Arrhythmia Review

2024 AAPA We Are Family Medicine – Phoenix, Arizona

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0

Disclosures

I have no relevant relationships with ineligible companies to disclose within the past 24 months. (Note: Ineligible companies are defined as those whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.)

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1

Objectives

- Review components of the ECG wave which will help identify arrhythmias.

- Identify common characteristics of common arrhythmias.

- Recognize common arrhythmias from a ECG tracing.

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Definitions

- ECG Paper
  - Large Boxes
  - Small Boxes
  - Time
  - Amplitude

- Rate
  - Tachycardia
  - Normocardia
  - Bradycardia

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Definitions

•Regularity

- Regular

- Irregular

- Regularly Irregular

- Irregularly Irregular

•ECG Waves

- p wave – atrial depolarization

- QRS complex (q wave, r wave, s wave) – ventricular depolarization

- t wave – ventricular repolarization

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Definitions

•ECG Intervals & Segments

- PR interval

- QT interval

- ST segment

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How to Determine Rhythm

- Questions to ask
  - Is there a pulse?
  - It is fast or slow?
  - It is regular or irregular?
  - Is there a p wave?
  - Is the PR interval normal?
  - Is there a QRS complex?
  - Is the QRS wide or narrow?
  - Is there a p wave before every QRS complex?

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Sinus Rhythms

- Normal Sinus Rhythm

- Sinus Arrhythmia

- Sinus Tachycardia

- Sinus Bradycardia

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Normal Sinus Rhythm

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Sinus Arrhythmia

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Sinus Tachycardia

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Sinus Bradycardia

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Ventricular Rhythms

- Ventricular Tachycardia
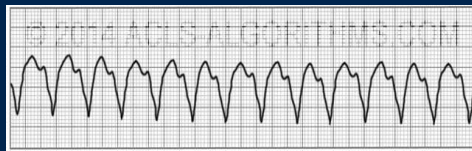
- Ventricular Fibrillation

- Torsades de Pointes

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12

Ventricular Tachycardia

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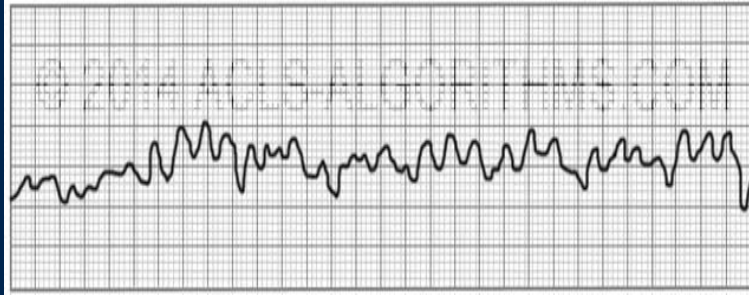13

Ventricular Fibrillation

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14

Torsades de Pointes
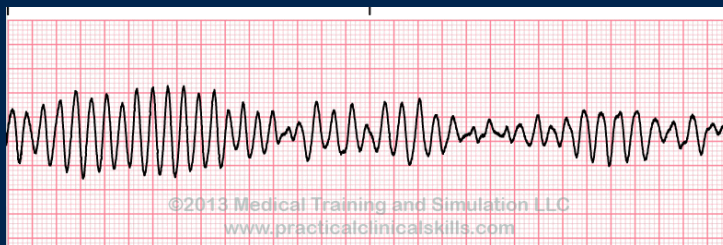
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Supraventricular Rhythms (atrial)

- Atrial Fibrillation

- Atrial Flutter

- Supraventricular Tachycardia

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Atrial Fibrillation

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Atrial Flutter

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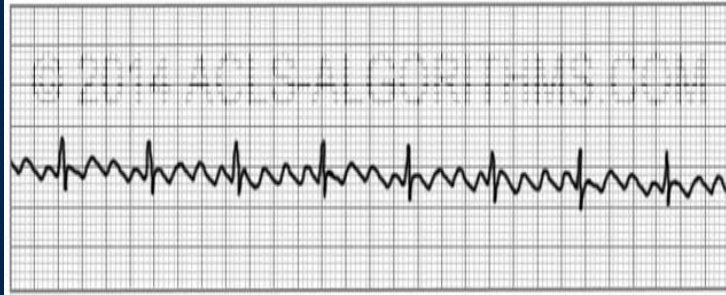
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Supraventricular Tachycardia

