

Case 9 Stable Tachycardias

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Stable Tachycardias

◆ Overview

- Step 1: Assess patient
- Step 2: Identify and evaluate arrhythmia
- Step 3: Treat arrhythmia

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Stable Tachycardia

◆ Initial therapy

- Administer oxygen
- Start IV
- Attach monitor
- Obtain 12-lead ECG
- Obtain portable chest x-ray in hospital setting

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Step 1

Is patient stable or unstable?

◆ Patient has serious signs or symptoms? Look for

- Chest pain (ischemic? possible ACS?)
- Shortness of breath (lungs getting 'wet'? possible CHF?)
- Low blood pressure (orthostatic? dizzy? lightheaded?)
- Decreased level of consciousness (poor cerebral perfusion?)
- Clinical shock (cool and clammy? peripheral vasoconstriction?)

◆ Are the signs and symptoms due to the rapid heart rate?

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Step 2

◆ Identify arrhythmia; classify patient into 1 of 4 tachycardia categories:

1. Atrial fibrillation/flutter
2. Narrow-complex tachycardia
3. Stable wide-complex tachycardia, unknown type
4. Stable monomorphic VT and/or stable polymorphic VT

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1. Atrial Fibrillation/Flutter



◆ Your evaluation of atrial fibrillation/flutter should focus on 4 clinical features.

◆ What are they?

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Atrial Fibrillation: Evaluation Focus

4 Clinical Features

1. Is patient clinically unstable?
2. Is cardiac function impaired?
3. Is WPW present?
4. Is duration of AF <48 or >48 hours?

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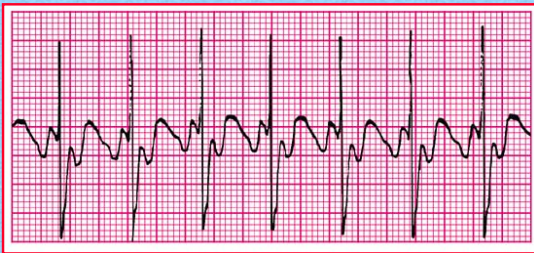
Atrial Fibrillation: Treatment Focus

4 Treatment Considerations

1. Treat unstable patients urgently
2. Control rate
3. Convert rhythm
4. Provide anticoagulation if indicated

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Atrial Flutter



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2. Narrow-Complex Tachycardias

- ◆ Attempt to establish a specific diagnosis:
 - Obtain 12-lead ECG
 - Gather clinical information
 - Perform vagal maneuvers
 - Give adenosine as a therapeutic agent, but it also serves as a diagnostic test

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2. Narrow-Complex Tachycardias (cont'd)

- ◆ Diagnostic efforts yield
 - Ectopic atrial tachycardia
 - Multifocal atrial tachycardia
 - Paroxysmal supraventricular tachycardia (PSVT)

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2. Narrow-Complex Tachycardias (cont'd)

Treatment considerations

- ◆ Attempt therapeutic diagnostic maneuver:
 - Vagal stimulation
 - Adenosine
- ◆ Patient: impaired heart vs normal cardiac function?
- ◆ Junctional tachycardia:
 - Automatic focus tachycardias respond better to blocking agents

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2. Narrow-Complex Tachycardias (cont'd)

Treatment considerations (cont'd)

◆ PSVT:

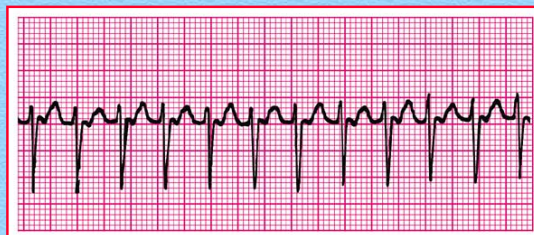
- Re-entry tachycardia responds better to cardioversion

◆ Ectopic or multifocal atrial tachycardia:

- Automatic focus tachycardias respond better to blocking agents

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Paroxysmal Supraventricular Tachycardia



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Sinus Tachycardia



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3. Stable Wide-Complex Tachycardia, Unknown Type

◆ Attempt to establish a specific diagnosis:

- 12-lead ECG
- Esophageal leads
- Clinical information

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3. Stable Wide-Complex Tachycardia, Unknown Type

◆ Attempt to establish a specific diagnosis:

- Confirmed as an SVT
- Wide-complex tachycardia of unknown type
- Confirmed as stable VT

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Wide-Complex Tachycardia

◆ Ventricular or

◆ Supraventricular with aberrant conduction?



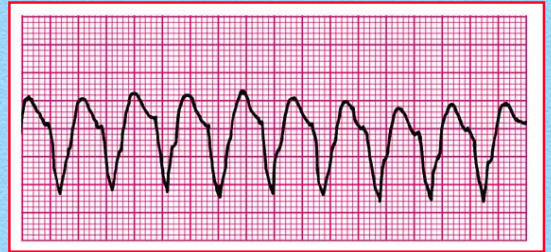
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4. Stable Monomorphic/ Polymorphic VT

- ◆ Monomorphic VT: is cardiac function impaired?
 - Preserved: procainamide
 - Impaired: amiodarone OR lidocaine OR synchronized cardioversion
- ◆ Polymorphic VT: QT interval (baseline) prolonged?
 - Normal: treat ischemia, correct electrolytes (amiodarone or lidocaine if heart impaired)
 - Prolonged: correct electrolytes
 - Magnesium, overdrive pacing, isoproterenol, dilantin, lidocaine

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Ventricular Tachycardia



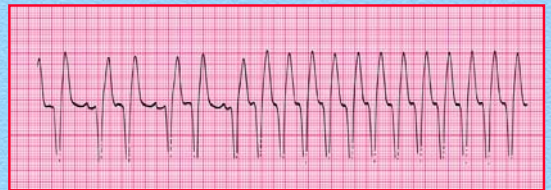
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Stable Tachycardia

- ◆ Initial therapy
 - Administer oxygen
 - Start IV
 - Attach monitor
 - Obtain 12-lead ECG
 - Obtain portable chest x-ray

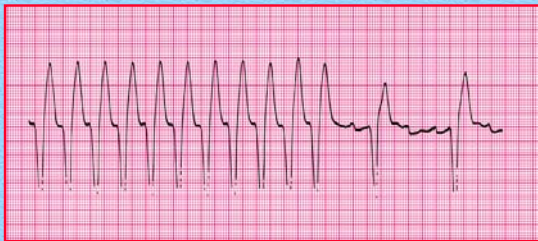
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Sinus Rhythm and PACs With Aberrant Conduction



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Wide-Complex Tachycardia Followed by Second-Degree AV Block



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