

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

**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 or medallion, 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**

- High flow oxygen
- Pulse Oximetry
- Shock position
- Regular reassessment of vital signs and signs of perfusion
- RMC
- Consider vagal maneuvers (Valsalva, cough or breath holding)
- 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 repeat q 1-2 minutes up to maximum of 30 mg.

**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 10-15 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** (100 J, 200 J, 300 J, and 360 J for monophasic; or equivalent 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)

**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.

**PRECAUTIONS AND COMMENTS**

- A narrow QRS complex is defined as less than 0.12 seconds.
- If the rate is less than 160 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.

7/04

Reviewed:

Revised:

EMS/ Region1 SMOs