

# ECG Tutorial Series

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## Case 1

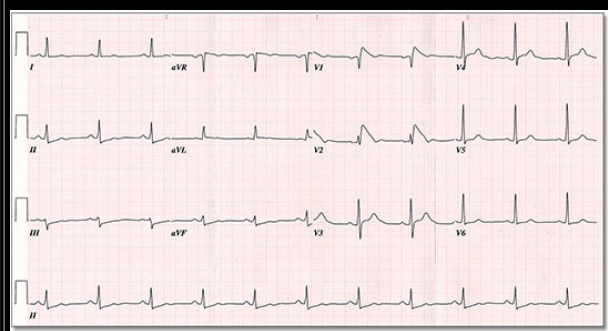
- A 38-year-old male is visiting a family member in the hospital, but collapses suddenly. He is resuscitated from ventricular fibrillation, and stabilized.

## Case 2

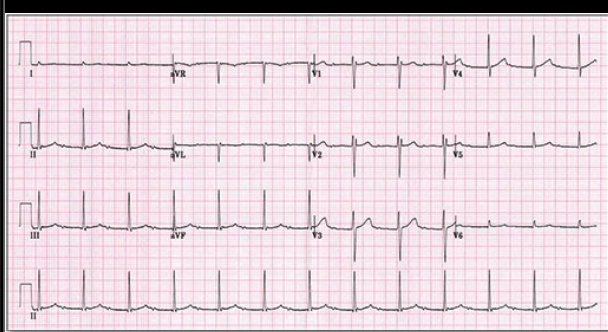
- A 19-year-old male with a history of recurrent palpitations presents to the emergency room. He complains of palpitations and lightheadedness.

## Case 3

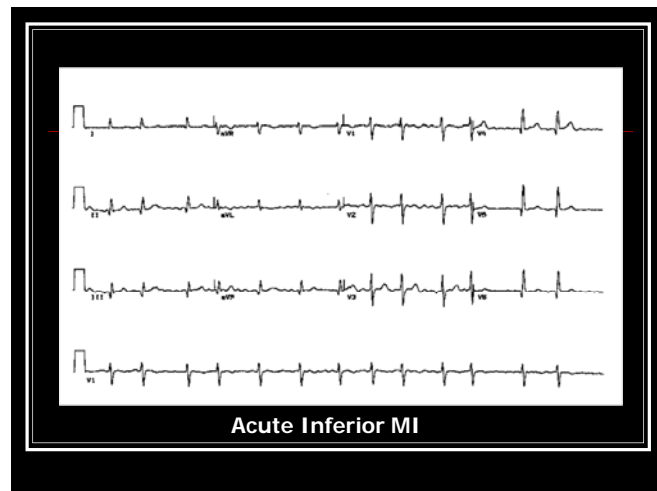
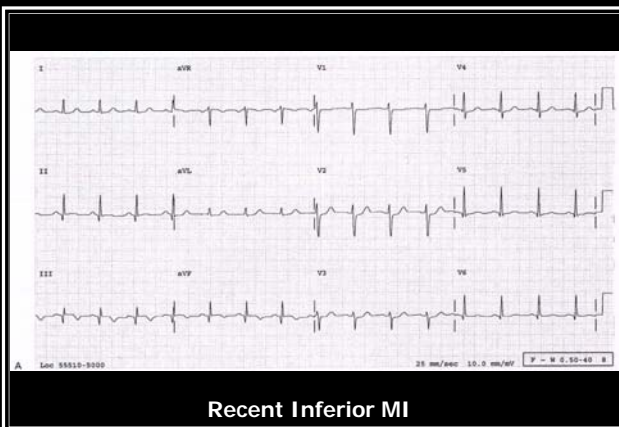
- This 48-year-old woman presented with CP one week after successful thrombolytic therapy for an inferior AMI. She had discontinued her medications and continued smoking.



