effort focuses on coping strategies and lifestyle changes, as well as specific management of prescribed therapies. Include the following topics as appropriate when teaching the client and family for home care.

- Function, maintenance, precautions, and signs of malfunction or complications of any implanted device such as a pacemaker or ICD
- Monitoring pulse rate and rhythm
- Activity or dietary restrictions, and any potential effects of the dysrhythmia or its treatment on lifestyle
- Medication management to reduce the risk of dysrhythmias, including the desired and potential adverse effects of anti-dysrhythmic drugs

In addition, discuss fears related to treatment or implanted devices, such as that of shocking a significant other during close contact or sexual activity. Explain that if a shock occurs, the partner may feel a slight buzz or tingling but should not be harmed. Refer to and encourage the client and family to attend a peer support group for the specific condition.

### Nursing Care Plan

#### A Client with Supraventricular Tachycardia

**Elisa Vasquez, 53 years old,** is admitted to the cardiac unit with complaints of palpitations, light-headedness, and shortness of breath. Her history reveals rheumatic fever at age 12 with subsequent rheumatic heart disease and mitral stenosis. An intravenous line is in place and she is receiving oxygen. Marcia Lewin, RN, is assigned to Ms. Vasquez.

**ASSESSMENT**

Ms. Lewin’s assessment reveals that Ms. Vasquez is moderately anxious. Her ECG shows supraventricular tachycardia (SVT) with a rate of 154. Vital signs: T 98.8°F (37.1°C), R 26, BP 95/60. Peripheral pulses weak but equal, mucous membranes pale pink, skin cool and dry. Fine crackles noted in both lung bases. A loud S3 gallop and a diastolic murmur are noted. Ms. Vasquez is still complaining of palpitations and tells Ms. Lewin, “I feel so nervous and weak and dizzy.” Ms. Vasquez’s cardiologist orders 2.5 mg of verapamil to be given slowly via intravenous push and tells Ms. Lewin to prepare to assist with synchronized cardioversion if drug therapy does not control the ventricular rate.

**DIAGNOSIS**

Ms. Lewin formulates the following nursing diagnoses for Ms. Vasquez.

- Decreased cardiac output related to inadequate ventricular filling associated with rapid tachycardia
- Ineffective tissue perfusion: cerebral/cardiopulmonary/peripheral related to decreased cardiac output
- Anxiety related to unknown outcome of altered health state

**EXPECTED OUTCOMES**

The expected outcomes for the plan of care specify that Ms. Vasquez will:

- Maintain adequate cardiac output and tissue perfusion.
- Demonstrate a ventricular rate within normal limits and stable vital signs.
- Verbalize reduced anxiety.
- Verbalize an understanding of the rationale for the treatment measures to control the heart rate.
Sudden cardiac death (SCD) is defined as unexpected death occurring within 1 hour of the onset of cardiovascular symptoms. It usually is caused by ventricular fibrillation and cardiac arrest. Cardiac arrest is the sudden collapse, loss of consciousness, and cessation of effective circulation that precedes biologic death. Nearly half of all cardiac arrest victims die before reaching the hospital; only 25% to 30% of out-of-hospital cardiac arrest victims survive to be discharged (Woods et al., 2001).

Almost 50% of all deaths due to coronary heart disease are attributed to SCD. Coronary heart disease (CHD) causes up to 80% of all sudden cardiac deaths in the United States. Other cardiac pathologies such as cardiomyopathy and valvular disorders also may lead to SCD. Noncardiac causes of sudden death include electrocution, pulmonary embolism, and rapid blood loss from a ruptured aortic aneurysm.

Ventricular fibrillation is the most common dysrhythmia associated with sudden cardiac death, accounting for 65% to 80% of cardiac arrests. Sustained severe bradydysrhythmias, asystole or cardiac standstill, and pulseless electrical activity (organized cardiac electrical activity without a mechanical response) are responsible for most remaining SCDs (Braunwald et al., 2001). Selected cardiac and noncardiac causes of sudden cardiac death are listed in Box 29–6.

Risk factors for SCD are those associated with coronary heart disease (see the next section of this chapter). Advancing age and male gender are powerful risk factors. After age 65, the gap between male and female incidence of SCD narrows (Braunwald et al., 2001). Clients with dysrhythmias such as recurrent VT may have a higher risk of SCD.

**PATHOPHYSIOLOGY**

Evidence of coronary heart disease with significant atherosclerosis and narrowing of two or more major coronary arteries is found in 75% of SCD victims. Although most have had prior myocardial infarction, only 20% to 30% have recent acute myocardial infarction. An acute change in cardiovascular status precedes cardiac arrest by up to 1 hour; however, often the onset is instantaneous or abrupt. Tachycardia develops, and the number of PVCs increase. This is followed by a run of ventricular tachycardia that deteriorates into ventricular fibrillation (Braunwald et al., 2001).

Abnormalities of myocardial structure or function also contribute. Structural abnormalities include infarction, hypertrophy, myopathy, and electrical anomalies. Functional deviations are caused by such factors as ischemia followed by reperfusion, altered homeostasis, autonomic nervous system...