TACHYCARDIA WITH A PULSE ALGORITHM

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

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

IS PERSISTENT TACHYARRHYTHMIA CAUSING:

- HYPOTENSION?
- ACUTE MENTAL STATUS ALTERATION?
- SIGNS OF SHOCK?
- ISCHEMIC CHEST DISCOMFORT?
- ACUTE HEART FAILURE?

Is the QRS wide or narrow (≥ 0.12 second)

- NO
  - IV ACCESS AND 12-LEAD ECG
    - Only if available
  - ADENOSINE
    - Only if regular
  - VAGAL MANEUVERS
  - BETA-BLOCKER OR CALCIUM CHANNEL BLOCKER
  - CONSIDER EXPERT CONSULTATION

- YES

Synchronized Cardioversion

- CONSIDER SEDATION
  - If regular narrow complex, consider adenosine

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

Procyclidine IV dose:
- 20-50 mg/min until arrhythmia suppressed, hypotension ensues, QRS duration increased > 50%, or maximum dose 17mg/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

This Algorithm is based on the latest (2015) American Heart Association standards and guidelines.