

CARDIOMYOPATHY

3 types - dilated, hypertrophic & restrictive.

Oscillator ↓ left ventricular systolic pump for impulse

leading to progressive cardiac enlargement

- histologically extensive areas of interstitial & perivascular fibrosis in.
- dilated myocardial damage by toxic, metabolic or infectious agents.
- may be late sequel of viral myocarditis
- reversible form of dil. cardiomyopathy in alcohol abuse, pregnancy, thyroid disease, cocaine use

cl: - exertional dyspnoea

- fatigue, orthopnoea

o - PND

- peripheral oedema

- palpitations

- maybe vague chest pain

- systemic embolism, stroke & syncope may occur

- on physical exam

- JVP raised
- 3 & 4th heart sound
- mitral/bicuspid regurgitation

- lab investigation

- ventricle enlarged on X-ray
- evidence of pulm. venous HTN / ducts oedema
- ECG - sinus tachycardia, atrial fibrillation, ventricular arrhythmia, ST-T wave abnormality.

- ✓ - echo shows ventricle dilation
- cardiac catheterization & coronary angiography exclude IHD
[Angiography shows diffusely hypokinetic ventricle (mostly left) & mitral regurgitation & normal coronary arteries]

T/T -

- death due to congestive heart failure.
- since systemic embolization may happen: - treat with chronic anticoagulation.
- salt restriction.
- ACE inhibitors.
- diuretics

- if chances of malignant arrhythmias
have cerebral defibrillator implanted.
- advanced disease - cardiac transplantation
(if medical tilt not working)

Hypertrophic Cardiomyopathy

- LV hypertrophy (non-dilated)
- 2 features: (a) LV hypertrophy & hypertrophy of IV septum resulting in asymmetrical septal hypertrophy & (b) dynamic LV outflow tract pressure gradient, related to narrowing of subaortic area as a result of mitral valve leaflet apposition of anterior mitral valve leaflet against hypertrophied septum
- there is red stiffness of hypertrophied muscle
↓
elevated diastolic filling pressures
- the pressure gradient is dynamic & may change between examination & even from beat to beat.

- "obstructive" results from further narrowing of an already small left ventricular outflow tract (by) much of pressure in 2) of the mitral valve against the hypertrophied septum.

- 3. medications are injected in pressure & intensification of dynamic pressure gradient

- a) ↑ LV contractility
- b) ↓ ventricular volume (preload)
- c) ↓ SV, ↓ CO, ↑ impedance & pressure (afterload)

- ~~Obstructive~~ the ~~obstruction~~

- interventions that ↑ myocardial contractility eg. vasodilators, glycosides & diuretics that reduce ventricular volume eg. volume removal, fluid restriction, tachycardia control, ↑ in gradient & LV infarct

- elevation of arterial pressure by isometric, sustained handgrip, augmentation of venous return by passive leg raising & expiration of blood volume all ↑ ventricular volume & ~~constrict~~ constrict the pressure & myocardium.

CHF - dyspnoea (d/lb red stiffness)
LV wall & impairment of
ventricular filling & leads
to elevated LV diastolic
& left atrial pressures

- angina
- fatigue
- syncope
- systolic murmurs

left heart failure : ECG shows LV hypertrophy
& blood & urine sugaruria
or myo infarct

- dyspnoea (orthopnoea, paroxysmal nocturnal dyspnoea or AF)

- echo shows 'ground glass'
opacities of septum d/lb
abnormal wall thickness &
myocardial infarct

d/lb - sympathetic spillover & increased activity
avoided.

- use diuretics & calcium
- β blockers for angina
- in PDA & risk of ventricular tachy arrhythmias
improvement with digoxin

- ^{infrapericardial} myotomy / myotomy of hypopericardial septum

Restrictive cardiomyopathy:-

- abnormal diastolic fn
- ventricular walls extremely rigid & impede ventr. filling
- myocardium's hypertrophy or fibrosis - dil. variety of causes responsible
- inability of ventricle to fall limits CO & raises filling pressure
- \therefore ex. intolerance & ~~ex.~~ dyspnoea
- \therefore bc of persistently elevated venous pressure \rightarrow dependent oedema, ascites, \uparrow JVP

[pericardial calcification on x-ray, E waves suggest constrictive pericarditis, is absent]

- echo reveals symmetrically thickened left ventricle walls, normal or slightly reduced ventricular volumes & systolic fn
- chronic anticoagulant's recommended to reduce risk of embolism from heart.

P.T.

- low levels of on prescribed

- ^{start} strengthening exercises at low level in gym.

sitting

standing

ambuler