



ORANGE COUNTY EMERGENCY MEDICAL SERVICES  
BASE HOSPITAL TREATMENT GUIDELINES  
ADULT/ADOLESCENT

#: BH-C-25  
Page: 1 of 2  
Org. Date: 12/2006  
Effective Date: 4/01/17

**NARROW QRS COMPLEX TACHYCARDIA**

**BASE GUIDELINES**

1. Determine ALS Standing Order treatments/procedures rendered prior to base hospital contact. Use ALS standing order as guidelines for treatments/procedures not initiated prior to base hospital contact.
2. **Supraventricular tachycardia** is defined as a regular, narrow QRS complex rhythm with a rate of 160 bpm or above.

If heart rate is 150 bpm and regular, consider **atrial flutter** to be underlying rhythm and treat using Narrow QRS Complex Tachycardia algorithm.

Irregular narrow complex QRS tachycardia is usually **atrial fibrillation** or **multifocal atrial tachycardia** rhythms that are not usually responsive to adenosine, consider one dose of adenosine and fluid challenge (if lungs clear to auscultation) and immediate transport. If hemodynamically unstable, consider immediate cardioversion, (but only if confirmed unstable and near cardiac arrest).

Tachycardia with rates below 150 bpm can be considered **sinus tachycardia**. Consider shock (including sepsis) if poor perfusion (low BP) and treat with an initial fluid bolus. There are many other causes for sinus tachycardia including medication reactions, toxins, primary cardiac disorders among the more common that are encountered. If tachycardia is presenting with systolic BP equal to or greater than 90, assess for oxygenation (supplemental O<sub>2</sub> for saturation under 95%) and consider immediate transport. If chest pain present and sinus tachycardia, use BH-C-15 Chest Pain Guidelines.

3. **Unstable patients**, especially those with altered mental status, may require immediate cardioversion without premedication.
4. **Unstable patients** may require unsynchronized cardioversion (defibrillation) if "synch" mode does not occur.

**ALS STANDING ORDER**

General:

1. Monitor and document cardiac rhythm with rhythm strip.
2. Pulse oximetry; if room air oxygen saturation less than 95%:
  - ▶ *High-flow oxygen by mask or nasal cannula at 6 l/min flow as tolerated.*

**Heart Rate 100 up to 150:**

1. Assess for signs of hypovolemia; if hypovolemia suspected and lungs clear on auscultation (no signs of CHF):
  - ▶ *Normal Saline, infuse 250 mL, repeat up to maximum 1 liter to maintain adequate perfusion.*
  - (assess lung sounds, discontinue fluid infusion if rales develop).*

**Heart Rate 150 and above:**

1. Assess for signs of hypovolemia; if hypovolemia suspected and lungs clear on auscultation (no signs of CHF):
  - ▶ *Normal Saline, infuse 250 mL, repeat up to maximum 1 liter to maintain adequate perfusion.*
  - (assess lung sounds, discontinue fluid infusion if rales develop).*
2. If mild chest discomfort, lightheadedness, or diaphoresis:
  - A. Attempt Valsalva maneuvers.
  - B. If monitor showing regular narrow QRS heart rate after attempted Valsalva maneuver, give:
    - ▶ *Adenosine: 12 mg rapid IV, may repeat one time after 3 minutes.*
3. Heart rate  $\geq$  150 with cardiac chest discomfort, altered mental status, or systolic BP less than 90 systolic:
  - A. Synchronized cardioversion: *100 J initial shock; may repeat once with maximum energy if no conversion on first shock (or use manufacturer's recommended cardioversion energy).*
4. ALS escort to nearest ERC or contact Base Hospital as needed.

Approved:

Reviewed: 4/15, 11/16  
Final Date for Implementation: Apr 01, 2017  
OCEMS copyright © 2017



ORANGE COUNTY EMERGENCY MEDICAL SERVICES  
BASE HOSPITAL TREATMENT GUIDELINES  
ADULT/ADOLESCENT

#: BH-C-25  
Page: 2 of 2  
Org. Date: 12/2006  
Effective Date: 4/01/17

**NARROW QRS COMPLEX TACHYCARDIA**

**BASE GUIDELINES**

5. Hold adenosine for **wide complex** tachycardia defined as QRS greater than 0.12 seconds (3 small ECG boxes). See BH-C-40.
6. Special situations for heart rate greater than 150 bpm:
  - If partial or incomplete conversion after a first 12 mg Adenosine dose, may repeat 12 mg Adenosine IV once after 3 minutes.
  - If heart rate  $\geq$  150 and regular with cardiac chest pain altered mental status or systolic BP less than 90 systolic, Consider repeated *Cardioversion: at full voltage*.
  - If patient becomes pulseless, treat according to *BH-C-10/SO-C-10 Cardiopulmonary Arrest – Adult/Adolescent Non-Traumatic*.
7. Consider sedation for cardioversion if patient alert and systolic BP greater than 90:
  - ▶ *Midazolam (Versed<sup>TM</sup>) 5 mg IN/IV*  
Do not delay cardioversion for IV access if patient is unstable.  
(*Assist ventilation and maintain airway if respiratory depression develops*).

**ALS STANDING ORDER**

**TREATMENT GUIDELINES:**

- This Standing Order applies when the Heart Rate is greater than 100, rhythm is regular and the width of the base of the QRS complex is less than 0.12 seconds (3 small ECG boxes).
- Do not give adenosine when the rhythm is wide complex QRS and irregular, this can result in worsening of cardiac status.
- Unstable patients, especially those with altered mental status, may require immediate cardioversion without premedication.
- Unstable patients may require unsynchronized cardioversion (defibrillation) if "synch" does not occur.
- If heart rate is 150 beats per minute and regular, likely rhythm is atrial flutter which rarely responds to adenosine; if unstable and rhythm is 150 and regular, there is usually a good response to cardioversion.

Approved:

Reviewed: 4/15, 11/16  
Final Date for Implementation: Apr 01, 2017  
OCEMS copyright © 2017