



**CORONARY ARTERY
DISEASE**

OBJECTIVE

➤ **SPECIFIC :**

At the end of the class students will be able to;

- ✓ Define CAD.
- ✓ Enumerate the risk factors of CAD.
- ✓ Describe the pathophysiology of CAD.
- ✓ Enlist the clinical manifestations of CAD.
- ✓ Enumerate diagnostic evaluation of CAD.
- ✓ Explain the management of CAD.

DEFINITION

- **Coronary atherosclerosis is characterized by abnormal accumulation of lipid or fatty substances & fibrous tissues in the vessel walls. These substances block or narrow the blood vessels, reducing blood flow to the myocardium & resulting in coronary artery disease.**

RISK FACTORS

➤ MODIFIABLE FACTORS:

1. Cigarette smoking.
2. Elevated lipid level in blood.
3. Elevated blood pressure.
4. Hyperglycemia.
5. Obesity.
6. Physical inactivity.

RISK FACTORS

7. Use of oral contraceptives.
8. Infection (gingivitis).
9. Behavior pattern (stress, aggressiveness, hostility).
10. Geography. (Higher incidence in industrialized regions).

RISK FACTORS

➤ NON MODIFIABLE FACTORS:

1. Positive family history.
2. Age, (35 – 55years).
3. Gender, (more common in men).
4. Race, (African Americans).

PATHOPHYSIOLOGY

1) Accumulation of fat deposit on intimal layer of blood vessel.



2) Inflammatory process.



3) Fiber tissue Formation



4) occlusion of blood vessels



5) Decreased blood supply to myocardium.



PATHOPHYSIOLOGY

6) ischemia.



7) Necrosis of myocardial muscles.



C.A.D.

CLINICAL MANIFESTATIONS

1. Chest pain.
2. Weakness or numbness in arms, wrist & hands.
3. Dyspnoea.
4. Diaphoresis.
5. Fatigue.
6. Palpitation

CLINICAL MANIFESTATIONS

7. Nausea & vomiting.
8. ECG changes.
9. Ventricular aneurysms.
10. Dysrhythmias, sudden death.
11. Hyperlipidemia.

DIAGNOSTIC EVALUATION

1. History taking.
2. Physical examination.
3. Blood investigations.
4. Urine analysis.
5. Chest X-ray.
6. E.C.G.

DIAGNOSTIC EVALUATION

- 7. 2D – ECHO.**
- 8. Angiography.**
- 9. Tread mill test (TMT).**
- 10. Positron Emission Tomography, (P.E.T.).**
- 11. Nuclear Imaging Studies.**
- 12. C.T.-Scan.**

MANAGEMENT

➤ MEDICAL:

1. To control cholesterol level.
 - Nicotinic acid.
 - Fibric acid.
 - Bile acid.
2. Anti hypertensive drugs, nitroglycerine, beta adrenergic blockers, calcium channel blockers, ACE inhibitors.
3. Antiplatelet, e.g. aspirin, clopidugre.

MANAGEMENT

4. Anticoagulants, (Heparin).
5. Sedative analgesics, (Morphine sulphate – IV.)

➤ **SURGICAL:**

✓ **Coronary revascularization:**

1. P.T.C.A. (Percutaneous Transluminal Coronary Angioplasty).
2. C.A.B.G. (Coronary Artery Bypass Graft Surgery).

MANAGEMENT

➤ **NURSING:**

✓ Assessment.

✓ Nursing diagnosis:

1. Acute pain related to hypoxia due to coronary artery obstruction.
2. Ineffective tissue perfusion (cardiac) related to cardiac injury.

MANAGEMENT

3. Anxiety related to disease condition.
4. Activity intolerance related to fatigue secondary to decreased cardiac output.
5. Ineffective therapeutic regimen management related to lack of knowledge of disease process.

THANK YOU!