



Fig. 8-7. CVP reading: Manometer zero must be level with client's right atrium.

- ◆ B. Changes in CVP correlate with client's clinical status.
 1. Elevated CVP can be late sign of left ventricular failure.
 2. Lowered CVP indicates hypovolemia.
- ◆ C. CVP measured by height of column of water in a manometer.
 1. Measuring CVP is done by using zero mark on manometer as standard reference point.
 2. Transducer placed at phlebostatic axis.
 - ◆ 3. Normal CVP is 5–10 cm H₂O.

◆ System Implementation

- A. Monitor apical pulse for alterations in cardiac rhythm and rate.
- B. Monitor for alterations in blood pressure.
- C. Assess peripheral pulses to determine adequacy of circulation.
- D. Monitor laboratory values for alterations in electrolytes, coagulation and cardiac enzymes to prevent complications.
- E. Provide diet appropriate for client's need.
- F. Provide emotional support for client and family when alterations in lifestyle are indicated.
- G. Administer and instruct client on medications and their side effects.
- H. Instruct client on preoperative and postoperative care modalities.
- I. Monitor for complications following surgical intervention.
- J. Plan an acceptable rehabilitation program with client and family.
- K. Administer life support measures when client's condition is compromised.

CORONARY ARTERY DISEASE (CAD)

Coronary Atherosclerosis

- ◆ **Definition:** The most common type of cardiovascular disease—occurs as the result of accumulation of fatty materials (lipids and, the primary one, cholesterol) and fibrous tissue which narrow the lumen of coronary arteries. Clinical manifestations of disease reflect ischemia to the myocardium, resulting from inadequate blood supply to meet metabolic demands.

Characteristics

- A. This form of heart disease is abnormal accumulation of fatty substances and fibrous tissue.
- B. Continued development involves an inflammatory response.
- C. Deposits are formed on vessel walls called atheromas or plaque, which narrows vessel and obstructs blood flow.
- D. Fibrous cap of plaque may be thick and stable or thin; if thin, it may rupture and form a thrombus.
- E. The thrombus may obstruct blood flow and lead to sudden cardiac death or an MI.

Assessment

- ◆ A. Assess for presence of risk factors.
- ◆ B. Evaluate chest pain.
 1. Angina, burning, squeezing, crushing tightness substernally or precordial area. Pain may radiate to neck, jaw, shoulder, arms.
 2. Associated with nausea, vomiting, increased perspiration, and cool extremities.
- ◆ C. Assess heart sounds for presence of arrhythmias and/or murmurs.

Implementation

- ◆ A. Risk reduction (lifestyle modification).
 1. Engage in regular aerobic exercise.

RISK FACTORS

- Major factors: without presence of other risk factors, may cause CAD.
 - a. Cigarette smoking.
 - b. Hypertension.
 - c. Increased cholesterol.
- Uncontrollable factors.
 - a. Age: increased risk with increasing age.
 - b. Gender: increased risk in males.
 - c. Heredity: increased risk with family history.
- Controllable factors.
 - a. Diabetes.
 - b. Obesity.
 - c. Lack of exercise.
 - d. Stress.