Chest Pain

DEFINITION /PATHOPHYSIOLOGY

A physical complaint that requires immediate diagnosis and evaluation. Chest pain may be symptomatic of cardiac disease, such as angina pectoris, myocardial infarction, aortic stenosis, or pericarditis, or of pulmonary disease, such as pleurisy, pneumonia, or pulmonary embolism or infarction. Angina Disease is a chest pain or discomfort caused by inadequate oxygen supply resulting of low blood flow to heart muscle.

The source of chest pain may also be musculoskeletal, gastrointestinal, or psychogenic. The use of illegal drugs such as cocaine may also cause chest pain. Over 90% of severe chest pain in adults is caused by coronary disease, spinal root compression, or psychological disturbance. Because of its association with life-threatening heart disease, chest pain causes extreme anxiety, which tends to mask other symptoms that would aid in diagnosis and treatment.

There are two types of angina:

1. Stable Angina Disease or Angina Pectoris:
   The sensation of chest pain, pressure of squeezing due to obstruction or spasm of the coronary arteries. It occurs when the heart muscle does not get as much blood as it needs resulting of ischemia. The pain usually radiates to the neck, jaw, shoulder, or arm and relieved with rest, nitroglycerin, or both.

2. Unstable Angina Disease:
   It refers to unexpected chest pain due to coronary arteries narrowed by fatty cholesterol build-ups. Atherosclerosis which can rupture blood vessels resulting in blood clotting which blocks the blood flow to the heart muscle. It is not relieved with rest or medicine and may get worse overtime.

SIGNS/SYMPTOMS

Stable Angina	Unstable Angina
Occurs when the heart works hard during physical exercise.	Occurs neither at rest while sleeping nor with little physical exertion.
Does not come as a surprise.	Come as surprise and sudden.
Usually lasts a short time(5 minutes or less)	Is more severe and lasts longer than stable Angina (as long as 30 minutes).
Usually relieved with rest and medicine.	Not relieved by rest or medicine.
May feel like gas or indigestion.	May get worse over time.
Usually radiates to arms, neck, jaw, and shoulder.	Might signal of heart attack.

ASSESSMENT:

There are many different ways of assessing chest pain. A popular method is the ***'PQRST'*** pain assessment:

P – Position/Provoking Factors

- Where is the pain? Can you point to it?
- What makes the pain better?
- What makes the pain worse?
- What were you doing when the pain started?
- Does the pain change with repositioning?

Q – Quality

- Can you describe the pain or discomfort?
- Is it a dull ache, sharp, stabbing or crushing pain?

R – Radiation

- Does the pain radiate to any other areas?
- Can you point to the area?

S – Severity/Symptoms

- Can you rate the pain (one out of ten)?
- Any other symptoms?

T – Time

- How long have you had the pain?
- Is the pain intermittent (starts and stops) or is it continuous (ongoing)?

NURSING INTERVENTIONS

- Assess for chest pain not relieved by rest or medications.
- Assess and document continuous ECG rhythm, vital signs, mental status, heart, and lung sounds.
- Assess and document pain characteristics: location, duration, intensity (have patient grade pain on a scale from 1 to 10), precipitating factors, relief measures and any symptoms that indicate changes in these parameters.
- Assess for nausea and vomiting.
- Assess for decreased urinary output.
- Assess for the history of pertinent illnesses.
- Perform a precise and complete physical assessment to detect complications and changes in the patient's status.
- Administer oxygen along with medication therapy to assist with relief of symptoms.
- Encourage bed rest with the back rest elevated to help decrease chest discomfort and dyspnea.
- Encourage changing of positions frequently to help keep fluid from pooling in the bases of the lungs.
- Check skin temperature and peripheral pulses frequently to monitor tissue perfusion.
- Provide information in an honest and supportive manner in order to allay any anxiety.
- Monitor the patient closely for changes in cardiac rate and rhythm, heart sounds, blood pressure, chest pain, respiratory status, urinary output, changes in skin.

PATIENT TEACHING

Medication teaching:

- Nitroglycerin sublingual tablets usually give relief in 1 to 5 minutes. However, if the pain is not relieved, you may use a second tablet 5 minutes after you take the first tablet. If the pain continues for another 5 minutes, a third tablet may be used. If you still have chest pain after a total of 3 tablets, contact your doctor or go to a hospital emergency room right away. Do not drive yourself and call 911, if necessary.
- Educate patient about nutritional status and the importance of paying special attention to obesity, hyperlipidemia, and malnutrition.
- Encourage smoking cessation.
- Teach patient to recognize the signs and symptoms that need to be reported to the nurse.

CULTURAL CONSIDERATIONS

- Assess for the influence of cultural beliefs, norms, and values of the patient's chest pain related to perceived end of life.
- Discuss with the patient those aspects of his or her daily activities that will remain unchanged, and work with patient to adapt cultural core nutrition.
- Validate the patient's feelings regarding the impact of current lifestyle, finances, and transportation on ability to redesign toward healthier personal habits.

COORDINATING CARE WITH NURSING ASSISTANT

- Ambulate patient as tolerated with doctor’s order three times daily.
- Encourage frequent rest periods and teach patient to pace activity.
- Encourage small frequent meals.

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REFERENCES:

Mosby's dictionary of Medicine, nursing & Health Professions

Meg Gulanick/ Judith L. Myers; Nursing Care Plans Diagnoses, Interventions, and Outcomes/Edition 8

Betty J. Ackley, Gail B. Ladwig; Nursing Diagnosis Handbook: An Evidence-Based Guide to Planning Care / Edition 9

Linton; Introduction to Medical-Surgical Nursing/ Edition 6

Marilyn Sawyer Sommers, Susan A. Johnson, Theresa A. Beery; Diseases and Disorders: A Nursing Therapeutics Manual/ Edition 3

Jane W. Ball Joyce E. Dains John A. Flynn Barry S. Solomon Rosalyn W. Stewart ; Seidel's Physical Examination Handbook/ Edition 8

http://nursinginterventionsrationales.blogspot.com/2013/07/ineffective-tissue-perfusion.html

https://nurseslabs.com/ineffective-tissue-perfusion/