

Junctional Ectopic Tachycardia (JET) Care Guideline for Cardiovascular Intensive Care Unit (CVICU)



Inclusion Criteria: Postoperative Cardiac Surgical Patient. Diagnosis of JET confirmed by EKG. Patient must have hemodynamic instability due to the arrhythmia.

Exclusion Criteria: Patients without temporary pacing wires

Initial Management

- Adequate sedation
- Electrolytes (especially magnesium)
- Temperature 36°C - 37°C rectal
- Decrease vasoactives (especially dopamine)

- Attempt brief period of atrial pacing over ventricular rate
- Check threshold of wires

- Obtain atrial ECG to document rhythm
- Obtain ECHO to rule out effusion and check function
- Notify Cardiologist

Recommendations/ Considerations

The **GOAL** of treatment is to decrease JET rate just low enough to pace over

- Lower medication doses may be appropriate in preterm neonate or impaired renal function

Secondary Medications/Interventions

Frequently reassess rhythm to determine ongoing need for medication
Consider cooling patient further down to 35°C - 36°C rectal

- **Dexmedetomidine** infusion start at 0.2 mcg/kg/hr up to max of 1 mcg/kg/hr
 - Reserve dexmedetomidine load for extreme situations
- **Amiodarone** 1 mg/kg over 10 minutes. Repeat in 1mg/kg increments to a total dose of 5 mg/kg.
 - Then amiodarone infusion at 5 mcg/kg/min.
 - Give intravenous CaCl prior to amiodarone load
- **Esmolol** infusion at 50-300 mcg/kg/min
 - Consider loading with caution
 - Consider esmolol as first line agent in patients with JET presenting on POD 2 or greater and the patient is not on dopamine and ejection fraction is normal

Consider Electrophysiology consult if patient does not respond to first pharmacologic agent

Tertiary Medications/Interventions

Caution: Must have an EP specialist consultation prior to initiation of tertiary medications

- **Procainamide** 7-10 mg/kg load over 30 minutes
 - Then procainamide infusion at 40-60 mcg/kg/min
 - Check levels at 4 hours
 - Use with caution if ejection fraction already decreased
- **Sotalol**
 - Strong caution if patient has received Amiodarone
 - Give 1mg/kg intravenous Sotalol over 1 hour. Can consider a second dose in consultation with EP specialist
- **Ivabradine (oral/NG)** 0.1mg/kg Q12 hours x 2 doses (Non-formulary)
 - Can consider higher 0.2 mg/kg Q12 hours x 2 additional doses in consultation with EP

References

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