

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

SMO: Pediatric Dysrhythmias: Tachycardia

Overview: Tachycardia in children may be a serious symptom of an underlying problem. This protocol is intended to give EMS providers response guidelines through the identified assessment and treatment parameters for these children.

INFORMATION NEEDED

- ___ History, onset and duration of symptoms, fluid loss, fever, nausea, vomiting, trauma, appearance, and neurological baseline
- ___ History of cardiac disease, surgery, previous episodes, previous treatment required, medications currently prescribed or possibility of ingestion
- ___ History of respiratory or respiratory insufficiency, failure, obstruction, or respiratory arrest
- ___ Antecedent symptoms; dizziness, syncope, or other related chief complaint

OBJECTIVE FINDINGS

*** Signs of decreased perfusion, CHF, and or tachyarrhythmia**

Sinus Tachycardia

- Onset
- Progression
- Fluid loss
- Trauma
- Rate: infant usually <220 bpm, child usually < 180 bpm.

SVT

- Onset; sudden
- Rate: infant usually >220bpm
child usually > 180bpm

Ventricular Tachycardia

- Onset, sudden
- Rate : 120 bpm

Clinical signs of resp. distress or failure/hypoxemia

- Apnea
- Retractions, flaring or grunting

Signs of decreased perfusion

- AMS/Abnormal appearance
- Inequality of central and distal pulses
- Slowed or absent capillary refill<3 sec
- Hypotension and loss of distal pulses

TREATMENT

- ___ RMC , rapid transport
- ___ ABC's—oxygenation and ventilation, Oxygen high flow by NRB mask; if no response assist ventilations using BVM and 100% oxygen
- ___ Shock position for decreased perfusion as needed
- ___ 100% Oxygen by mask
- ___ Consider ALS intercept.

Documentation of adherence to protocol:

- Respiratory status—airway treatment provided as needed
- Perfusion status—color, pulses, capillary refill
- Response to treatment

Medical Control Contact Criteria

* Contact Medical Control if any question exists as to the best option for the patient.

PRECAUTIONS AND COMMENTS

- In children, Tachycardia almost always means poor perfusion and hypoxia
- Be prepared to support ventilations and oxygenation.

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

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TREATMENT

- ___ RMC, Rapid Transport
- ___ ABC's—oxygenation and ventilation, Oxygen high flow by NRB mask; if no response assist ventilations using BVM and 100% oxygen
- ___ Shock position for decreased perfusion as needed
- ___ 100% Oxygen by mask
- ___ Cardiac monitor
- ___ IV access as needed

7/04

Reviewed:

Revised:

EMS/ Region1 SMOs

__ Treat underlying cause

TREATMENT (cont)

- Fluid bolus 20 ml/kg, repeat times 3 as indicated.
- Reassess, if signs of hypovolemic shock, refer to pediatric shock protocol

Stable SVT

- Attempt vagal maneuvers (See precautions and comments)
- Diminished perfusion, but patient is responsive, Per Medical Control, **Adenosine 0.1 mg/kg rapid IV/IO. (maximum first dose is 6mg. May repeat per Medical Control x 1 at 0.2 mg/kg, maximum second dose is 12mg).**

Unstable SVT

- Per medical control, **synchronized cardioversion**, 1.0 joule/kg. Reassess and repeat x 1 if indicated.
- Fluid bolus of 20 ml/kg
- For sedation of patient prior to cardioversion, per physician order, **Valium (diazepam) 0.1mg/kg IV/IO slow or Versed (midazolam) 2 mg IVP.**

Stable Ventricular Tachycardia

- Contact Medical Control for administration of **Lidocaine 1mg/kg IV / IO**, may repeat x 1 in 5 minutes.

Unstable Ventricular Tachycardia

- Contact Medical Control for administration of **Lidocaine 1mg/kg IV / IO**
- Per medical control, **synchronized cardioversion**, 1.0 joule/kg. Reassess and repeat x 1 if indicated.
- For sedation of patient prior to cardioversion, **Valium (diazepam) 0.1mg/kg IV/IO slow or Versed (midazolam) 2 mg IVP.**
- If ventricular tachycardia persists, per medical control , **Lidocaine 1mg/kg IV/IO** to maximum of 3 mg/kg
- Consider fluid challenge of 20ml/kg

Documentation of adherence to protocol:

- Respiratory status—airway treatment provided as needed
- Perfusion status—color, pulses, capillary refill
- Medication administration
- Cardioversion
- Rhythm analysis
- Response to treatment

Medical Control Contact Criteria

- Contact Medical Control if any question exists as to the best option for the patient.
- Contact Medical control for medication and cardioversion therapy

PRECAUTIONS AND COMMENTS

- In children, Tachycardia almost always means poor perfusion and hypoxia
- Be prepared to support ventilations and oxygenation.
- Example of vagal maneuvers in the infant and pre-school patient is ice cold water to face (place cold washcloth over forehead and face without obstructing airway). In older children use valsalva maneuvers.
- Remember to use pediatric paddles for cardioversion.