Title: Chest Pain, (Outside Critical Care): Care of Patient, protocol for

Related Standards & Resources:
1. NCS6318 – Cardiac Cath Lab: Pre-Procedure Care, protocol for
2. NCS6319 – Cardiac Cath Lab: Post Procedure Care, protocol for

Skill Level:
Basic

Need To Know:
Chest discomfort may be a sign of myocardial ischemia. Ischemia is the result of inadequate blood supply (e.g. due to thrombus, spasm) or increased demand (e.g. due to exercise, stress) to the heart. Some chest discomfort may be due to other causes (see Brunner & Suddarth). However, all chest discomfort must be treated immediately and assumed to be ischemic until proven otherwise. Chest discomfort due to myocardial ischemia (angina) may be felt as an uncomfortable pressure, fullness, squeezing or pain in the centre of the chest. Discomfort may spread to the shoulder, neck, arms, and jaw, in the back or between the shoulder blades or epigastrium. Chest discomfort may be accompanied by lightheadedness, fainting, sweating, nausea, weakness, or shortness of breath. A general feeling of distress, anxiety or impending doom may also be present. Most men and women present with the symptoms listed above. However, some people have other symptoms such as isolated unusual fatigue and this may be slightly more common in women. Women are also more likely than men to report throat, jaw or neck pain.

Assessment:
1. Assess the following with onset of chest pain and then Q3-5 minutes until chest pain resolved:
   a) Assess (PQRST) Precipitating factors, Quality of pain, Radiation, Severity and Timing of pain. Ask the patient to rate the pain on a scale of 1-10.
   b) Assess whether this is typical pain for patient
   c) Assess for associated symptoms, for example:
      i) Shortness of breath
      ii) Diaphoresis
      iii) Nausea
      iv) Dizziness
   d) Measure vital signs
   e) For cardiac units: obtain and analyze rhythm strip

Interventions:
* Indicates physician’s order required

1. Restrict patient’s activity to bed rest.
2. Place patient in semi-Fowler’s position
a) Following angiogram/percutaneous coronary intervention, HOB may only be raised to a maximum of 30° if within 4 hours after procedure
3. Administer oxygen by nasal prongs if SaO2 less than 92% or evidence of respiratory distress
4. Administer nitroglycerin spray/tablets STAT*
   a) Hold nitroglycerin if BP is less than 90 mmHg and call physician for orders
5. Wait 3-5 minutes and then:
   a) Assess patient’s response to intervention:
      i) VS
      ii) Chest pain (PQRST)
      iii) Analyze rhythm (if on cardiac ward)

For non-cardiac units:
1. If pain persists after one dose of nitroglycerin, repeat nitroglycerin and notify physician immediately.

For cardiac units:
1. If pain persists, repeat nitroglycerin as above to a maximum of 2 doses. If pain unresolved after second dose, order a STAT 12 lead ECG and NOTIFY MOST RESPONSIBLE PHYSICIAN.
2. Consider morphine (1-5 mg Q5-30 minute intervals) in addition to nitroglycerin for pain unrelieved by nitroglycerin*. ALWAYS INFORM PHYSICIAN OF CHEST PAIN UNRELIEVED BY NITROGLYCERIN.

In the case of deteriorating hemodynamic status (decreased LOC, decreased BP, respiratory distress and/or angina with significant increase or decrease in heart rate), a nurse may independently initiate telemetry. Chest pain or other signs of ischemia without evidence of changes in rhythm (e.g. a significant increase or decrease in heart rate) does not necessarily warrant the initiation of telemetry.

Patient Education:
- Instruct the patient to notify nurse with onset of ANY episode of chest pain/discomfort, or whatever was the symptom leading to admission. Emphasize that even “minor” discomfort should be reported to the nurse.
- Discharge teaching— instruct patient how to manage chest discomfort (including how to take nitroglycerin, if prescribed). Within the Heart Centre, follow discharge guidelines for ACS patients. Outside the Heart Centre, discuss referral to a cardiac rehabilitation program with physician.

Documentation:
1. 24 Hour Nursing Assessment Flow sheet: record assessment, nursing interventions, patient’s response and vital signs
2. Medication Administration Record—any medications given
3. On cardiac unit, if on telemetry:
a. ECG Rhythm Strip Flow Sheet—analyze and mount ECG rhythm strip every shift and with any chest pain or change in rhythm or VS

References:

Persons/Groups Consulted:
CCU attending cardiologists

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