

chapter 53

Antianginal Drugs

Objectives

AFTER STUDYING THIS CHAPTER, THE STUDENT WILL BE ABLE TO:

1. Describe the types, causes, and effects of angina pectoris.
2. Describe general characteristics and types of antianginal drugs.
3. Discuss nitrate antianginals in terms of indications for use, routes of administration, adverse effects, nursing process implications, and drug tolerance.
4. Differentiate between short-acting and long-acting dosage forms of nitrate antianginal drugs.
5. Discuss calcium channel blockers in terms of their effects on body tissues, clinical indications for use, common adverse effects, and nursing process implications.
6. Teach clients ways to prevent, minimize, or manage acute anginal attacks.

Critical Thinking Scenario

Mrs. Sinatra, a 56-year-old housewife, experiences chest pressure after exercise. She is the mother of six and works 30 hours a week word-processing documents for a law firm. When she is told that her chest discomfort is probably secondary to coronary artery disease, she cannot believe it. She states, "I'm just too young to have heart problems!" Mrs. Sinatra is referred to her primary care health care provider and given sublingual nitroglycerin tablets to use PRN for chest pain.

Reflect on:

- ▶ What assessment questions will you ask to determine Mrs. Sinatra's risk factors for heart disease?
- ▶ Evaluate Mrs. Sinatra's reaction to her new diagnosis and the client teaching implications.
- ▶ What lifestyle modifications would help minimize the progression of coronary artery disease?

OVERVIEW

Angina pectoris is a clinical syndrome characterized by episodes of chest pain. It occurs when there is a deficit in myocardial oxygen supply (myocardial ischemia) in relation to myocardial oxygen demand. It is most often caused by atherosclerotic plaque in the coronary arteries but may also be caused by coronary vasospasm. The development and progression of atherosclerotic plaque is called coronary artery disease (CAD). Atherosclerotic plaque narrows the lumen, decreases elasticity, and impairs dilation of coronary arteries. The result is impaired blood flow to the myocardium, especially with exercise or other factors that increase the cardiac workload and need for oxygen.

The continuum of CAD progresses from angina to myocardial infarction. There are three main types of angina: classic angina, variant angina, and unstable angina (Box 53-1). The Canadian Cardiovascular Society classifies clients with angina

according to the amount of physical activity they can tolerate before anginal pain occurs (Box 53-2). These categories can assist in clinical assessment and evaluation of therapy.

Classic anginal pain is usually described as substernal chest pain of a constricting, squeezing, or suffocating nature. It may radiate to the jaw, neck, or shoulder, down the left or both arms, or to the back. The discomfort is sometimes mistaken for arthritis, or for indigestion, as the pain may be associated with nausea, vomiting, dizziness, diaphoresis, shortness of breath, or fear of impending doom. The discomfort is usually brief, typically lasting 5 minutes or less until the balance of oxygen supply and demand is restored.

Current research indicates that gender differences exist in the type and quality of cardiac symptoms, with women reporting epigastric or back discomfort. Additionally, older adults may have atypical symptoms of CAD and may experience "silent" ischemia that may delay them from seeking professional help. Individuals with diabetes mellitus may present