Interventions

Use the following measures to prevent acute anginal attacks:

- Assist in preventing, recognizing, and managing contributory disorders, such as atherosclerosis, hypertension, hyperthyroidism, hypoxia, and anemia. For example, hypertension is a common risk factor for CAD and morbidity and mortality increase progressively with the degree of either systolic or diastolic elevation. Management of hypertension reduces morbidity and mortality rates. However, most studies indicate that the reductions stem more from fewer strokes, less renal failure, and less heart failure, than from less CAD.
- Help the client recognize and avoid precipitating factors (eg, heavy meals, strenuous exercise) when possible. If anxiety is a factor, relaxation techniques or psychological counseling may be helpful.
- Help the client to develop a more healthful lifestyle in terms of diet and weight control, adequate rest and sleep, regular exercise, and not smoking. Ideally, these self-help interventions are practiced before illness occurs and they can help prevent or delay illness. However, most individuals are unmotivated until illness develops, and perhaps after it develops as well. These interventions are beneficial at any stage of CAD. For example, for a client who already has angina, a supervised exercise program helps to develop collateral circulation. Smoking has numerous ill effects on the client with angina and decreases effectiveness of antianginal drugs.

During an acute anginal attack in a client known to have angina or CAD:

- Assume that any chest pain may be of cardiac origin.
- Have the client lie down or sit down to reduce cardiac workload and provide rest.
- Check vital signs and compare them with baseline values.
- Record the characteristics of chest pain and the presence of other signs and symptoms.
- Have the client take a fast-acting nitroglycerin preparation (previously prescribed), up to three sublingual tablets or three oral sprays, each 5 minutes apart, as necessary.
- If chest pain is not relieved with rest and nitroglycerin, assume that a myocardial infarction has occurred until proven otherwise. In a health care setting, keep the client at rest and notify the client's physician immediately. Outside of a health care setting, call 911 for immediate assistance.
- Leave sublingual nitroglycerin at the bedside of hospitalized clients (per hospital policy). The tablets or spray should be within reach so they can be used immediately. Record the number of tablets used daily, and ensure an adequate supply is available.

Evaluation

- Observe and interview for relief of acute chest pain.
- Observe and interview regarding the number of episodes of acute chest pain.
- Identify CAD lifestyle factors that are being successfully modified or require modification (eg, diet, weight, activity, and smoking cessation).
- Interview regarding success and compliance with drug therapy.

PRINCIPLES OF THERAPY

Goals of Therapy

The goals of drug therapy are to relieve acute anginal pain; reduce the number and severity of acute anginal attacks; improve exercise tolerance and quality of life; delay progression of CAD; prevent myocardial infarction; and prevent sudden cardiac death.

Choice of Drug and Dosage Form

For relief of acute angina and prophylaxis before events that cause acute angina, nitroglycerin (sublingual tablets or translingual spray) is usually the primary drug of choice. Sublingual or chewable tablets of isosorbide dinitrate also may be used. For long-term prevention or management of recurrent angina, oral or topical nitrates, beta-adrenergic blocking agents, or calcium channel blocking agents are used. Combination drug therapy with a nitrate and one of the other drugs is common and effective. Clients taking one or more long-acting antianginal drugs should carry a short-acting drug as well, to be used for acute attacks.

Titration of Dosage

Dosage of all antianginal drugs should be individualized to achieve optimal benefit and minimal adverse effects. This is usually accomplished by starting with relatively small doses and increasing them at appropriate intervals as necessary. Doses may vary widely among individuals.

Tolerance to Long-Acting Nitrates

Clients who take long-acting dosage forms of nitrates on a regular schedule develop tolerance to the vasodilating (antianginal) effects of the drug. The clients more likely to develop tolerance are those on high-dose, uninterrupted therapy. Although tolerance decreases the adverse effects of hypotension, dizziness, and headache, therapeutic effects also may be decreased. As a result, episodes of chest pain may occur more often or be more severe than expected. In addition, short-acting nitrates may be less effective in relieving acute pain.

Opinions seem divided about the best way to prevent or manage nitrate tolerance. Some authorities recommend using short-acting nitrates when needed and avoiding the