Pediatric Tachycardia + Pulse and POOR Perfusion Algorithm

Identify and treat the cause of the tachyarrhythmia

Keep airway open and assist breathing & provide oxygen
Monitor rhythm, BP, and O2 Saturation
Establish IV/IO access
12-lead ECG if possible

Check QRS width

- **QRS normal (≤ 0.09 sec)** → **Determine Rhythm**
- **QRS wide (> 0.09 sec)** → **Presume VT**

Sinus Tachycardia

- Identified cause of tachycardia (fever, hypovolemia, etc)
- Rate variability.
- Typically < 220 for infants
- Typically < 180 for children

→ Treat the cause.

Supraventricular Tachycardia (SVT)
(Most common tachyarrhythmia)

- Usually abrupt onset
- Usually no rate variability
- No P-waves
- Typically ≥ 220 for infants
- Typically ≥180 for children

→ Vagal Maneuvers (optional)

→

- IV/IO access if not done yet
- **Adenosine**
- **Synchronized cardioversion** if adenosine is ineffective or no vascular access.

Presume VT → UNSTABLE?
Hypotension
Altered LOC
Signs of Shock

- **YES** → Perform **Synchronized Cardioversion**
- **NO** → **Adenosine** if the rhythm is regular and uniform QRS morphology

→

- Expert Consultation
- Amiodarone
- Procainamide

Synchronized cardioversion

- 0.5-1 J/kg (increase to 2 J/kg if needed)
- Use sedation if possible

Adenosine

- 0.1 mg/kg IV/IO (Max. 6 mg)
- May give 2nd dose of 0.2 mg/kg IV/IO (Max. 12 mg)

**Adenosine should be given rapid IV bolus.

Antiarrhythmics:

- **Amiodarone** 5mg/kg IV over 20-60 min
- **Procainamide** 15 mg/kg IV over 30-60 minutes

**Amiodarone and Procainamide are not typically given together.

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