

Congestive heart failure

Definition of congestive heart failure:

Congestive heart failure is a condition in which the hearts function as a pump is inadequate to meet the body needs.

Or

Congestive heart failure is a chronic progressive condition that affects the pumping power of your heart muscle.

Causes of congestive heart failure:

Heart failure is caused by many conditions that damage the heart muscle, including:

1. Coronary artery disease: Coronary artery disease, a disease of the arteries that supply blood and oxygen to the heart, causes decreased blood flow to the heart muscle. If the arteries become blocked or severely narrowed, the heart becomes starved for oxygen and nutrients.
2. Heart attack: A heart attack occurs when a coronary artery becomes suddenly blocked, stopping the flow of blood to the heart muscle.
3. Cardiomyopathy: Damage to the heart muscle from causes other than artery or blood flow problems, such as from infections or alcohol or drug abuse.
4. Conditions that overwork the heart: Conditions including high blood pressure, valve disease, thyroid disease, kidney disease, and diabetes or heart defects present at birth can all cause heart failure.

Management of congestive heart failure:

A. Clinical feature-

Symptoms:

- Dyspnoea\breathlessness.
- Cough with frothy sputum\expectoration, sometimes stained with blood.
- Feature of low cardiac output: Fatigue, restlessness, poor effort tolerance, cold & clammy skin, hypotension, oliguria, uraemia, confusion, and convulsion.
- Cardiac cachexia in choric heart failure.
- Generalized swelling which started in the legs\bilateral leg swelling.
- Features of cause: H\O chest pain, palpitation, HTN.

Signs:

- General examination-
 - Patient is edematous & puffy.
 - Patient is dyspnoeic and is in propped up position.
 - Pulse-tachycardia.
 - Blood pressure-Hypotension.
 - Bilateral leg odema.
 - Elevated JVP (jugular venous pressure).
- Precordium-
 - Apex beat- Shifted downwards & outwards with having character (cardiomegaly).
- Lungs-
 - Bilateral basal crepitations (alveoli collapsed).
 - Feature of pleural effusion.
- Abdomen-
 - Tender hepatomegaly (liver enlargement).
- Features of causes- Murmur.

B. Investigation-

- The chest X-ray P\A view.
- ECG
- Echocardiography

C. Treatment-

- General measures-
 1. Bed rest
 2. Diet-
 3. Should give up alcoholism and smoking.
 4. Regular moderate exercise within limit of symptoms.
 5. Vaccination, if possible influenza and pneumococcus.
- Specific measures-

A. Drug therapy-

1. Diuretics-
 - ✓ Frusemide (5-10mg\hour) can be used alone or in combination with thiazides.
2. Angiotensin converting enzyme inhibitor: Ramipril, captopril, Enalapril.
3. Angiotensin receptor blocker:
 - ✓ Losartan 50-100mg once daily.
 - ✓ Candesartan 4-16mg daily.
4. Beta blocker :(Bisoprolol starting dose-1.25mg daily increased gradually over a 12 weeks & target dose 10mg daily): in chronic heart failure.

5. Digoxin: To provide in patient with heart failure not controlled by diuretics, ACEI, beta blocker or heart failure with atrial fibrillation.
 6. IV inotropic & vasopressor if not respond to oral therapy.
- B. Non-pharmacological treatment of heart failure-
1. Implantable cardiac defibrillators.
 2. Heart transplantation.
 3. Ventricular assist device.