Resuscitation Algorithm for Tachycardia with Poor Perfusion

Unstable tachycardia with pulse and poor perfusion

Narrow QRS (≤ 0.08 s) ← Evaluate QRS duration → *Wide QRS (> 0.08 s)*

Evaluate rhythm with 12-lead ECG or monitor

Possible ventricular tachycardia

Possible sinus tachycardia:
- Compatible history
- P waves present/ normal
- Variable R-R, constant P-R
- Infants: rate usually < 220/min
- Child: rate usually < 180/min
- Support blood pressure as appropriate with frequent assessments (fluids/ vasoactive agents

Possible SVT:
- Compatible history
- P waves absent/abnormal
- HR not variable
- History of abrupt changes
- Infants: rate usually > 220/min
- Child: rate usually > 180/min

With cardiopulmonary compromise, **immediate synchronised cardioversion:**
- 1 J/kg; if not effective, increase to 2 J/kg
- Sedate if possible but do not delay synchronised cardioversion.
- May attempt adenosine if it does not delay synchronised cardioversion.

Search and treat reversible causes

Consider vagal manoeuvres (no delay)

Expert consult advised before further therapy:
- Other agents as advised by paediatric cardiologists (e.g. calcium channel blockers, propranolol, amiodarone)
- Caution with use of multiple agents (heart block, hypotension)
- Look for reversible causes and manage these accordingly

If IV access is readily available:
- Give IV **adenosine** 0.1 mg/kg rapid bolus (max. first dose 6 mg), may double first dose and give once (max. second dose 12 mg)

If haemodynamically unstable, IV/IO is not available, or adenosine is ineffective:
- **Synchronised cardioversion:**
– 0.5–1 J/kg, if not effective, increase to 2 J/kg as necessary
– Sedate if possible but do not delay synchronised cardioversion