



ADULT TACHYCARDIA

NARROW (≤ 0.11 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. dysrhythmia
- Fever, sepsis, infection
- Pericarditis, pulmonary embolism
- Aortic dissection or aneurysm
- Overdose: Stimulants

Assess tachycardia in context of clinical condition
Identify and treat underlying cause of tachycardia

P Cardiac Monitor

Unstable / Serious Signs and Symptoms
HR Typically ≥ 150
Hypotension, Acute AMS, Ischemic Chest Pain,
Acute CHF, Seizures, Syncope, Poor Skin Signs,
or Shock secondary to tachycardia

Consider
Only if regular/narrow complex
ADENOSINE 6 mg IV / IO
Rapid push with flush
May repeat **12 mg IV / IO**
May repeat **12 mg IV / IO**

Cardioversion Procedure

Consider Sedation Prior to Cardioversion
MIDAZOLAM
2 – 2.5 mg IV / IO, 5 mg IM / IN
May repeat as needed
(Maximum 10 mg)

Synchronized
Narrow and Regular: 200J
Narrow and Irregular: 200J
May repeat cardioversion attempts

NO

B 12 Lead ECG Procedure
IV or IO Access Protocol UP 6

Regular Rhythm?

Attempt Vagal Maneuvers Procedure

ADENOSINE
6 mg IV / IO
Rapid push with flush
May repeat **12 mg IV / IO**
May repeat **12 mg IV / IO**

NO

DILTIAZEM 0.25 mg/kg IV / IO
Over 2-3 minutes
(Maximum 25 mg)

If No Improvement in 15 minutes
DILTIAZEM 0.35 mg/kg IV / IO
Over 2-3 minutes
(Maximum 25 mg)

OR

AMIODARONE
150 mg in 100 mL of D5W IV / IO
Over 10 minutes

Monitor and Reassess

Notify Destination or Contact Medical Control



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AMIODARONE INFUSION INSTRUCTIONS

DOSE: 150 mg/100 mL infused over 10 minutes

- Inject 150 mg of Amiodarone into 100 mL D5W bag
- Using a 10 gtt IV set, administer 100 gtt/minute

Pearls

- **Recommended Exam: Mental Status, Skin, Neck, Lung, Heart, Abdomen, Back, Extremities, Neuro**
- **Most important goal is to differentiate the type of tachycardia and if STABLE or UNSTABLE and SYMPTOMATIC.**
- **12-Lead ECG:**
 - 12 Lead ECG not necessary to diagnose and treat
 - Obtain when patient is stable and/or following rhythm conversion.
- **Unstable condition**
 - Condition which acutely impairs vital organ function and cardiac arrest may be imminent.
 - If at any point patient becomes unstable move to unstable arm in algorithm.
- Search for underlying cause of tachycardia such as fever, sepsis, dyspnea, etc.
- Typical sinus tachycardia is in the range of 100 to (200 - patient's age) beats per minute.
- **Symptomatic condition**
 - Arrhythmia is causing symptoms such as palpitations, lightheadedness, or dyspnea, but cardiac arrest is not imminent.
 - 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 CHF.
- **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 Narrow-Complex Tachycardia:**
 - Vagal maneuvers and adenosine are preferred. Vagal maneuvers may convert 19% to 54 % of SVT.
 - Using passive leg raise with Valsalva is more effective.
 - Adenosine should be pushed rapidly via proximal IV site followed by 20 mL Normal Saline rapid flush.
 - Adenosine should not be used in the post-cardiac transplant patient without **Contact of Medical Control**.
 - Agencies using both calcium channel blockers and beta blockers should choose one primarily. Giving the agents sequentially requires **Contact of Medical Control**. This may lead to profound bradycardia / hypotension.
- **Irregular Narrow-Complex Tachycardia:**
 - Rate control is more important in pre-hospital setting rather than focus on rhythm conversion.
- **Synchronized Cardioversion:**
 - Recommended to treat UNSTABLE Atrial Fibrillation, Atrial Flutter and SVT.
- Monitor for hypotension after administration of Calcium Channel Blockers or Beta Blockers.
- Document all rhythm changes with monitor strips and obtain monitor strips with each therapeutic intervention.