

ANGINA PECTORIS



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INTRODUCTION:

Angina pectoris is a clinical syndrome characterized by pain or pressure in the center of chest just behind the breast bone.

It occurs when the heart muscle (myocardium layer) does not get sufficient amount of blood and oxygen due to narrow or blocked coronary artery.

Types of Angina Pectoris:

a. Chronic stable angina:

Chronic narrowing of coronary artery due to deposition of cholesterol inside the blood vessel wall will cause ischemia & hypoxia condition in heart is known as chronic stable angina.

b. Chronic un-stable angina:

It caused by formation of clot inside the coronary artery will cause ischemia & hypoxia condition in heart is known as chronic un-stable angina.

c. Variant angina:

It caused by coronary artery vasospasm, which is temporarily reduces coronary blood flow due to emotional stress is known as variant angina.

ETIOLOGY/CAUSES:

- family history
- Atherosclerosis
- Age (women after 55 and man after 45)
- Any cardiovascular disease
- Unhealthy life style(Consumption of cocaine, Excess intake of fatty meal, tobacco & alcohol, Smoking)
- High blood cholesterol
- High BP, eating heavy meal
- Emotional stress
- Diabetic

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.
- Then oxygen demand exceeds, it leads to increasing cardiac work load.
- Increasing cardiac work load leads to a severe pain in chest is known as angina pectoris.

CLINICAL MANIFESTATION:

- Chest pain
- Chest discomfort
- Burning sensation in chest
- Pain can spread to jaw, arm, shoulder, neck, upper abdomen, teeth & back
- Dizziness
- Fatigue
- Nausea & Vomiting
- Excess Sweating

- Cramping
- Shortness in breathing
- Chocking and indigestion.

Complication: Heart attack, Stroke

CLINICAL EVALUATION/DIAGNOSIS:

- Family history & Medical history
- Physical examination
- ECG
- Stress test
- Echocardiogram
- Chest x-ray
- Coronary angiography
- MRI
- CT scan
- 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 physical work out
- Avoid stress
- Proper or routine health check up

