

Cardiomyopathy
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CARDIOMYOPATHY

- Heart loses its ability to pump blood and often heart rhythm is disturbed
- All types of cardiomyopathy (CMP) lead to cardiomegaly (enlarged heart) and heart failure

Cardiomyopathy

- Affects 50,000 Americans
- Is leading reason for heart transplantation
- Treatment is palliative, not curative
- 50% of patients die within 5 years

CLASSIFICATION

- Ischemic cardiomyopathy
Heart muscle damage results from coronary artery disease
- Nonischemic cardiomyopathy
Includes several types

**NONISCHEMIC
CARDIOMYOPATHY**

- According to abnormalities in structure and function:
- Dilated or “Congestive” (DCM)
- Hypertrophic = (HCM) or (IHSS)
- Restrictive = Restrictive CMP

**DILATED CARDIOMYOPATHY
(DCM)**

- Most prevalent = 87% of cases
- Larger capacity for ventricular volume but decrease in contractility
- Muscle fibers have stretched (dilated) and heart chambers enlarges

**ETIOLOGY OF DILATED
CARDIOMYOPATHY**

- Toxins such as ethanol and chemotherapy
- Damage from inflammatory processes caused by viruses
- Longstanding hypertension
- Valve disorders

**HYPERTROPHIC
CARDIOMYOPATHY(HCM)**

- Second most common form
- Rare disease
- Occurs in no more than 0.2% of the U.S. population
- 1 in 500 persons

**HYPERTROPHIC
CARDIOMYOPATHY**

- Growth and arrangement of muscle fibers are abnormal
- Leads to thickened heart walls especially in left ventricle and septum
- Thickening reduces size of the left ventricle pumping chambers and obstructs blood flow into aorta

**HYPERTROPHIC
CARDIOMYOPATHY**

- Thickening prevents heart from properly relaxing between beats to fill with blood
- Combination of thickened left ventricle and anterior movement of the mitral valve causes obstruction in the outflow tract of the left ventricle

RESTRICTIVE CARDIOMYOPATHY

- Restrictive cardiomyopathy (RCMP)
- Least common form

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RESTRICTIVE CARDIOMYOPATHY

- Ventricular walls are infiltrated by abnormal tissue (endomyocardial fibrosis)
- Causes ventricular walls to stiffen and lose flexibility
- Heart cannot adequately fill
- Eventually heart loses its pumping ability
- Least prevalent form

**DILATED CARDIOMYOPATHY:
SIGNS AND SYMPTOMS**

- Decreased cardiac output
- Fatigue and weakness
- Left ventricular heart failure (SOB, dyspnea, orthopnea)
- Dysrhythmias or heart block
- S3 and S4 gallops
- Systemic or pulmonary emboli

**HYPERTROPHIC
CARDIOMYOPATHY SIGNS AND
SYMPTOMS**

- Due to obstruction in the outflow tract
- Dyspnea
- Angina
- Syncope
- S4
- Systolic murmur at left sternal border
- Ventricular dysrhythmias

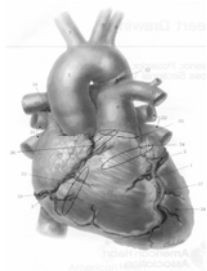
**RESTRICTIVE CARDIOMYOPATHY:
SIGNS AND SYMPTOMS**

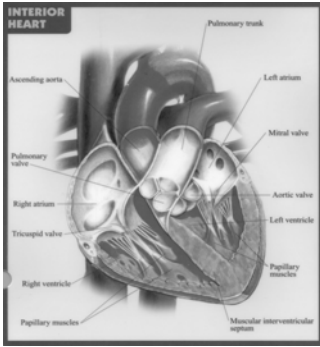
- Dyspnea
- Fatigue
- S3 and S4
- Heart block
- Emboli

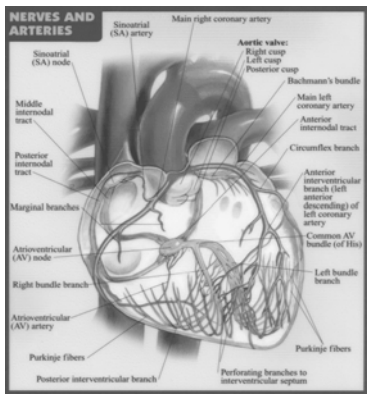
DIAGNOSTIC TESTING

- Chest x-ray = Cardiomegaly
- Pleural effusion especially on right
- Transthoracic Doppler
Echocardiography
- Cardiac catheterization
- Endocardial biopsy

Anterior View







Posterior View

