, blood-thinning medications may be recommended to reduce the risk of blood clots and complications like strokes or heart attacks. Regular Monitoring ongoing monitoring of cardiovascular risk factors, lupus activity, and atherosclerosis progression is crucial. This involves regular follow-up appointments with rheumatologists, cardiologists, and other specialists. Individualized Treatment Plans for atherosclerosis in lupus patients should be tailored to the individual's specific needs and risk factors. Collaborative care involving multiple healthcare providers is often necessary.