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Commentary

Major Symptoms and Risk Factors of Cardiovascular Diseases

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DESCRIPTION

Cardiovascular disease is the leading cause of death in developed countries. This chapter provides an overview of the behavioral and psychosocial impacts of cardiovascular disease, with a focus on Coronary Artery Disease (CAD) and hypertension. Cardiovascular disease refers to diseases that affect the heart and blood vessels. From peripheral arterial disease and high blood pressure to heart attacks and strokes, it covers a wide range of conditions. It is the leading cause of death for Americans and the leading cause of hospitalization in the Veterans Affairs healthcare system. It is also a leading cause of disability. Another reason cardiovascular disease is of particular importance to veterans is that it is commonly associated with many other conditions that affect them. These include diabetes, spinal cord injury, and post-traumatic stress disorder.

Cardiovascular disease has many forms, but one of the most common forms is a narrowing or blockage of the blood vessels that supply the heart. This is called Coronary Heart Disease (CHD) and is the leading cause of heart attacks.

Low-Density Lipoprotein (LDL) is the major cholesterol-carrying lipoprotein in plasma and is responsible for many forms of coronary artery disease. Four single-gene disorders elevate plasma LDL levels by affecting the activity of liver LDL receptors that normally remove LDL from the plasma. Familial hypercholesterolemia was the first monogenic disorder shown to cause elevated plasma cholesterol levels. A major defect in familial hypercholesterolemia is the lack of the LDL receptor, and more than 600 mutations in the LDLR gene have been identified in patients with this condition. One million people are homozygous at a single locus. Heterozygotes produce half the normal amount of LDL receptors, resulting in a 2 or 3 fold increase in plasma LDL levels, whereas homozygotes have LDL levels that are 6 to 10 fold higher than normal. Homozygotes have severe coronary atherosclerosis and usually die in childhood from myocardial infarction.

Diagnosis of coronary heart disease depends on our symptoms and what condition the doctor thinks we may have.

Tests may be based on our family history and can include:

- Blood tests
- Chest x-ray
- Electrocardiogram (ECG)
- Echocardiogram
- CT scan
- MRI scans

Mortality in acromegaly patients is primarily due to cardiovascular disease and diabetes, especially in undiagnosed and untreated patients. Her/his 20-year survival rate for those with acromegaly and diabetes is only 20%. Several studies suggest that increased incidences of gastrointestinal tumors, colonic polyps, colon cancer, and lung disease are contributing factors to this increased mortality. However, cardiovascular and cerebrovascular events contribute to mortality more frequently. Recently published clinical practice guidelines by the endocrine society recommend that patients with acromegaly be evaluated for relevant comorbidities.

The cardiovascular and hemodynamic effects of acromegaly vary greatly with patient age, disease severity and duration. A specific form of acral mega cardio-myopathy develops in patients with persistently increased secretion of hGH and IGF-1. As up to two-thirds of patients with acromegaly meet echocardiographic criteria for Left Ventricular Hypertrophy (LVH), it can occur in the absence of cardiovascular risk factors, manifesting as biventricular concentric hypertrophy.

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