

CONGESTIVE HEART FAILURE



Centurion
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INTRODUCTION:

Congestive heart failure can be defined as a physiological state in which the heart is unable to pump enough blood to meet the metabolic needs of the body at rest or during exercise.

It is two types

- I. Systolic dysfunction**
- II. Diastolic dysfunction**

- i. Systolic dysfunction:**

Heart muscle are too weak, the ventricles stretch out (enlarged, floppy, dilated) and fail to contract efficiently.

In this condition less blood is pumped out.

- ii. Diastolic dysfunction:**

Heart muscle become stiff, thick, rigid, so that they no longer fill properly with blood.

In this condition less blood is pumped out.

ETIOLOGY:

Systolic dysfunction

- Ischemic heart disease
- Hypertension
- Large salt intake in diet
- Diabetes
- Myocarditis
- Over weight
- Unhealthy life style(Consumption of cocaine, tobacco & alcohol, Smoking)
- Heart valve diseases

- Coronary artery disease
- Cardio myopathy
- Aortic stenosis

PATHOPHYSIOLOGY:

- Due to coronary atherosclerosis, coronary thrombosis or embolism, it occurs.
- Excess intake of fatty meal or unhealthy diet or maintaining a unhealthy life style, cholesterol and fat level increases in body.
- Then accumulation of cholesterol, fats, and other substances occurs in body, that leads to plaque formation inside the inner wall of arteries.
- This can leads to a narrowing of the arteries and reduced blood flow to vital organs and tissues.
- Over time, the plaque can become unstable and rupture, leading to the formation of blood clots that can completely block the coronary artery.
- Coronary artery supplies blood to myocardial layer of the heart.
- Due to blockage in coronary artery, Myocardial blood supply from coronary artery decreases and it increases myocardial oxygen demand.
- Long term deficiency of blood causes myocardial ischemia, then it leads to myocardial hypoxia.
- When myocardium layer doesn't get sufficient amount of oxygen from blood, it causes myocardial cell necrosis/death or myocardial dysfunction.
- Further, it leads to heart failure or congestive heart failure.

CLINICAL MANIFESTATION/ SIGN & SYMPTOMS:

- Fatigue, shortness of breath, dyspnea on exercise
- Orthopnea
- Pulmonary edema
- Asthma like wheezing sound
- Dry Cough
- Pale and bluish skin
- Palpitation, arrhythmia,
- increased blood pressure
- Weakness, insomnia, restlessness
- Swollen legs or peripheral edema of lower extremities
- Liver and spleen enlargement
- Abdominal pain

CLINICAL EVALUATION/DIAGNOSIS:

- Family history, physical examination
- ECG
- Stress test
- Echocardiogram
- Chest x-ray
- Coronary angiography
- MRI
- CT scan
- PET Scanning
- Holler monitoring
- Blood test (troponin, myoglobin, c-reactive protein, homocysteine)

PHARMACOLOGICAL MANAGEMENT:

- Oxygen therapy- 3lit. by nasal cannula
- Vasodilator therapy- nitroglycerin
- ACE inhibitors- captopril
- Anticoagulant- heparin
- Cholesterol lowering agent- statins
- Analgesics- morphine
- Thrombolytic therapy- Urokinase, streptokinase

NON PHARMACOLOGICAL MANAGEMENT/PREVENTION:

- Avoid smoking, consuming alcohol & tobacco
- Avoid fatty meal & junk food
- Take nutritional diet everyday
- Daily 30min morning walk
- Daily normal physical work out
- Avoid stress
- Proper or routine health check up

