**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 as indicated
- 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**

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

**Y**
- Consider antiarrhythmic infusion
- Consider expert consultation

**Oxygen as indicated**

**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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**Scholten M, Szili-Torok T, Klootsnej P, Jordaens L, Comparison of monophasic and biphasic shocks for transthoracic cardioversion of atrial fibrillation. Heart 2003;89:1032-1034**