

Protocol 2-8

SECTION: Adult Cardiovascular Emergencies

PROTOCOL TITLE: Medical – Supraventricular Tachycardia
(including atrial fibrillation)
Medical - Tachycardia
Medical - Ventricular Tachycardia with a Pulse

REVISED: 06/2017

OVERVIEW:

Tachycardia's can be classified in several ways, based on the appearance of the QRS complex, heart rate, and regularity. ACLS professionals should be able to recognize and differentiate between sinus tachycardia, narrow-complex Supraventricular Tachycardia (SVT), and wide-complex tachycardia. Because ACLS providers may be unable to distinguish between supraventricular and ventricular rhythms, they should be aware that most wide-complex (broad-complex) tachycardias are *ventricular* in origin.

HPI	Signs and Symptoms	Considerations
<ul style="list-style-type: none"> • Past medical history • Medications: (Aminophylline, Diet Pills, Thyroid Supplements, Decongestants, Digoxin) • Diet (caffeine, chocolate) • Drugs (nicotine, cocaine) • History of palpitations / heart racing • Syncope / near syncope 	<ul style="list-style-type: none"> • Heart rate > 150 bpm • Dizziness • Chest Pain • Shortness of Breath • Potential presenting rhythm: <ul style="list-style-type: none"> ○ Sinus tachycardia ○ Atrial Fibrillation / Flutter ○ Multifocal atrial tachycardia (MAT) 	<p>QRS < 0.12 ms</p> <ul style="list-style-type: none"> • Sinus tachycardia • Atrial fibrillation • Atrial flutter • AV nodal reentry • Accessory pathway – mediated tachycardia • Atrial tachycardia (including automatic and reentry forms) • Multifocal atrial tachycardia (MAT) • Junctional tachycardia (rare in adults)
		<p>QRS > 0.12 ms</p> <ul style="list-style-type: none"> • Ventricular tachycardia (VT) and ventricular fibrillation(VF) • SVT with aberrancy • Pre-excitation tachycardia's (Wolff-Parkinson-White [WPW] syndrome) • Ventricular paced rhythms

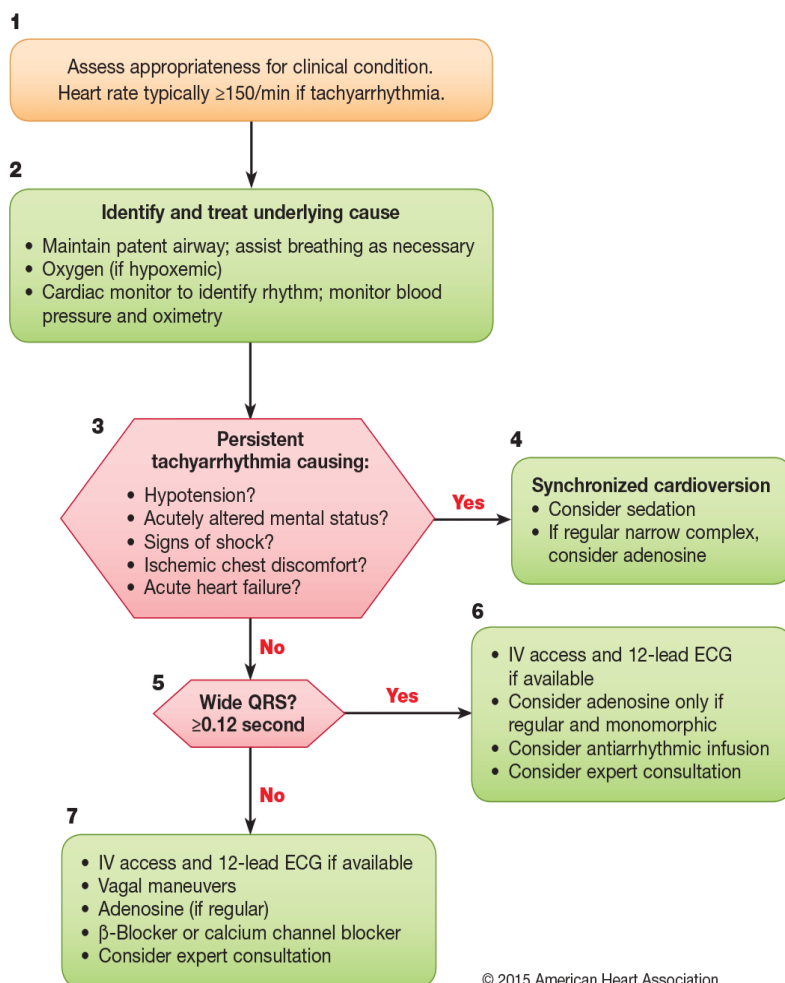
TACHYCARDIA WITH A PULSE

TACHYCARDIA WITH A PULSE

PEARLS:

1. Approved vagal maneuvers include coughing, bearing down as if attempting a bowel movement, and attempting to blow plunger out of 10 mL syringe. **Carotid sinus massage and / or ocular massage are not approved.**
2. Irregular narrow-complex tachycardias are likely atrial fibrillation or MAT; occasionally atrial flutter is irregular.
3. Each dose of Adenosine should be drawn up completely in a 5 ml syringe. Both the Adenosine and a 10 ml syringe of NS should be inserted, together, in the port closest to the IV catheter. Adenosine should be administered rapid IVP followed immediately by the Normal Saline flush administered rapid IVP. Due to the half-life of Adenosine, this is the only way to assure its efficacy and safety. Slow administration allows for a prolonged effect on the SA and AV node, which may result in prolonged bradycardia or asystole after rhythm converts.
4. Patients with past history of SVT conversion by Adenosine alone are more likely to convert by medication alone. Those who do not convert easily are patients on aminophylline, or similar agents (including high dose caffeine ingestion). A proper history should include number of conversions in past, and whether cardioversion was necessary.

Adult Tachycardia With a Pulse Algorithm



Doses/Details
<p>Synchronized cardioversion: Initial recommended doses:</p> <ul style="list-style-type: none"> Narrow regular: 50-100 J Narrow irregular: 120-200 J biphasic or 200 J monophasic Wide regular: 100 J Wide irregular: defibrillation dose (<i>not</i> synchronized) <p>Adenosine IV dose: First dose: 6 mg rapid IV push; follow with NS flush. Second dose: 12 mg if required.</p>
<p>Antiarrhythmic Infusions for Stable Wide-QRS Tachycardia</p> <p>Procainamide IV dose: 20-50 mg/min until arrhythmia suppressed, hypotension ensues, QRS duration increases >50%, or maximum dose 17 mg/kg given. Maintenance infusion: 1-4 mg/min. Avoid if prolonged QT or CHF.</p> <p>Amiodarone IV dose: First dose: 150 mg over 10 minutes. Repeat as needed if VT recurs. Follow by maintenance infusion of 1 mg/min for first 6 hours.</p> <p>Sotalol IV dose: 100 mg (1.5 mg/kg) over 5 minutes. Avoid if prolonged QT.</p>

Protocol

2-8

Continued

TACHYCARDIA WITH A PULSE

This page intentionally
left blank.