Indications and Administration:

Tachycardias not of sinus origin, usually with a ventricular rate >150 beats/min with serious signs and symptoms related to the tachycardia. These include chest pain, dyspnea, decreased level of consciousness, hypotension, and pulmonary edema

Precautions:

1. Always “clear” the patient before administering a shock.
2. A patient who is talking to you is probably perfusing adequately but may be relatively unstable depending on the degree of chest pain or shortness of breath.
3. Lifepack 12 defibrillators can be configured to remain in SYNC mode or to return to asynchronous mode after discharge. It is important that you know how your defibrillator is configured. On other defibrillators, reactivation of the sync mode is often required after each attempt at cardioversion. Know your equipment.
4. Defibrillate immediately if patient goes into VF.
5. Synchronized cardioversion cannot be performed unless the patient is connected to the ECG cable and the ECG electrodes. Select lead II or lead with greatest QRS complex amplitude (positive or negative).
6. If the defibrillator does not discharge on synch with ventricular tachycardia, try increasing the amplitude. The waves may not have enough amplitude to trigger the synch mechanism.
7. If sinus rhythm is achieved only transiently with cardioversion, subsequent cardioversion at a higher energy setting is of no value. Leave energy setting the same and consider alteration of other variables.
8. Patients with rapid atrial fibrillation who are unstable may need more joules to cardiovert, especially if they have chronic or paroxsymal atrial fibrillation.
9. Sinus tachycardia greater than 150 can be seen. Sinus tachycardia can be seen in the very sick pts. However, do not cardiovert sinus tachycardia.

Technique:

1. Pre-medicate with a benzodiazepine whenever possible.

Cardioversion

2. Place hands-off pads on patient’s chest and connect to monitor. Attach limb leads.
3. Push Synchronize button and look for markers on the R wave.
4. Energy sequence:
   a. 100J, 200J, 300J, 360J for VT and atrial fibrillation
   b. 50J, 100J, 200, 300J, 360J for PSVT and atrial flutter
5. Charge defibrillator.
6. Clear patient and press shock.
7. If defibrillator doesn’t fire, adjust amplitude and try again, or turn off sync and manually defibrillate.
8. If patient goes into VF, turn off sync, set energy to 200J and defibrillate immediately.

Notes:

1. Erythema or skin irritation may occur if skin contact is inadequate.
2. Children with structural congenital heart disease are at greater risk for VT. What looks like SVT could be VT, unless the child has a know history of SVT. Sometimes congenital heart disease remains undiagnosed until it shows up during athletic exertion later in life.
3. VF and asystole are rarely a complication of cardioversion and usually occur in the setting of digitalis toxicity.

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