Protocol
C-05

SECTION: C-05

TITLE: Adult Wide-Complex Tachycardia

REVISED: November 1, 2017

Adult Wide-Complex Tachycardia

This protocol includes ventricular tachycardia with a pulse, Torsades with a pulse, and wide-complex tachycardias of unclear origin. When possible, a 12-lead may be helpful in determining rhythm origin.

BLS-Specific Care *See Adult General Cardiac Care and ACS Protocol C-3*

AEMT/O.M. SPECIFIC CARE: *See Adult General Cardiac Care/ACS Protocol C-3*

ALS-Specific Care *See Adult General Cardiac Care and ACS Protocol C-3*

Cardioversion for hemodynamically UNSTABLE patients

- Settings for manual synchronized cardioversion :

Rhythm	ZOLL	Physio Control LP12/15	Philips MRx
Atrial Flutter	75j, 120j,150j,200j	100j, 200j, 300j, 360j	100j, 150j, 200j,
Atrial Fibrillation	75j, 120j,150j,200j	100j, 200j, 300j, 360j	100j, 150j, 200j,
V-Tach w/ pulse	75j, 120j,150j,200j	100j, 200j, 300j, 360j	100j, 150j, 200j
SVT	75j, 120j,150j,200j	100j, 200j, 300j, 360j	100j, 150j, 200j

    - Ensure "**SYNC**" button is pressed between each desired synchronized shock
- If synchronization is not obtained, proceed with unsynchronized cardioversion at the same settings
- Sedation/Analgesia prior to cardioversion is highly desirable, but not mandatory. If IV access cannot be obtained for prompt sedation, then cardioversion may be performed without sedation
    - *See Sedation for Painful Procedures M-15 for medications and doses*
    - Use Midazolam (Versed) for sedation in cardioversion.

Antiarrhythmics:

- Amiodarone
    - 150 mg IV infusion over 10 minutes. May repeat every 10 minutes as needed. (max dose of 300 mg).
    - **To Mix**: Mix 150 mg /100 ml NS in a buretrol and drip Run at equivalent of 600 ml/hr.

- Lidocaine
  - 1.0-1.5 mg/kg slow IV bolus followed by additional doses of 0.5-0.75 mg/kg every 5minutes **not to exceed 3 mg/kg or 300 mg in 30 minutes (not including infusion).**
  - If ectopy resolves, can set up a continuous infusion.
    - (Be sure to rebolus @ 0.5-0.75 mg/kg in 8-10 minutes to maintain therapeutic levels of lidocaine)

Adenosine (Adenocard): Consider Adenosine for **suspected SVT with aberrancy**. Use Lidocaine or Amiodorone instead of Adenosine in cases of **known VT**

- IV: 6 mg **rapid IVP**
- Repeat at 12 mg in 3-5 minutes two times PRN (total 30 mg)
- Follow each dose with a flush of at least 20-60 ml

- For hemodynamically <u>STABLE</u> patients presenting with wide complex tachycardia, antidysrhythmic therapy is indicated.

- Magnesium sulfate IV/IO:
  - First line agent in treatment of hemodynamically stable polymorphic wide complex tachycardia (torsades de pointes.)
  - Also indicated in treatment of refractory VF/VT, wide complex tachycardia in the presence of suspected hypomagnesmia and life threatening ventricular dysrhythmias due to suspected digitalis toxicity
    - IV/IO: 2 g every 5 minutes, 1st line for Torsades or refractory V-Fib/Pulseless V-Tach.
    - **To Mix:** 2 g (4ml), dilute to a total of 20 ml to make 10% solution. Do not give faster than 1 g/minute
    - **Repeat PRN every 5 minutes to a max of 8 grams**

Consider sedation prior to cardioversion if it will not cause unnecessary delays.

- **DO NOT** administer sedation if:
  - Systolic BP < 90 mmHg
  - Low respiratory rate, SpO2 and/or diminished mental status