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Junctional Rhythms

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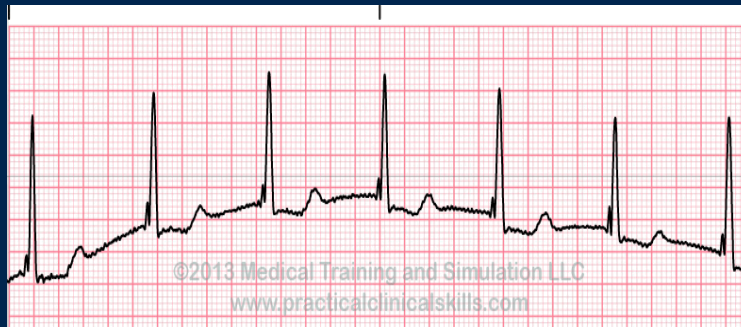
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Pulseless Rhythms

•Asystole

•Pulseless Electrical Activity

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Asystole
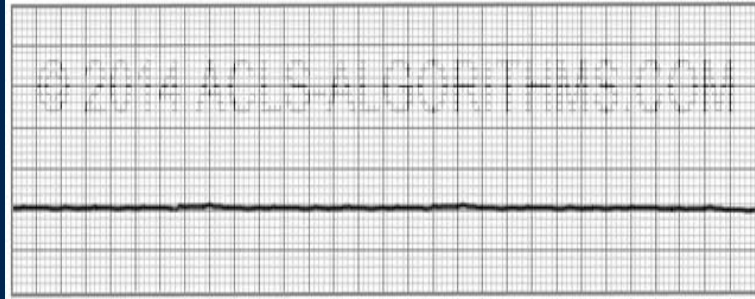
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Pulseless Electrical Activity

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Heart Blocks

- First Degree

- Second Degree
  - Type I
  - Type II

- Third Degree

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First Degree

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Second Degree, Type I

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Second Degree, Type II

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27

Third Degree

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28

Other Rhythms

•Pacemaker

•Premature Ventricular Complexes

•Premature Atrial Complexes

•Idioventricular

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29

Pacemaker
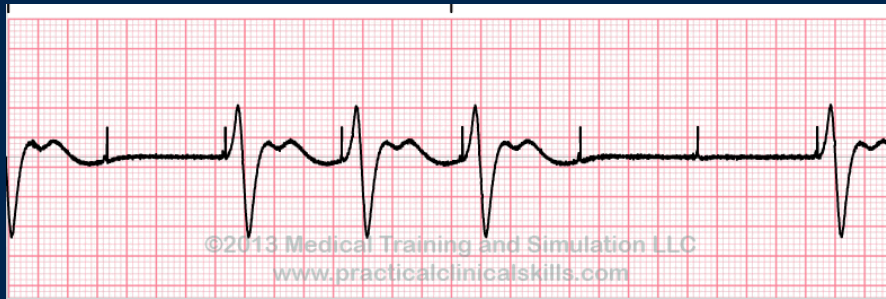
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Premature Ventricular Complexes
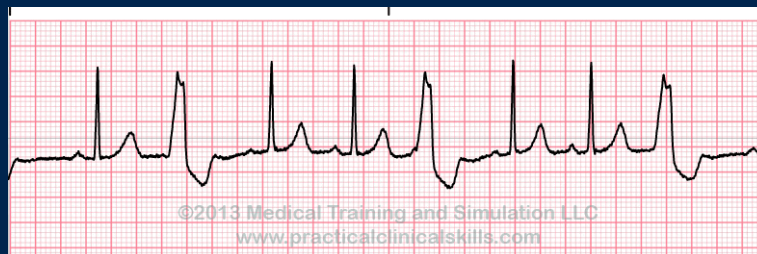
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Premature Atrial Complexes

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Idioventricular

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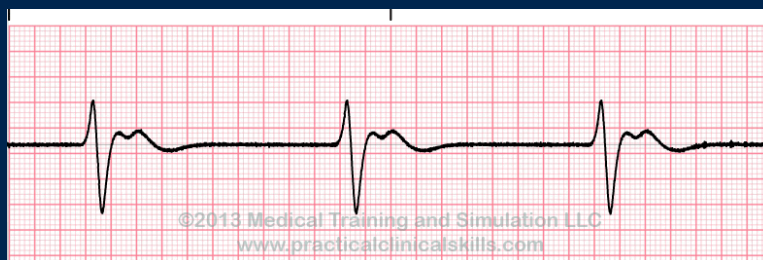
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33

References

- ECG Strip Photos from the following:
  - https://acls-algorithms.com/rhythms/
  - http://www.practicalclinicalskills.com/ekg-reference-guide

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34