Adult Tachycardia With a Pulse Algorithm

1

Assess appropriateness for clinical condition.
Heart rate typically ≥150/min if tachyarrhythmia.

2

Identify and treat underlying cause

- Maintain patent airway; assist breathing as necessary
- Oxygen (if hypoxemic)
- Cardiac monitor to identify rhythm; monitor blood pressure and oximetry

3

Persistent tachyarrhythmia causing:

- Hypotension?
- Acutely altered mental status?
- Signs of shock?
- Ischemic chest discomfort?
- Acute heart failure?

Yes

4

Synchronized cardioversion

- Consider sedation
- If regular narrow complex, consider adenosine

No

5

Wide QRS? ≥0.12 second

Yes

6

- IV access and 12-lead ECG if available
- Consider adenosine only if regular and monomorphic
- Consider antiarrhythmic infusion
- Consider expert consultation

No

7

- IV access and 12-lead ECG if available
- Vagal maneuvers
- Adenosine (if regular)
- β-Blocker or calcium channel blocker
- Consider expert consultation

Doses/Details
Synchronized cardioversion: Initial recommended doses: • Narrow regular: 50-100 J • Narrow irregular: 120-200 J biphasic or 200 J monophasic • Wide regular: 100 J • Wide irregular: defibrillation dose (*not* synchronized)
Adenosine IV dose: First dose: 6 mg rapid IV push; follow with NS flush. Second dose: 12 mg if required.
Antiarrhythmic Infusions for Stable Wide-QRS Tachycardia
Procainamide IV dose: 20-50 mg/min until arrhythmia suppressed, hypotension ensues, QRS duration increases >50%, or maximum dose 17 mg/kg given. Maintenance infusion: 1-4 mg/min. Avoid if prolonged QT or CHF.
Amiodarone IV dose: First dose: 150 mg over 10 minutes. Repeat as needed if VT recurs. Follow by maintenance infusion of 1 mg/min for first 6 hours.
Sotalol IV dose: 100 mg (1.5 mg/kg) over 5 minutes. Avoid if prolonged QT.