

CHEST PAIN

Dr. Hetal H. Acharya

CHEST DISCOMFORT

- D/D includes conditions affecting the organs of the thorax and the abdomen with prognosis varying from the benign to life-threatening conditions.
- Failure to recognize the potentially serious conditions can lead to serious complications and conservative management of low risk patients leads to unnecessary admissions ,tests and procedures.

Common Causes of Chest Pain

- **Cardiac**
 - Angina pectoris
 - Myocardial infarction
 - Mitral valve prolapse
 - Pericarditis
 - Hypertrophic cardiomyopathy
 - Aortic stenosis/regurgitation
- **Aortic**
 - Dissecting aneurysm
- **Lung and pleura (respiratory)**
 - Pleurisy
 - Pneumothorax
 - Pulmonary embolism
- **Intra-abdominal conditions**
- **Oesophageal**
 - Reflux oesophagitis
 - Diffuse oesophageal spasm
- **Musculoskeletal**
- **Hyperadrenergic state**
 - Cocaine intoxication
- **Anxiety**

Causes of Chest Discomfort-

- **Cardiac** causes-like Myocardial Ischemia and injury, Angina Pectoris, Unstable angina and Myocardial Ischemia.
- **Other Cardiac** causes-like Pericarditis , Diseases of the Aorta (like Aortic dissection ,Aortic stenosis)
- **Pulmonary causes like** – Pulmonary embolism, Pulmonary hypertension ,pleuritis and Pneumonia.
- **Gastrointestinal conditions** like gastro-esophageal reflux ,Mallory Weis syndrome, peptic ulcer disease biliary disease, and pancreatitis.
- **Neuromusculoskeletal conditions.**
- **Emotional and psychiatric conditions.**

Cardiac causes-

- Myocardial Ischemia and injury
- Angina Pectoris
- Unstable angina
- Myocardial Ischemia.

Other Cardiac causes-

- Pericarditis
- Diseases of the Aorta like Aortic dissection
- Diseases of the Aorta like Aortic stenosis

Pulmonary causes

- Pulmonary embolism
- Pulmonary hypertension
- Pneumothorax
- Pleuritis
- Pneumonia.

Respiratory chest pain

- Respiratory chest pain most commonly arises from parietal pleura (including the diaphragmatic pleura), chest wall and
- the mediastinal structures. Lung parenchyma and visceral pleura are insensitive to most painful stimuli. The peripheral
- part of the diaphragm and costal portion of parietal pleura are innervated by somatic intercostal nerves, thus pain felt in
- these areas is often localised to cutaneous distribution of involved neurons over the adjacent chest wall. Central portion
- of diaphragm is innervated by phrenic nerve; therefore central diaphragm irritation is referred to ipsilateral shoulder tip
- or even the neck

Gastrointestinal conditions

- Gastro-Esophageal reflux .
- Mallory Weis syndrome.
- Peptic ulcer disease .
- Biliary disease.
- Pancreatitis.
- Cholecystitis.

Neuromusculoskeletal conditions-

Cervical Disc Disease –can cause chest pain by compression of nerve roots.

Intercostal muscle cramps or herpes zoster can cause pain in the dermatomal distribution

Chest pain symptoms due herpes zoster can occur before skin lesions are apparent.

Costochondral and chondrosternal syndromes are most common cause of anterior chest musculoskeletal pain.

Tietze syndrome –physical signs of costochondritis such as swelling ,redness and warmth present. The pain is fleeting and sharp ,also dull ache pain that lasts for hours is seen.

Chest pain can also be seen in patients with arthritis of the shoulder, spine and bursitis.

Emotional and psychiatric conditions

- 10% of the patient attending the emergency department with complains of acute chest discomfort are having panic disorder or other emotional disorder.
- Pain is described as visceral tightness ,or aching that lasts for more than 30 mins.
- ECG may show St-T changes due to hyperventilation.
- Careful history may illicit clues of depression, panic attacks, and other phobias.

Mathews Chest PAIN



**Adobe Acrobat
Document**

Approach to a patient with chest discomfort

- If chest discomfort is acute ,with potentially life threatening condition that needs immediate hospitalization and aggressive treatment ?

As in

- 1) Acute ischemic heart disease
- 2) Aortic dissection
- 3) Pulmonary embolism
- 4) Spontaneous pneumothorax

Approach to a patient with chest discomfort

- If chest discomfort is chronic, likely to lead to serious complication ?

As in

- 1) Stable Angina
- 2) Aortic Stenosis
- 3) Pulmonary Hypertension

Approach to a patient with chest discomfort

- If chest discomfort is an Acute condition that warrants specific condition

As in

- 1) Pericarditis
- 2) Pneumonia / Pleuritis
- 3) Herpes Zoster

Approach to a patient with chest discomfort

- If chest discomfort is another treatable chronic condition

As in

- 1) Esophageal reflux, esophageal spasm
- 2) Peptic ulcer disease
- 3) Gallbladder disease
- 4) Cervical disc disease
- 5) Arthritis of the shoulder or spine
- 6) Costochondritis and other musculoskeletal disease
- 7) Anxiety