Heart Disease

MAY 15, 2024

About Cardiomyopathy

KEY POINTS

- Cardiomyopathy represents a collection of diverse conditions of the heart muscle.
- Cardiomyopathy can be acquired—developed because of another disease, condition, or factor—or inherited.

What it is

Cardiomyopathy represents a collection of diverse conditions of the heart muscle. These diseases have many causes, symptoms, and treatments and can affect people of all ages and races.

When cardiomyopathy occurs, the normal muscle in the heart can thicken, stiffen, thin out, or fill with substances the body produces that do not belong in the heart muscle. As a result, the heart muscle's ability to pump blood is reduced. This, in turn, can lead to irregular heartbeats, the backup of blood into the lungs or rest of the body, and heart failure.

Cardiomyopathy can be acquired—developed because of another disease, condition, or factor—or inherited. The cause isn't always known.

The main types of cardiomyopathy include the following: [1] [2] [3] [4]

Dilated: meaning that one of the pumping chambers (ventricles) of the heart is enlarged. This is more common in males and is the most common form of cardiomyopathy in children. It can occur at any age and may or may not be inherited.

Hypertrophic: where the heart muscle is thickened. This often presents in childhood or early adulthood and can cause sudden death in adolescents and young adult athletes. [1] It is often an inherited condition, and a person may not have any symptoms. If there is a family history of this, other family members can be tested and adjust their activities to reduce the risk of sudden death.

Arrhythmogenic: where the disease causes irregular heartbeats or rhythms. This is often inherited and more common in males.

Restrictive: where heart muscle is stiff or scarred, or both. It can occur with amyloidosis (a rare disease that occurs when a protein called amyloid builds up in organs), or hemochromatosis (a disorder in which extra iron builds up in the body to harmful levels), and other conditions. This is the least common type.

Some people who have cardiomyopathy never have symptoms, while others may show signs as the disease progresses.

How common is cardiomyopathy?

Cardiomyopathy often goes undiagnosed,[5] so the numbers can vary. As many as 1 of 500 adults may have this condition.[6] [7] Males and females of all ages and races can have cardiomyopathy. Dilated cardiomyopathy is more common in Black people than in White people, and in males than in females.[5]

Hypertrophic cardiomyopathy is thought to be the most common inherited or genetic heart disease. While this type of cardiomyopathy occurs at many ages, in children and young adults with this condition there may be no symptoms. Yet they are at high risk of sudden cardiac death.

Types

Pediatric cardiomyopathy

Cardiomyopathy can occur in children regardless of age, race, and gender. Pediatric cardiomyopathy can be inherited or acquired through a viral infection, and sometimes the cause is unknown. It is a frequent cause of sudden cardiac arrest in the young, according to the National Heart, Lung, and Blood Institute. Treatment may include medications, changes to physical activity, or surgery.

In many cases, early detection and intervention can help to improve outcomes for children.

Peripartum cardiomyopathy

Peripartum cardiomyopathy (PPCM) is a rare form of heart failure that can occur near the end of pregnancy or up to a year after giving birth. The heart muscle becomes weak, causing a buildup of fluid in the lungs.

Symptoms include shortness of breath, fatigue, and swollen ankles or legs. Because these symptoms can also occur in a normal pregnancy, recognition and treatment for this condition can be delayed.

Women who are pregnant or who have recently delivered a baby should seek medical care immediately if they are experiencing any urgent maternal warning signs. These symptoms could indicate a life-threatening situation.

Treatment may include close monitoring by the woman's health care team and prescription medication.

Many medicines may be safe during pregnancy and breastfeeding, including diuretics, beta-blockers, or blood thinners.[8]

The risk of PPCM is higher for Black women and for women who are older than 30, who are pregnant with more than one fetus, or who have a history of preeclampsia or chronic high blood pressure.[9]

Symptoms

Some people who have cardiomyopathy never have symptoms, while others may show signs as the disease progresses. These might include the following:

- Shortness of breath or trouble breathing.
- Fatigue.
- Swelling in the ankles and legs.
- Irregular heart beat or palpitations.
- Syncope, the medical term for fainting or briefly passing out.

Causes

Although the cause of cardiomyopathy is sometimes unknown, certain diseases or conditions can lead to cardiomyopathy. These include the following: [1] [2] [3] [4]

- A family history of cardiomyopathy, heart failure, or sudden cardiac arrest.
- Connective tissue disease and other types of autoimmune disease.
- Coronary heart disease or a heart attack.
- Diseases that can damage the heart, such as hemochromatosis, sarcoidosis or amyloidosis.
- Endocrine diseases, including thyroid conditions and diabetes.
- Infections in the heart muscle.
- Long-term alcoholism or cocaine abuse.
- Muscle conditions such as muscular dystrophy.
- Pregnancy.

Treatment and recovery

The goal of treatment is to slow down the disease, control symptoms, and prevent sudden death. If you are diagnosed with cardiomyopathy, your doctor may tell you to change your diet and physical activity, reduce stress, avoid alcohol and other drugs, and take medicines. Your doctor may also treat you for the conditions that led to cardiomyopathy, if they exist, or recommend surgery. Treatment also depends on which type of cardiomyopathy you have.

Genetic or inherited types of cardiomyopathy cannot be prevented. Adopting or following a healthier lifestyle can help control symptoms and complications. If you have an underlying disease or condition that can cause cardiomyopathy, early treatment of that condition can help prevent the disease from developing.

Resources

- Children's Cardiomyopathy Foundation
- Public Health Genomics

SOURCES

CONTENT SOURCE:

National Center for Chronic Disease Prevention and Health Promotion; About the Division for Heart Disease and Stroke Prevention

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