Brugada Syndrome

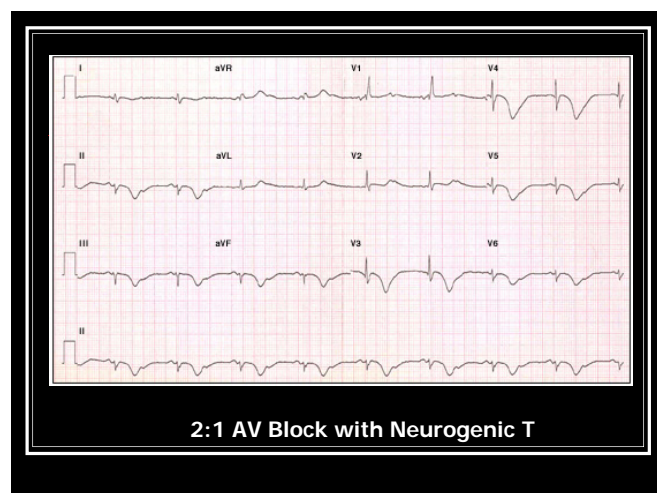


AVNRT with 2:1 AV Block



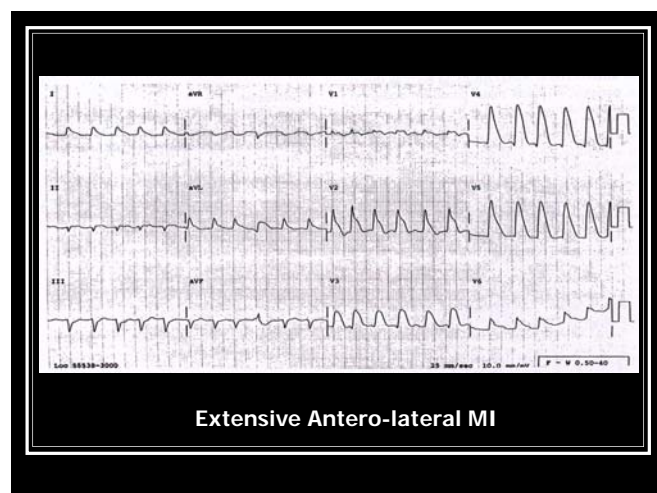
## Case 4

- A 25-year-old female is brought to the emergency department, having been found unresponsive in bed by her daughter. Her daughter is uncertain of her mother's medications, but states that she has a history of hypertension. In the emergency department she is unresponsive. Her blood pressure is 180/104 and heart rate 50.



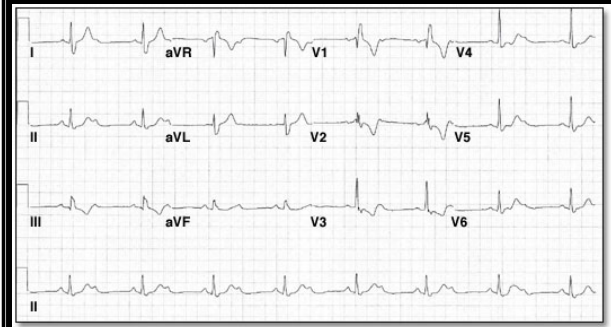
## Case 5

- This 45-year-old smoker presented with typical CP.



## Case 6

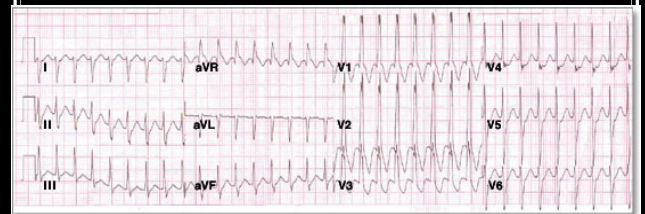
- A 53-year-old male presents to the emergency room with dyspnea on exertion and near syncope. His heart rate is 47 BPM, and blood pressure is 124/70. He has not had syncope.



