NURSING CARE OF THE CLIENT RECEIVING THROMBOLYTIC THERAPY

PREINFUSION CARE

- Obtain nursing history, and perform a physical assessment. Information obtained from the history and physical exam helps determine whether thrombolytic therapy is appropriate. The goal is to initiate thrombolytic therapy within 30 minutes of arrival.
- Evaluate for contraindications to thrombolytic therapy: recent surgery or trauma (including prolonged CPR), bleeding disorders or active bleeding, cerebral vascular accident, neurosurgery within the last 2 months, gastrointestinal ulcers, diabetic hemorrhagic retinopathy, and uncontrolled hypertension. Thrombolytic agents dissolve clots and therefore may precipitate intracranial, internal, or peripheral bleeding.
- Inform the client of the purpose of the therapy. Discuss the risk of bleeding and the need to keep the extremity immobile during and after the infusion. Minimal movement of the extremity is necessary to prevent bleeding from the infusion site.

DURING THE INFUSION

- Assess and record vital signs and the infusion site for hematoma or bleeding every 15 minutes for the first hour, every 30 minutes for the next 2 hours, and then hourly until the intravenous catheter is discontinued. Assess pulses, color, sensation, and temperature of both extremities with each vital sign check. Vital signs and the site are frequently assessed to detect possible complications.
- Remind the client to keep the extremity still and straight. Do not elevate head of bed above 15 degrees. Extremity immobilization helps prevent infusion site trauma and bleeding. Hypotension may develop keeping the bed flat helps maintain cerebral perfusion.
- Maintain continuous cardiac monitoring during the infusion. Keep antidysrhythmic drugs and the emergency cart readily available for treatment of significant dysrhythmias. Ventricular dysrhythmias commonly occur with reperfusion of the ischemic myocardium.

POSTINFUSION CARE

- Assess vital signs, distal pulses, and infusion site frequently as needed. The client remains at high risk for bleeding following thrombolytic therapy.
- Evaluate response to therapy: normalization of ST segment, relief of chest pain, reperfusion dysrhythmias, early peaking of the CK and CK-MB band. These are signs that the clot has been dissolved and the myocardium is being reperfused.
- Maintain bed rest for 6 hours. Keep the head of the bed at or below 15 degrees. Reinforce the need to keep the extremity straight and immobile. Avoid any injections for 24 hours after catheter removal. Precautions such as these are important to prevent bleeding.
- Assess puncture sites for bleeding. On catheter removal hold direct pressure over the site for at least 30 minutes. Apply a pressure dressing to any venous or arterial sites as needed. Perform routine care in a gentle manner to avoid bruising or injury. Thrombolytic therapy disrupts normal coagulation. Peripheral bleeding may occur at puncture sites, and there may not be sufficient fibrin to form a clot. Direct or indirect pressure may be needed to control the bleeding.
- Assess body fluids, including urine, vomitus, and feces, for evidence of bleeding; frequently assess for changes in level of consciousness and manifestations of increased intracranial pressure, which may indicate intracranial bleeding. Assess surgical sites for bleeding. Monitor hemoglobin and hematocrit levels, prothrombin time (PT), and partial thromboplastin time (PTT). These provide additional means of assessing for bleeding.
- Administer platelet-modifying drugs (e.g., aspirin, dipyridamole) as ordered. Platelet inhibitors decrease platelet aggregation and adhesion and are used to prevent reocclusion of the artery.
- Report manifestations of reocclusion, including changes in the ST segment, chest pain, or dysrhythmias. Early recognition of reocclusion is vital to save myocardial tissue.

prophylactically to prevent dysrhythmias. Ventricular dysrhythmias are treated with a class I or class III antidysrhythmic drug (see Box 29-17). Symptomatic bradycardia (bradycardia with associated hypotension and other signs of low cardiac output) is treated with intravenous atropine, 0.5 to 1 mg. Intravenous verapamil or the short-acting beta blocker esmolol (Brevibloc) may be ordered to treat atrial fibrillation or other supraventricular tachydysrhythmias.

Other Medications

Beta blockers such as propranolol (Inderal), atenolol (Tenormin), and metoprolol (Lopressor) reduce pain, limit infarct size, and decrease the incidence of serious ventricular dysrhythmias in AMI. These drugs decrease the heart rate, reducing cardiac work and myocardial oxygen demand. Initial doses are given intravenously. Oral beta blocker therapy is continued to reduce the risk of reinfarction and death related to cardiovascular causes (Braunwald et al., 2001).

Angiotensin-converting enzyme (ACE) inhibitors also reduce mortality associated with AMI. These drugs reduce ventricular remodeling following an MI, reducing the risk for subsequent heart failure. They also may reduce the risk of reinfarction (Braunwald et al., 2001).

Intravenous nitroglycerin may be administered for the first 24 to 48 hours to reduce myocardial work. Nitroglycerin is a peripheral and arterial vasodilator that reduces afterload. It dilates coronary arteries and collateral channels in the heart, increasing coronary blood flow to save myocardial tissue at risk. Nitrates may, however, cause reflex tachycardia or excessive hypotension, so close monitoring is necessary during administration. See Box 29-7 for the nursing implications of these drugs.

Anticoagulants and other antiplatelet medications often are prescribed to maintain coronary artery patency following thrombolysis or a revascularization procedure. Abciximab (ReoPro) suppresses platelet aggregation and reduces the risk of reocclusion following angioplasty. It also improves vessel