United Medical Education
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Advanced Cardiovascular Life Support
Adult Tachycardia with a Pulse

Assess if the heart rhythm is appropriate for the patient's condition.
Heart rates above 150 beats per minute (bpm) should generally be treated.

Search for and treat the cause.

Monitor:
- Heart rhythm
- Oxymetry
- Blood pressure

Provide as needed:
- Maintain an open airway
- Give oxygen

Is the Tachyarrhythmia persistant and symptomatic?
- Low blood pressure
- Change in mental status
- Chest pain
- Heart failure

Yes

Perform synchronized cardioversion:
start with:
Narrow regular: give 50-100 J.
Narrow irregular: give 120-200 J biphasic or 200 J monophasic.
Wide regular: give 100 J.
Wide irregular: defibrillate (not syncronized).
Consider providing sedation.
For regular narrow complex:
consider giving adenosine.
1st dose: 6 mg IV/IO push with NS flush.
2nd dose: 12 mg IV/IO push with NS flush.

No

Wide QRS complex ≥ 0.12 seconds

No

Provide IV access.
Obtain a 12-lead ECG if available.
Perform vegal maneuvers.
If rhythm is regular:
Give adenosine.
1st dose: 6 mg IV/IO push with NS flush.
2nd dose: 12 mg IV/IO push with NS flush.
Consider giving calcium channel blockers.
Consider giving beta blockers.
Consider requesting expert consultation.

Yes

Provide IV access.
Obtain a 12-lead EKG if available.
If rhythm is regular and monomorphic:
Give adenosine.
1st dose: 6 mg IV/IO push with NS flush.
2nd dose: 12 mg IV/IO push with NS flush.

If there is no prolonged QT or CHF:
Consider a procainamide infusion.
Infuse at 20-50 mg/min IV/IO with a maximum dose of 17 mg/kg.
continue procainamide infusion until:
- rhythm converts.
- administration results in hypotention.
- QRS complex duration rises >50%.

Maintenance infusion rate is 1-4 mg/min.

Consider giving amiodarone.
1st dose: 150 mg IV/IO over 10 minutes.
Repeat if VT reocurrs.
Follow with a maintenance infusion:
1 mg/min for following 6 hours.
If there is no prolonged QT:
Consider giving Sotalol:
Infuse 100 mg (1.5 mg/kg) IV/IO over 5 minutes.
Consider requesting expert consultation.

Source: American Heart Association. (2015).
https://eccguidelines.heart.org/wp-content/uploads/2015/10/2010-Integrated_Updated-Circulation-ACLS-Tachycardia-Algorithm.png
Dallas, TX: Publisher.