

SECTION: C-5**TITLE: Adult Wide-Complex Tachycardia****REVISED: October 15, 2014**

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

ILS-Specific Care See Adult General Cardiac Care and 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
 - 200j ⇒ 300 j ⇒ 360j LP15
 - 100j ⇒ 150j ⇒ 200j MRx
 - Other monitors per manufactures recommendations
 - 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. Mix 150 mg in 20ml NS in a buretrol and drip at a rate of 120 gtts/min
- Lidocaine
 - IV: 1-1.5 mg/kg, repeated at 0.5-0.75 mg/kg every 5 minutes for continued ectopy. Max. bolus of 3 mg/kg or 300 mg in 30 min
 - Maintenance Infusion 2-4 mg/minute titrated for effect. Must bolus again with Lidocaine in 5-10 minutes after initiation of the drip to reach therapeutic levels unless max bolus dose has been reached

Adult Wide-Complex Tachycardia

- 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 STABLE 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, wide complex tachycardia in the presence of suspected hypomagnesemia and life threatening ventricular dysrhythmias due to suspected digitalis toxicity
 - 1-2 g over 5 minutes
 - Rapid administration of magnesium sulfate (i.e. rates >1 g/min) can cause hypotension and respiratory depression. Carefully monitor both during infusion
 - To prepare:
 - 1-2 g diluted to 50 ml with NS in buretrol administered IV over approximately 5 minutes
 - Start infusion with roller-clamp half open and titrate to rate of approximately 10 ml/minute

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

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