

Cardiomyopathy

Heart Muscle Disease

Cardiomyopathy from other heart disease is called secondary cardiomyopathy.

(Hypertension, valve disease)

① Primary Cardiomyopathy

① Hypertrophic cardiomyopathy

→ Myocardium gets thick and hypertrophy and hypercontractile due to the

↑ Sarcomere in parallel

→ usually in the left ventricle, asymmetrical, and interventricular septum.

↓
Takes more room &

less stretchable (compliant).

↓
Less Filling (Diastole)

↓
Less output (Stroke Volume)

↓
Diastolic Heart Failure

→ Obstructed left ventricular outflow causes blood through small opening

↓
Creates Decrescendo murmur (AG)

↓
Squats on Handgrip

↓
↑ Vascular resistance

↓
↑ Afterload (Squats)

↓
stands on Valava manner

↓
↑ Venous return

↓
↓ Preload

↓
↑ Stroke volume

→ Bilid pulse → Two pulses
 ↳ Due to mitral valve causing obstruction
 mid systolic
 → S4 sound heard
 → Hypertrophy → ↑ oxygen needed
 Tachemia → Death in young people.

Cause

① Autosomal dominant

↳ Single gene mutation
 ↳ which code for sarcomere

② Autosomal recessive

→ Friedreich's ataxia → Neurodegenerative disease

Treatment → β Blocker, Calcium channel Blocker

2) Dilated Cardiomyopathy

→ Myocardium gets dilated all the chambers, sarcomere is added in series which causes thinning

↓
Weak contractions

↓
less Blood Pumped out

Right Ventricle

Left Ventricle

Biventricular congestive heart failure

→ Dilatation cause Regurgitation

↳ Mitral → Pansystolic murmur.
S3 murmur heard
→ Tricuspid valve regurgitation.

→ Arrhythmia → Due to Conduction.

Cause → Idiopathic.

↳ X linked → Duchenne muscular dystrophy.
recessive Becker's.

↳ Infection → Coxsackievirus, Chagas Disease

↳ Deficiency → vitamin B₁ → wet Beri Beri

→ Alcohol, Drug abuse.

→ Pericardium

3) Restrictive Cardiomyopathy

↳ Myocardium same size but less
Compliant

↓
Card stretch

↓
less Filling

↓
less Pumping

↓
Diastolic Heart Failure.

Causes:

① Amyloidosis → Thyroid.

② Sarcoidosis → Cysticercosis

③ Koffler's Syndrome → Eosinophils.

④ Hemochromatosis → Iron.

⑤ Radiation Fibrosis.

4) Obliterative Cardiomyopathy

→ Form of Restrictive Cardiomyopathy associated with eosinophilic granulomatosis with polyangiitis (Churg Strauss Syndrome).

5) Takotsubo Cardiomyopathy

→ Acute Ventricular dysfunction characterized by left ventricular apex dilatation.

6) Arrhythmogenic Ventricular Cardiomyopathy

→ Inherited autosomal dominant of gene plakophilin.

→ Right Ventricle affected with the patches of fibrous and fatty deposition.