Tachycardia With a Pulse Algorithm

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

Identify and Treat Underlying Cause
- Maintain patient airway; assist breathing as necessary
- Oxygen (if O₂ sat < 94%)
- Cardiac monitor to identify rhythm; monitor blood pressure and oximetry

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

Synchronized Cardioversion*
- Consider sedation
- If regular narrow complex, consider adenosine

Wide QRS? 0.12 second
- Y: IV access and 12-lead ECG if available.
  - Consider adenosine only if regular and monomorphic.
  - Consider antiarrhythmic infusion.
  - Consider expert consultation.

N: 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
- 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.

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Version control: This document is current with respect to 2015 American Heart Association Guidelines for CPR and ECC. These guidelines are current until they are replaced on October 2020. If you are reading this page after October 2020, please contact ACLS Training Center at support@acls.net for an updated document. Version 2016.02.a

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