Atrial Bigeminy with PAC Blocked

## Case 7

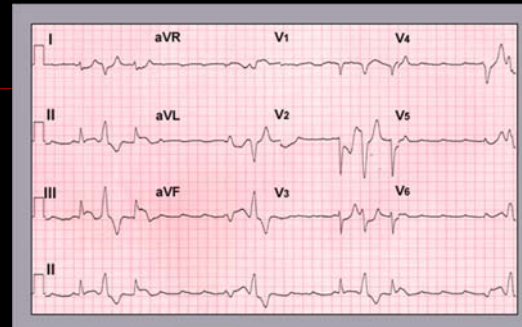
- A 21-year-old male with a prior history of repaired congenital heart disease (transposition of the great vessels, s/p Senning procedure) presents to the emergency room with palpitations and lightheadedness. The heart rate is 200 BPM, and blood pressure is 105/65.



Atrial Tachycardia  
VT/SVT Rules May **NOT** Apply to CHD

## Case 8

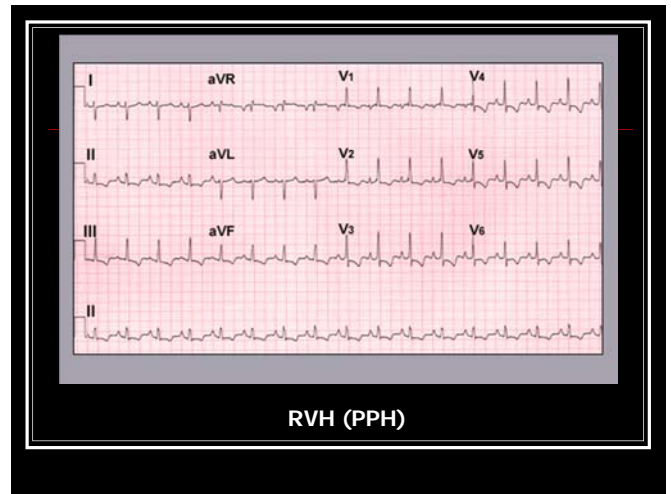
- 59 year old male collapses at his desk at work. CPR is performed and he is defibrillated with an automatic external defibrillator (AED). He is intubated by the paramedics and brought to the emergency room.



Inferior MI, high grade AV block and PVC

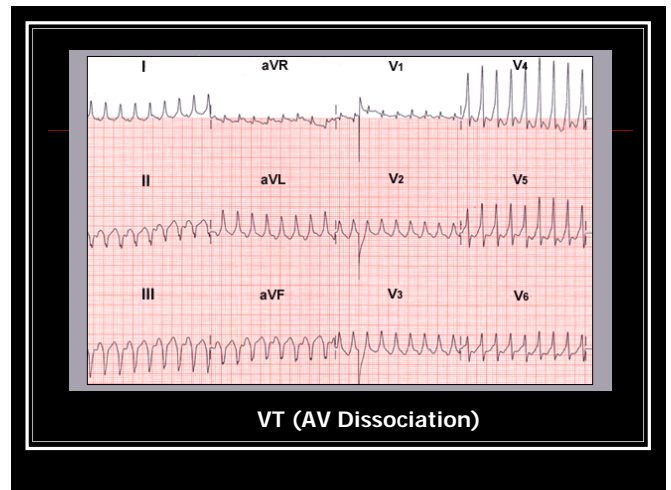
### Case 9

- A 38 year old female without prior cardiac history presents to the emergency room for evaluation of progressive dyspnea on exertion. She denies productive cough or fever.



