2. A-FIB rarely requires cardioversion in the field. As it is difficult to ascertain the onset of this rhythm, the risk of stroke needs to be considered prior to cardioversion
3. A wide-complex irregular rhythm should be considered pre-excited A-FIB; extreme care must be taken in these patients
    a. Characteristic EKG findings include a short PR interval and, in some cases, a delta wave
    b. Avoid AV nodal blocking agents such as adenosine, calcium channel blockers, digoxin, and possibly beta-blockers in patients with pre-excitation A-FIB (e.g., Wolff-Parkinson-White Syndrome, Lown-Ganong-Levine Syndrome) because these drugs may cause a paradoxical increase in the ventricular response
    c. Blocking the AV node in some of these patients may lead to impulses that are transmitted exclusively down the accessory pathway, which can result in ventricular fibrillation
    d. Amiodarone or procainamide may be used as an alternative
4. Amiodarone or procainamide can be used as a rate-controlling agent for patients who are intolerant of or unresponsive to other agents, such as patients with CHF who may not otherwise tolerate diltiazem or metoprolol
    a. Caution should be exercised in those who are not receiving anticoagulation, as amiodarone can promote cardioversion
5. Administer metoprolol to patients with SBP greater than 120 mmHg
    a. Worsening CHF, chronic obstructive pulmonary disease (COPD), asthma, as well as hypotension and bradycardia can occur with use of metoprolol
6. Biphasic waveforms have been proven to convert A-FIB at lower energies and higher rates of success than monophasic waveforms
    a. Strategies include dose escalation (70, 120, 150, 170 joules (J) for biphasic or 100, 200, 300, 360 J for monophasic) versus beginning with single high energy/highest success rate for single shock delivered
7. Studies in infants and children have demonstrated the effectiveness of adenosine for the treatment of hemodynamically stable or unstable SVT
8. Adenosine should be considered the preferred medication for stable SVT
    a. Verapamil may be considered as alternative therapy in older children but should not be routinely used in infants
    b. Procainamide or amiodarone given by a slow IV infusion with careful hemodynamic monitoring may be considered for refractory SVT

Pertinent Assessment Findings

None noted

Patient Safety Considerations

1. Only use one antidysrhythmic at a time
2. Patients who receive beta-blockers (e.g., metoprolol) with calcium channel blockers (e.g., diltiazem) are at increased risk for hypotension and bradycardia
3. If using cardioversion, consider sedation and pain control
4. With irregular wide complex tachycardia (A-FIB with aberrancy such as Wolff-Parkinson-White and Lown-Ganong Levine), avoid use of AV nodal blocking agents (e.g., adenosine, calcium channel blockers, beta-blockers)
5. Patients with Wolff–Parkinson–White should be given procainamide prior to amiodarone