SYNCHRONIZED CARDIOVERSION

OVERVIEW:

Synchronized electrical cardioversion causes a rapid and complete depolarization of cardiac tissues. Under many circumstances synchronized electrical cardioversion is the quickest and most effective method of correcting a life-threatening dysrhythmia.

INDICATIONS:

- Patients who are exhibiting hemodynamically unstable tachycardias (wide or narrow complex).
  - Patients are unstable if they display one or more of the following:
    - Altered mental status
    - Chest pain
    - Syncope
    - Dyspnea
    - Hypotension
    - Pulmonary congestion
    - CHF
    - AMI
  - In most situations, Synchronized cardioversion is usually reserved for those adult patients with heart rates over 150 beats/minute.

CONTRAINDICATIONS:

- Supraventricular tachycardia induced by non-cardiac conditions (medication – digitalis toxicity, hypovolemia, hyperthermia, hypoxia, etc.).

PROCEDURE:

- Explain procedure and reassure patient
- Initiate sedation with Midazolam 2.5mg – 5mg IV/IO/IN/IM
  - May defer sedation if patient’s level of consciousness is significantly diminished and the patient is hemodynamically unstable – administering after procedure is acceptable
- Place defib/cardioversion pads on patient in accordance with manufacture’s recommendation for cardiac device being used.
  - Anterior/Lateral or Anterior/Posterior
- Set cardiac device to Synchronize with QRS complexes
- Select appropriate initial energy setting per manufacture’s recommendation for cardiac device being used:
  - Wide Complex Tachycardias (e.g., 100J for Physio 75J for Zoll etc)
  - Narrow Complex Tachycardias (e.g., 50J for Physio 70J for Zoll etc)
- Clear the patient and deliver shock
- Re-assess patient and repeat procedure as required

CONSIDERATIONS:

- If energy is delivered without synchronization, ventricular fibrillation could result
- Depending upon the cardiac device being used, synchronization may be required following each counter shock – refer to the operational materials for your specific device.
- Ensure synchronization is turned OFF if defibrillation becomes necessary.