2I WIDE COMPLEX TACHYCARDIA

PATIENT CARE GOALS

- Restore regular sinus rhythm, prevent recurrence of symptomatic PSVT, and maintain adequate oxygenation, ventilation, and perfusion.

EMT

1. Assess the patient and provide initial care, including oxygen and vascular access, per **1B General Assessment and Care**. [1, 2]

PARAMEDIC

ADULT	PEDIATRIC (less than 60 kg)
2. For unstable[3] patients, perform **7J Synchronized Cardioversion**. First shock at 120 J initial biphasic energy setting. If additional shocks are needed, increase energy settings to 150 J and then 200 J. • For responsive patient, provide sedation prior to shock as outlined in **1D Anxiety and Sedation Management.**	2. For unstable[3] patients, perform **7J Synchronized Cardioversion**. First shock at 1 J/kg. If additional shocks are needed increase energy dose to 2 J/kg. • For responsive patients, provide sedation prior to shock as outlined in **1D Anxiety and Sedation Management.**
3. For stable[3] patients with suspected ventricular tachycardia and chest pain/discomfort or dyspnea: • Administer **amiodarone (Cordarone) 150 mg IV/IO slowly over 10 minutes**. Dose may be repeated in 10 minutes if needed.	3. For stable[3] patients with suspected ventricular tachycardia and chest pain/discomfort or dyspnea: Contact Medical Control for orders. If approved by Medical Control, administer **amiodarone (Cordarone) 5 mg/kg (maximum dose 150 mg) IV/IO over 20 to 30 minutes.**
4. For Torsades de Pointes:[4] • Administer **magnesium sulfate 2 grams diluted in 10 mL normal saline over 1 to 2 minutes.** May repeat dose one time after 10 minutes.	4. For Torsades de Pointes:[4] • Administer **magnesium sulfate 50 mg/kg (maximum dose 2 grams) diluted in 10 ml normal saline IV/IO over 1 to 2 minutes.** May repeat dose one time after 10 minutes.
5. For stable[3] patients with suspected regular monomorphic wide-complex tachycardia with history of Wolff-Parkinson-White (WPW)[5] syndrome: Contact Medical Control for orders to administer **adenosine (Adenocard)**.	5. For stable[3] patients with suspected regular monomorphic wide-complex tachycardia with history of Wolff-Parkinson-White (WPW)[5] syndrome: Contact Medical Control for orders to administer **adenosine (Adenocard).**
6. For suspected hyperkalemia follow **2E: Hyperkalemia/ Renal Failure** treatment guideline.[6]	6. For suspected hyperkalemia follow **2E: Hyperkalemia/ Renal Failure** treatment guideline.[6]

DOCUMENTATION KEY POINTS

- VS measurements every 10 minutes and before and after administration of medications and cardioversion.
- ECG tracing documentation for all rhythm interpretations, treatment decisions, and changes in the patient's clinical condition.
- Obtain 12-lead ECG before and after rhythm conversion.
- Initial and on-going assessment, monitoring, interventions, patient response, and complications (if any) encountered.

NOTES

[1] **Confirmation of rhythm:** Before treatment, if the patient is stable, attempt to identify the rhythm by obtaining a 12-lead ECG.

[2] **Causes and contributing factors** to wide-complex tachycardia may include:

* Hypovolemia	* Toxins, drug overdoes
* Hypoxia	* Tamponade
* Hydrogen ions (acidosis)	* Tension pneumothorax
* Hypo/Hyperkalemia	* Thrombosis (coronary or pulmonary)
* Hypoglycemia	* Trauma (hypovolemia)
* Hypothermia	

[3] **Stable versus Unstable:** A "stable patient" is a patient without signs and symptoms of impaired consciousness or hypo-perfusion. Only unstable patients who are experiencing chest pain, pulmonary edema, confusion, or other signs of hypo-perfusion should be cardioverted.

[4] **Torsades de pointes** should be considered in patients with ventricular tachycardia refractory to antiarrhythmics, especially patients with history of long QT syndrome or repeated syncopal episodes.

[5] **Wolff-Parkinson-White (WPW) syndrome** should be suspected in young patients with fast, wide-complex PSVT or atrial fibrillation with QRS rate greater than 200/minute.

[6] **Hyperkalemia** should be considered a potential cause of any wide-complex tachycardia in patients with a history of renal failure or insufficiency.