

**REGION I EMERGENCY MEDICAL SERVICES
STANDING MEDICAL ORDERS
EMT – Intermediate**

SMO: Adult Narrow Complex Tachycardia

Overview: Treatment of tachyarrhythmias is separated into narrow complex and wide complex tachycardias. The urgency with which tachyarrhythmias require treatment is guided by two considerations: (1) evidence of hypoperfusion (shock, altered mental status, anginal chest pain or pulmonary edema) and (2) the potential to degenerate into a more serious arrhythmia or cardiac arrest. This protocol divides the approach to the patient with narrow complex tachycardia into 1) stable and 2) unstable with criteria defining each. Please note that a patient can deteriorate in status and will require frequent reassessments.

INFORMATION NEEDED

- History of arrest:
- Witnessed collapse: time down and preceding symptoms
- Unwitnessed collapse: time down and preceding symptoms if known
- Bystander CPR and treatments, including First Responder, AED or PAD defibrillation, given prior to arrival
- Past medical history: diagnosis, medications
- Scene: evidence of drug ingestion, hypothermia, trauma, Valid DNR form, nursing home or hospice patient

OBJECTIVE FINDINGS

- Mental status
- Blood pressure
- Evidence of CHF

STABLE-defined as:

- Normal mental status AND/OR
- Signs of normal or mildly decreased perfusion

TREATMENT

- Pulse Oximetry
- High flow oxygen if hypoxemic
- Shock position
- Regular reassessment of vital signs and signs of perfusion
- RMC
- Obtain 12 ECG Lead if available
- Consider vagal maneuvers (Valsalva, cough or breath holding)
- Contact Medical Control for use of **Adenosine 6 mg rapid IVP** flushed with 20 cc NS bolus
- If dysrhythmia persists 1-2 minutes after initial dose, consult Medical Control to repeat
- Adenosine 12 mg rapid IVP** flushed with 20 cc NS, for additional dose contact Medical Control.

UNSTABLE-defined as:

- Signs of poor perfusion:
- Decreased level of consciousness
- SBP<90 (with signs/symptoms of hypoperfusion)
- CHF (rales)
- Moderate to severe chest pain

TREATMENT

- BLS airway support
- High flow oxygen 15 L/min; assist ventilations via bag valve mask or advance airway techniques as indicated.
- Pulse oximetry
- Shock position
- Regular reassessment of vital signs and signs of perfusion
- Routine Medical Care
- Synchronized cardioversion** (Narrow Regular-50-100 J, Narrow Irregular120-200J, Wide Regular 100 J,biphasic); Contact Medical Control for permission to administer **Valium (diazepam) 5 mg IVP** or **Versed (midazolam) 2mg IVP** for sedation prior to cardioversion if patient SBP \geq 100 mm Hg.
- Obtain 12 ECG Lead if available (not to delay patient care)
- Contact Medical Control for permission to administer **Morphine sulfate 2 mg IVP** for pain control if needed if patient SBP \geq 100 mm Hg (see PAIN MANAGEMENT protocol)

Documentation of Adherence to Protocol:

- Stability documented (chart contains word “stable” or “unstable” and the criteria on which that determination was made)
- Stable patients receive either valsalva maneuver or adenosine
- Cardioverted patients receive sedation if conscious and SBP \geq 100.
- Correct doses of medications administered if indicated

Medical Control Contact Criteria

- Permission to administer Valium or Versed prior to cardioversion.
- Permission to administer Morphine Sulfate for pain management.

PRECAUTIONS AND COMMENTS

- A narrow QRS complex is defined as less than 0.12 seconds.
- If the rate is less than 150 bpm, consider sinus tachycardia. Sinus tachycardia is most likely secondary to some other factor such as hypoxia, hypovolemia, pain, fever, etc.
- Adenosine administration is associated with flushing, dyspnea and chest pain, which resolves within 1 to 2 minutes in most patients. These symptoms may be alarming and patients should be advised accordingly.
- Adenosine should only be used when a supraventricular origin is strongly suspected. Do not use to discriminate ventricular tachycardia from supraventricular tachycardia with aberrancy.
- Do not use Adenosine on a patient with a known history of Wolff-Parkinson-White (WPW) syndrome.

Approved: 3/2/2012
Revised:7/1/2011, 11/11
EMS/ Region1 SMOs

**REGION I EMERGENCY MEDICAL SERVICES
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EMT – Paramedic**

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TREATMENT

- High flow oxygen
- Pulse Oximetry
- Shock position
- Regular reassessment of vital signs and signs of perfusion
- RMC
- Obtain 12 Lead ECG if available
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- Adenosine 6 mg rapid IVP** flushed with 20 cc NS bolus
- If dysrhythmia persists 1-2 minutes after initial dose, repeat **Adenosine 12 mg rapid IVP** flushed with 20 cc NS bolus for additional dose contact Medical Control.

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- Routine Medical Care
- Synchronized cardioversion** (Narrow Regular-50-100 J, Narrow Irregular120-200J, Wide Regular 100 J,biphasic); **Valium (diazepam) 5 mg IVP** or **Versed (midazolam) 2mg IVP** for sedation prior to cardioversion if patient SBP \geq 100 mm Hg. May repeat dose up to 10 mg maximum.
- Morphine sulfate 2 mg IVP** for pain control to maximum of 10 mg if needed if patient SBP \geq 100 mm Hg. (see PAIN MANAGEMENT Protocol)
- Obtain 12 Lead ECG if available (not to delay patient care)

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