Pediatric Supraventricular Tachycardia

**History**
- SAMPLE
  - 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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**Universal Patient Care Protocol**

**Routine Standard of Care**

1. Continuous Cardiac Monitor
2. Attempt to Identify Cause
3. Narrow QRS duration < 0.08 sec

**IV Protocol**

- May attempt Valsalva’s maneuver and / or apply cold packs to face after each drug administration if indicated.
- Adenosine IV/IO (0.1mg/kg)
  - If no change
  - Adenosine IV/IO (0.2mg/kg)

**Synchronized Cardioversion**

- (0.5 Joules/kg)

**IV Protocol**

- For sedation consider
  - Diazepam IV/IO (0.1mg/kg)
  - Midazolam IV/IO (0.1mg/kg)
  - Lorazepam IV/IO (0.1mg/kg)

  - If unsuccessful
  - Repeat Cardioversion
    - (1.0 - 2.0 joules/kg)

**Go to Appropriate Protocol**

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**Pearls**
- Recommended Exam: Mental Status, Skin, Neck, Lung, Heart, Abdomen, Back, Extremities, Neuro
- Carefully evaluate the rhythm to distinguish Sinus Tachycardia, Supraventricular Tachycardia, and Ventricular Tachycardia
- Separating the child from the caregiver may worsen the child’s clinical condition.
- Pediatric pads should be used in children < 10 kg or Broselow-Luten color Purple
- Monitor for respiratory depression and hypotension associated if Diazepam or Midazolam is used.
- Continuous pulse oximetry is required for all SVT Patients if available.
- Document all rhythm changes with monitor strips and obtain monitor strips with each therapeutic intervention.
- As a rule of thumb, the maximum sinus tachycardia rate is 220 – the patient’s age in years.

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**Protocol 45**

This protocol has approved by the Survival Flight Medical Director as of April 2014

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