

Case 9 Stable Tachycardias

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1

Stable Tachycardias

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

2

Stable Tachycardia

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

3

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?

4

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

5

1. Atrial Fibrillation/Flutter



- ◆ Your evaluation of atrial fibrillation/flutter should focus on 4 clinical features.
- ◆ What are they?

6

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?

7

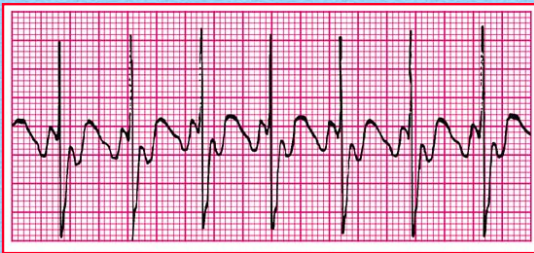
Atrial Fibrillation: Treatment Focus

4 Treatment Considerations

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

8

Atrial Flutter



9

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

10

2. Narrow-Complex Tachycardias (cont'd)

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

11

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

12

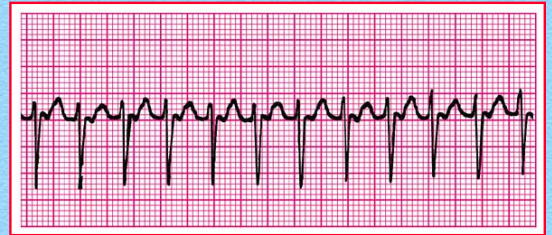
2. Narrow-Complex Tachycardias (cont'd)

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

13

Paroxysmal Supraventricular Tachycardia



14

Sinus Tachycardia



15

3. Stable Wide-Complex Tachycardia, Unknown Type

- ◆ Attempt to establish a specific diagnosis:
 - 12-lead ECG
 - Esophageal leads
 - Clinical information

16

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

17

Wide-Complex Tachycardia

- ◆ Ventricular or
- ◆ Supraventricular with aberrant conduction?



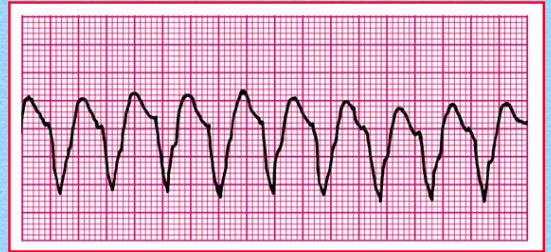
18

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

19

Ventricular Tachycardia



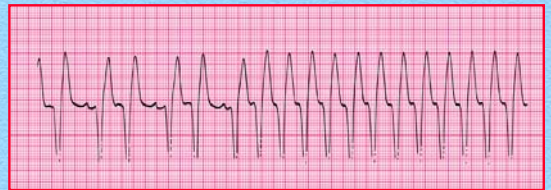
20

Stable Tachycardia

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

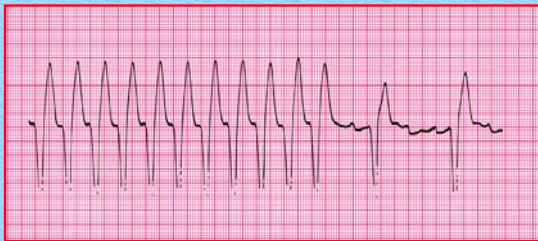
21

Sinus Rhythm and PACs With Aberrant Conduction



22

Wide-Complex Tachycardia Followed by Second-Degree AV Block



23