frequency alternating current is used to create heat as it passes through tissue. Catheter ablation is used to treat supraventricular tachycardias, atrial fibrillation and flutter, and, in some cases, paroxysmal ventricular tachycardia (Woods et al., 2004).

Anticoagulant therapy may be started after catheter ablation to reduce the risk of clot formation at the ablation site.

Other Therapies
In addition to medications and interventional techniques, other measures may be used to treat selected dysrhythmias. Vagal maneuvers that stimulate the parasympathetic nervous system may be used to slow the heart rate in supraventricular tachycardias. These maneuvers include carotid sinus massage and the Valsalva maneuver. Carotid sinus massage is performed only by a physician during continuous cardiac monitoring. Excessive slowing of the heart rate may result. The Valsalva maneuver, forced exhalation against a closed glottis (e.g., bearing down), increases intrathoracic pressure and vagal tone, slowing the pulse rate.

NURSING CARE

Caring for the client with cardiac dysrhythmias requires the ability to recognize, identify, and, in some cases, promptly treat the dysrhythmia. The urgency of intervention is determined by the effects of the dysrhythmia on the client. Nursing care focuses on maintaining cardiac output, monitoring the response to therapy, and teaching. Also see the Nursing Care Plan for a client with a dysrhythmia.

**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 intra-venous 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.

**DIAGNOSES**
- 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**
- 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.

**PLANNING AND IMPLEMENTATION**
- Provide oxygen per nasal cannula at 4 L/min.
- Continue to monitor ECG for rate, rhythm, and conduction.
- Assess vital signs and associated symptoms with changes in ECG. Report findings to physician.
- Explain the importance of rapidly reducing the heart rate. Explain the cardioversion procedure and encourage questions.

- Encourage verbalization of fears and concerns. Answer questions honestly, correcting misconceptions about the disease process, treatment, or prognosis.
- Administer intravenous diazepam as ordered before cardioversion.
- Document pretreatment vital signs, level of consciousness, and peripheral pulses.
- Place emergency cart with drugs and airway management supplies in client unit.
- Assist with cardioversion as indicated.
- Assess LOC, level of sedation, cardiovascular and respiratory status, and skin condition following cardioversion.
- Document procedure and postcardioversion rhythm, and response to intervention.

**EVALUATION**
Intravenous verapamil lowers Ms. Vasquez’s heart rate to 138 for a short time, after which it increases to 164 with BP of 82/64. Her cardiologist, Dr. Mullins, performs carotid sinus massage. The ventricular rate slows to 126 for 2 minutes, revealing atrial flutter waves, and then returns to a rate of 150. Dr. Mullins explains the treatment options, including synchronized cardioversion. Ms. Vasquez agrees to the procedure.

Ms. Vasquez is lightly sedated and synchronized cardioversion is performed. One countershock converts Ms. Vasquez to regular sinus rhythm at 96 beats/min with BP 112/60.

Ms. Vasquez is sleepy from the sedation but recovers without incident. She states that she feels “much better,” and her vital signs return to her normal levels. She remains in NSR with a rate of 86 to 92 for the remainder of her hospital stay. Dr. Mullins places Ms. Vasquez on furosemide to treat manifestations of mild heart failure.

**CRITICAL THINKING IN THE NURSING PROCESS**
1. What is the scientific basis for using carotid massage to treat supraventricular tachycardias? Was this an appropriate maneuver in the case of Ms. Vasquez?
2. What other treatment options might the physician have used to treat Ms. Vasquez’s supraventricular tachycardia if she had been asymptomatic with stable vital signs?
3. Develop a teaching plan for Ms. Vasquez related to her prescription for furosemide.

*See Evaluating Your Response in Appendix C.*