

# **Adult Monomorphic Tachycardia**

Wide Complex (≥0.12 sec)

### History

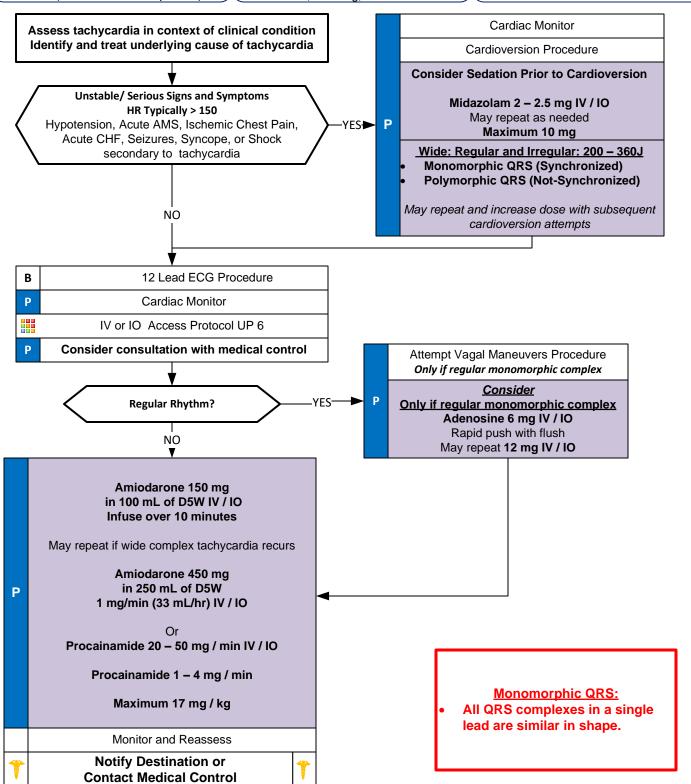
- Age
- Past medical history (MI, Angina, Diabetes, post menopausal)
- · Recent physical exertion
- Palpitations, irregular heart beat
- Time (onset /duration / repetition)

## **Signs and Symptoms**

- Chest pain, heart failure, dyspnea
- AMS
- Shock, poor perfusion, hypotension
- Pale, diaphoresis
- Shortness of breath
- Nausea, vomiting, dizziness

### **Differential**

- Trauma vs. Medical
- Sinus Tachycardia vs. dysrrhythmia
- Fever, sepsis, infection
- Pericarditis, pulmonary embolism
- Aortic dissection or aneurysm
- Overdose: Stimulants





## **Adult Monomorphic Tachycardia**

Wide Complex (≥0.12 sec)

**Adult Cardiac Protocol Section** 

### **Pearls**

- Recommended Exam: Mental Status, Skin, Neck, Lung, Heart, Abdomen, Extremities, Neuro
- Most important goal is to differentiate the type of tachycardia and if STABLE or UNSTABLE and if SYMPTOMATIC.
- 12-Lead ECG:

12-Lead ECG is not necessary to diagnose and treat arrhythmia. A single lead ECG is often all that is needed. Obtain12-Lead when patient is stable and/ or following a rhythm conversion.

Monomorphic QRS:

All QRS complexes in a single lead are similar in shape.

- Polymorphic QRS:
  - QRS complexes in a single lead will change shape from complex to complex.
- Rhythm should be interpreted in the context of symptoms and pharmacological or electrical treatment given only when symptomatic, otherwise monitor and reassess.
- Unstable condition
  - Condition which acutely impairs vital organ function and cardiac arrest may be impending. If at any point patient becomes unstable move to unstable arm in algorithm.
- Symptomatic condition
  - Arrhythmia is causing symptoms such as palpitations, lightheadedness, or dyspnea but cardiac arrest is not impending.
  - Symptomatic tachycardia usually occurs at rates ≥ 150 beats per minute. Patients symptomatic with heart rates < 150 likely have impaired cardiac function such as CHF.
- Serious Signs/ Symptoms:
  - Hypotension. Acutely altered mental status. Signs of shock/ poor perfusion. Chest pain with evidence of ischemia (STEMI, T wave inversions or depressions.) Acute congestive heart failure.
- Search for underlying cause of tachycardia such as fever, sepsis, dyspnea, etc.
- Typical sinus tachycardia is in the range of 100 to (220 patients age) beats per minute.
- If patient has history or 12-Lead ECG reveals Wolfe Parkinson White (WPW), DO NOT administer a Calcium Channel Blocker (e.g., Diltiazem) or Beta Blockers. Use caution with Adenosine and give only with defibrillator available.
- Regular Wide-Complex Tachycardia:

### **Unstable condition:**

Immediate defibrillation if pulseless and begin CPR.

#### Stable condition:

Typically VT or SVT with aberrancy. Adenosine may be given if regular and monomorphic and if defibrillator available.

Verapamil contraindicated in wide-complex tachycardias.

Agencies using Amiodarone, Procainamide, and Lidocaine need to choose one agent primarily. Giving multiple anti-arrhythmics requires contact of Medical Control.

Atrial arrhythmias with WPW should be treated with Amiodarone or Procainamide

• Irregular Tachycardia:

Revised 10/15/2022 Wide-complex, irregular tachycardia: Do not administer calcium channel, beta blockers, or adenosine as this may cause paradoxical increase in ventricular rate. This will usually require cardioversion. Contact Medical Control.

• Document all rhythm changes with monitor strips and obtain monitor strips with each therapeutic intervention.