Treatment Protocol: CARDIAC DYSRHYTHMIA - TACHYCARDIA **Ref. No. 1213-P**

Base Hospital Contact: Required for all patients with cardiac dysrhythmias (excludes sinus tachycardia)

1. Assess airway and initiate basic and/or advanced airway maneuvers prn *(MCG 1302)*
2. Administer **Oxygen** prn *(MCG 1302)*
3. Initiate cardiac monitoring *(MCG 1308)*
   Document cardiac rhythm and obtain12-lead ECG if dysrhythmia suspected
4. Maintain supine for patients with signs of poor perfusion if respiratory status allows
5. Establish vascular access prn *(MCG 1375)*

SINUS TACHYCARDIA (Infants: heart rate < 220bpm, Children: heart rate < 180bpm) ❶

6. For adequate perfusion:
   Monitor closely for potential deterioration, rapid transport
7. For poor perfusion *(MCG 1355)*:
   Normal Saline 20mL/kg IV per *MCG 1309*

   For persistent poor perfusion, treat in conjunction with *TP 1207-P, Shock/Hypotension*

SVT - NARROW COMPLEX (Infants: heart rate ≥ 220bpm, Children: heart rate ≥ 180bpm)

8. For adequate perfusion:
   Attempt **Valsalva maneuver** when age appropriate
9. **Adenosine (3mg/mL) 0.1mg/kg rapid IV push**, dose per *MCG 1309*, maximum 6mg ❷
   Immediately follow with 10mL Normal Saline rapid IV flush

   If SVT persists:
   Adenosine (3mg/mL) 0.2mg/kg rapid IV push, dose per *MCG 1309*, maximum 12mg

   CONTACT BASE concurrent with adenosine treatment
10. For persistent poor perfusion after adenosine
    CONTACT BASE to discuss order for Synchronized Cardioversion
    Synchronized cardioversion 1 J/kg, dose per *MCG 1309* ❸
    May repeat x2 at **2J/kg**, dose per *MCG1309*

    Consider sedation prior to cardioversion:
    Midazolam (5mg/mL) 0.1mg/kg slow IV/IO push or 0.2 mg/kg IM/IN, dose per *MCG 1309*
    May repeat in 5 min prn x1 with Base order, maximum single dose 5mg

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WIDE COMPLEX (WCT) – REGULAR/MONOMORPHIC

11. For adequate perfusion:
    Adenosine (3mg/mL) 0.1mg/kg rapid IV push, dose per *MCG 1309*, maximum 6mg ❷❹
    Immediately follow with 10mL Normal Saline rapid IV flush

    If WCT persists:
    Adenosine (3mg/mL) 0.2mg/kg rapid IV push, dose per *MCG 1309*, maximum 12mg ❹
    CONTACT BASE concurrent with adenosine treatment

12. For poor perfusion *(MCG 1355)*:
    CONTACT BASE to discuss order for:
    Adenosine (3mg/mL) 0.2mg/kg rapid IV push, dose per *MCG 1309*, maximum 12mg and/or
    Synchronized cardioversion 1.0J/kg, dose per *MCG 1309* ❸❹
    May repeat x2 at **2J/kg**, dose per *MCG1309*

    Consider sedation prior to cardioversion:
    Midazolam (5mg/mL) 0.1mg/kg slow IV/IO push or 0.2 mg/kg IM/IN, dose per *MCG 1309*
    May repeat in 5 min prn x1 with Base order, maximum single dose 5mg

WIDE-COMPLEX – IRREGULAR

13. For adequate perfusion:
    CONTACT BASE and monitor closely for potential deterioration

14. For poor perfusion *(MCG 1355)*:
    CONTACT BASE to discuss order for synchronized cardioversion 1.0J/kg, dose per *MCG 1309* ❸
    May repeat x2 at **2J/kg**, dose per *MCG1309*

    Consider sedation prior to cardioversion:
    Midazolam (5mg/mL) 0.1mg/kg slow IV/IO push or 0.2 mg/kg IM/IN, dose per *MCG 1309*
    May repeat in 5 min prn x1 with Base order, maximum single dose 5mg

SPECIAL CONSIDERATIONS

1. Sinus tachycardia is common and SVT is rare. Consider sinus tachycardia in patients with history of fever, volume loss (e.g., vomiting or diarrhea), or congenital heart disease. An indication of sinus tachycardia is narrow complex and beat-to-beat variability seen on the ECG. Vital signs vary by age and normal ranges can be found in *MCG 1309*. Any pediatric patient with vital signs outside the normal range for age should be considered potentially ill and transported to an EDAP or PMC if criteria are met.

2. Contraindications: 2nd and 3rd Degree Heart Blocks; history of Sick Sinus Syndrome

3. For failure to convert or transient conversion to normal sinus rhythm, consider expedited transport.

4. Regular monomorphic wide complex tachycardia may be a supraventricular rhythm with a bundle branch or aberrancy. In this case, Adenosine may convert the rhythm to sinus and American Heart Association guidelines recommend its use for regular monomorphic wide complex tachycardia.