Chest Pain Management of the Telemetry Patient

Simulated Clinical Experience (SCE™) Overview

Location: Cardiac Unit

History/Information:
The patient is a 44-year-old, overweight female who presented to her primary healthcare provider yesterday with complaints of recent episodes of shortness of breath that occur with minimal activity such as walking a flight of stairs or with increased stress. Her symptoms are relieved with rest. She denied any chest, arm or jaw pain but did have some diaphoresis with one or two episodes. She attributed her symptoms to her smoking one pack per day for the past 20 years and obesity. She has gastroesophageal reflux controlled with ranitidine and has a history of elevated cholesterol (252), HDL of 46, and LDL of 180. Her triglycerides were 140. She drinks three to four caffeinated beverages per day and denies alcohol use. In addition, she has a history of situational anxiety since her mother’s death and hypertension controlled with atenolol. Her surgical history includes total abdominal hysterectomy six years ago and right carpal tunnel surgery two years ago.

The patient’s mother had a Myocardial Infarction (MI) at age 56 and died at age 66, secondary to complications of a coronary artery bypass graft. Her oldest sister died at age 54 from sudden cardiac death. Her father is alive with a recent stroke and two younger brothers are alive and well. The patient and her husband have three healthy children, ages 14-18, all living at home. She is employed full-time as a paralegal.

The patient failed an exercise tolerance test today with ST depression, shortness of breath and a drop in BP. She was admitted to the cardiac unit and an MI was ruled out with normal Troponin, CPK and Iso-Enzymes and ECG. She was then sent to the cardiac catheterization lab for possible angioplasty and stent placement. She was unable to have stent placement or angioplasty secondary to findings of three vessel disease and poor coronary anatomy. Thus, she was scheduled to have a coronary artery bypass graft (CABG) the following day.

The time is 1600 hours and you are the nurse working the PM shift. The cardiac catheterization RN has just reported to you that the patient was medicated with alprazolam 2mg at 1430 hours. She tolerated the procedure with no increase in heart rate or blood pressure. The left lower extremity neurovascular status is intact and pulses are 2/4. She is scheduled to have a CABG tomorrow and she is aware of this.

Learning Objectives/Questions

1. Identifies the risk factors associated with coronary artery disease (KNOWLEDGE).
2. Formulates a nursing plan of care for the patient with cardiac vascular disease (APPLICATION).
4. Evaluates outcome of nursing interventions for the patient having chest pain (EVALUATION).
5. Identifies the causes of preoperative anxiety and nursing measures to decrease this (KNOWLEDGE).
6. Creates and organizes the nursing plan of care in preparing a patient preoperatively for coronary artery bypass graft surgery (CABG) (SYNTHESIS).
7. Develops a teaching plan for education of the patient and family with a CABG (SYNTHESIS).

Questions to Prepare for the Simulated Clinical Experience:

1. Describe the pathophysiology of coronary artery disease.
2. Discuss risk factors for coronary artery disease and health promotion measures.
3. What are the classic and non-classic symptoms of chest pain? How are they different in men and women?
4. Discuss the following medications: nitroglycerin, morphine sulfate, aspirin, alprazolam, atenolol, aluminum hydroxide/magnesium hydroxide, atorvastatin calcium. Include indications, actions, contraindications, side effects, normal dosage and nursing implications.
5. Discuss the nursing and medical management of the patient post cardiac angiogram.
6. Describe how to intervene and care for the patient with chest pain and anxiety.
7. Outline and discuss the preoperative education plan for a patient and family for coronary artery bypass graft surgery. This should include preoperative education, instruction on the surgical procedure, postoperative course, and avoidance of complications.
8. Discuss the basic components of cardiac rehabilitation.
**Healthcare Provider's Orders**

Admit to Cardiac Unit with diagnosis of unstable angina, CAGB in AM Telemetry

Post procedure angiography orders for the next eight hours: Bedrest

Bed flat with left leg straight

Head of bed not greater than 30 degrees

Sandbag over pressure dressing to left groin

Vital signs, including assessment of left groin site, dressing, and left lower extremity pulses/neurovascular check every 15 minutes for one hour, then every 30 minutes times four, and then hourly until stable

Encourage oral fluids

Saline lock IV after taking oral fluids

Flush IV lock with 2mL of 0.9% NS every eight hours and between medications

Bedrest for eight hours then bathroom privileges

Atorvastatin calcium 10mg PO at hour of sleep

Alprazolam 0.5mg PO every six hours prn anxiety

Nitroglycerin 0.4mg SL every five minutes prn chest pain; if pain unrelied after 3 doses notify healthcare provider

Morphine 1-2mg IV push up to a total of 10mg for chest pain unrelied by nitroglycerin

Aluminum hydroxide and magnesium hydroxide 30mL PO prn indigestion

Acetaminophen 650mg PO every four hours prn pain

Aspirin 81mg chewable prn chest pain

12-lead ECG for acute chest pain

Oxygen per nasal cannula to keep SpO₂ greater than 90%

Low cholesterol, low fat cardiac diet

Preoperative education for CAGB

Preoperative labs for CAGB (done upon admission): CBC with WBC

Differential, Electrolytes, BUN, Creatinine, Glucose, ALT, AST, Pre-Albumin and Albumin,

Bilirubin, Troponin, Creatinine Phosphase Kinase (CPK) with

Myocardial Bands (MB), Type and Cross Match for 2units of packed red blood cells

Chest x-ray (done upon admission)

**References**


