

San Joaquin County
Emergency Medical Services Agency



Pediatric Tachycardia with Pulses

AUTHORITY:

Division 2.5, Health and Safety Code, Sections 1797.220 & 1798 et seq.

DEFINITIONS:

- A. "**Sinus Tachycardia**" indicates a rapid heart rate with a narrow QRS (less than or equal to 0.08 sec.) that is less than 220/min. in an infant or less than 180/min. in a child.
- B. "**Supraventricular Tachycardia**" indicates a rapid heart rate with a narrow QRS (less than or equal to 0.08 sec.) that is greater than 220/min. in an infant or greater than 180/min. in a child.
- C. "**Ventricular Tachycardia**" indicates a rapid heart rate with a wide QRS (greater than 0.08 sec.).

POLICY:

- I. Perform routine ALS/BLS medical care as directed in EMS Policy No. 5502, Routine BLS Care, EMS Policy No. 5701, Routine ALS Care and EMS Policy No. 5800, Pediatric Routine Medical Care.
- II. Treatment:
 - A. Consider pediatric normal values for heart rate. Infants may have heart rates as high as 220/min. and children may have heart rates as high as 180/min. in the presence of fever, anxiety, and/or pain.
 - B. Manage airway and ventilations as indicated.
 - C. Obtain vascular access.
 - D. Treat according to rhythm:
 - 1. **Sinus Tachycardia:**
 - a. Consider and treat underlying cause (fever, pain, trauma, hypovolemia).
 - b. Consider fluid bolus of NS 20 ml/kg IV/IO. May repeat as indicated.
 - c. Recheck vital signs after each bolus.
 - d. If suspected trauma, refer to EMS Policy No. 5833, Pediatric Trauma.

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Approved:


Medical Director


EMS Administrator

2. Supraventricular Tachycardia:**a. Stable:**

1. Attempt vagal maneuver.
2. If unsuccessful, administer Adenosine 0.1mg/kg rapid IV push (maximum dose of 6 mg) followed by rapid 20ml flush of NS.
3. If unsuccessful, administer Adenosine 0.2mg/kg rapid IV push (maximum dose of 12 mg) followed by rapid 20ml flush of NS.

b. Unstable:

1. Transport without delay.
2. Administer Adenosine 0.1mg/kg rapid IV push (maximum dose of 6mg) followed by rapid 20ml flush of NS while setting up to perform cardioversion.
3. Consult base hospital physician for orders:
 - If responsive, administer Midazolam 0.05 mg/kg (maximum dose of 2mg) prior to cardioversion.
 - Perform synchronized cardioversion at 1J/kg.
 - If no response, perform synchronized cardioversion at 2J/kg.

3. Ventricular Tachycardia:

- a. If no pulse refer to EMS Policy No. 5811, Pulseless Arrest: VFIB/VTACH.

b. Stable:

1. Administer Lidocaine 1mg/kg IV/IO. May repeat once in 3-5 minutes.

c. Unstable:

1. Transport without delay.
2. Administer Lidocaine 1 mg/kg IV/IO while setting up to perform cardioversion.
3. Consult base hospital physician for orders:
 - If responsive, administer Midazolam 0.05 mg/kg (maximum dose of 2 mg) prior to cardioversion.
 - Perform synchronized cardioversion at 1J/kg.
 - If no response, perform synchronized cardioversion at 2J/kg.
 - If no response, perform synchronized cardioversion at 4J/kg.
- d. If cardioversion is successful, consult with base hospital physician for post cardioversion medication orders.

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