Pediatric Cardiac Protocol Section

Pediatric Tachycardia

Narrow Complex (≤ 0.09 sec)



History

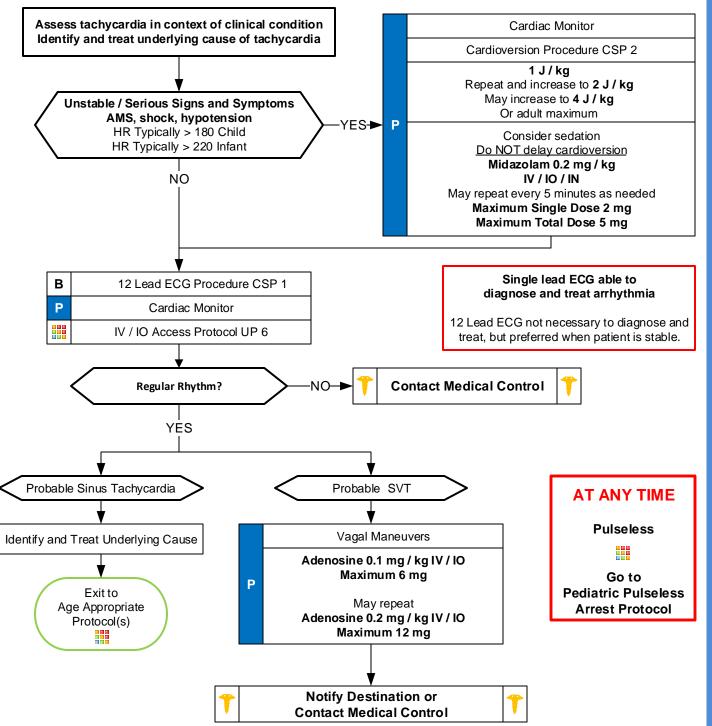
- Past medical history
- Medications or Toxic Ingestion (Aminophylline, Diet pills, Thyroid supplements, Decongestants, Digoxin)
- * Drugs (nicotine, cocaine)
- Congenital Heart Disease
- Respiratory Distress
- Syncope or Near Syncope

Signs and Symptoms

- Heart Rate: Child > 180/bpm Infant > 220/bpm
- * Pale or Cyanosis
- * Diaphoresis
- * Tachypnea
- Vomiting
- Hypotension
- * Altered Level of Consciousness
- * Pulmonary Congestion
- Syncope

Differential

- Heart disease (Congenital)
- Hypo / Hyperthermia
- Hypovolemia or Anemia
- * Electrolyte imbalance
- * Anxiety / Pain / Emotional stress
- * Fever / Infection / Sepsis
- Hypoxia, Hypoglycemia
- Medication / Toxin / Drugs (see HX)
- Pulmonary embolus
- * Trauma, Tension Pneumothorax



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Pearls

- * Recommended Exam: Mental Status, Skin, Neck, Lung, Heart, Abdomen, Back, Extremities, Neuro
- Monomorphic QRS:
 - All QRS complexes in a single lead are similar in shape.
- * Polymorphic QRS:
 - QRS complexes in a single lead will change from complex to complex.
- Use length-based or weight-based pediatric resuscitation system for medication, equipment, cardioversion, and defibrillation guidance. Pediatric paddles should be used in children < 10 kg.</p>
- * Rhythm should be interpreted in the context of symptoms and pharmacological or electrical treatment given only when symptomatic, otherwise monitor and reassess.
- * 12-Lead ECG:
 - 12-Lead ECG not necessary to diagnose and treat.
 - Obtain when patient is stable and/or following rhythm conversion.
 - When administering adenosine, obtaining a continuous 12-Lead can be helpful to physicians.
- * Unstable condition:
 - Condition which acutely impairs vital organ function and cardiac arrest may be imminent.
 - If at any point patient becomes unstable move to unstable arm in algorithm
 - If IV or IO access is in place, may administer adenosine and repeat, prior to synchronized cardioversion.
- * Document all rhythm changes with monitor strips and obtain monitor strips with each therapeutic intervention.
- * Serious Signs and Symptoms:
 - Respiratory distress / failure.
 - Signs of shock / poor perfusion with or without hypotension.
 - AMS
 - Sudden collapse with rapid, weak pulse
- ***** Narrow Complex Tachycardia (≤ 0.09 seconds):
 - Sinus tachycardia: P waves present. Variable R-R waves. Infants usually < 220 beats / minute. Children usually < 180 beats / minute.
 - SVT: > 90 % of children with SVT will have a narrow QRS (≤0.09 seconds.) P waves absent or abnormal. R-R waves not variable. Usually abrupt onset. Infants usually > 220 beats / minute. Children usually > 180 beats / minute.
 - Atrial Flutter / Fibrillation
- * Vagal Maneuvers:
 - Breath holding. Blowing a glove into a balloon. Have child blow out "birthday candles" or through an obstructed straw. Infants: May put a bag of ice water over the upper half of the face careful not to occlude the airway.
- Separating the child from the caregiver may worsen the child's clinical condition.
- * Monitor for respiratory depression and hypotension associated with the administration of Benzodiazepines.
- * Continuous pulse oximetry is required for all SVT Patients if available.