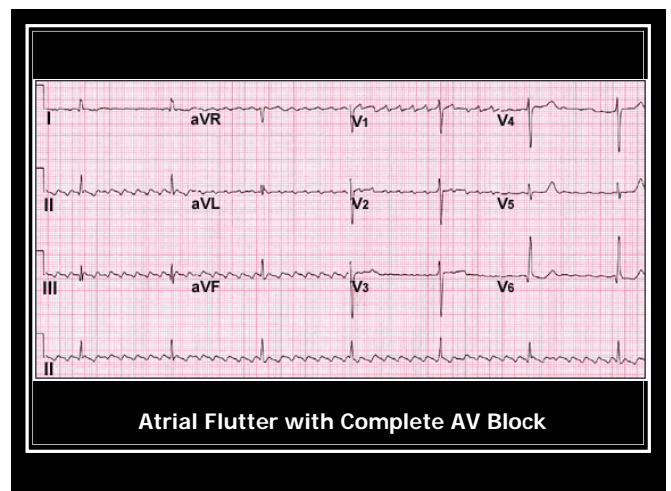
### Case 10

- A 68 year old man presents to the emergency room with palpitations and near syncope. His blood pressure is 90/60.



### Case 11

- A 74-year-old female with a history of hypertension presents for her annual physical. She denies any symptoms, other than a gradual decline in her energy level that she attributes to aging. She is on an ACE-inhibitor. On examination, she looks well. She is bradycardic. Her blood pressure is 124/72.





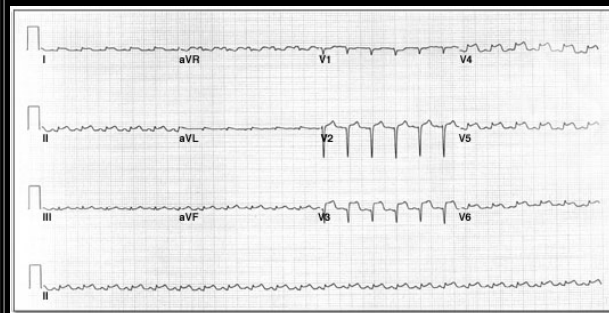


What's the difference?

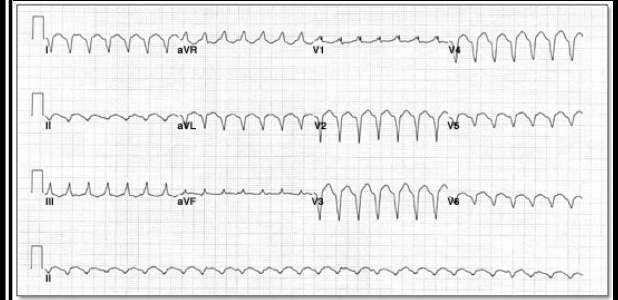


## Case 12

■ A twenty-five-year-old female presents to the emergency room with severe fatigue and progressive shortness of breath. For about 10 days she has had a viral syndrome, with fevers, chills, myalgias, diarrhea, and in the last few days, a cough productive of yellow, and occasionally blood tinged sputum. Heart rate and systolic blood pressure were 140 BPM and 70 mm Hg, respectively.



Acute Myocarditis



Ventricular Tachycardia

## Case 13

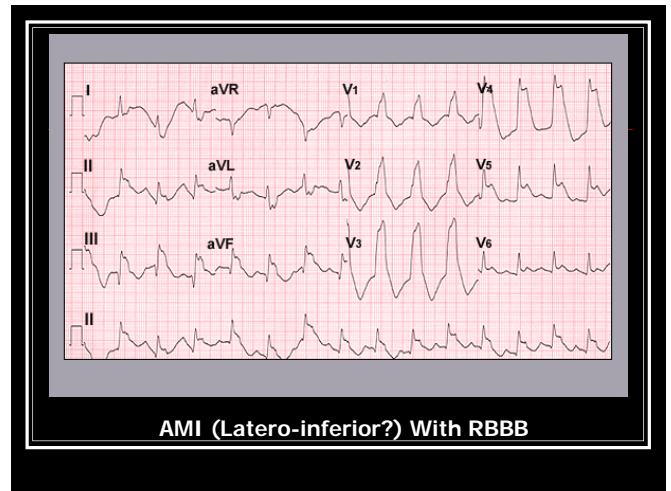
■ A sixty-nine-year-old female presents to the emergency department with symptoms of palpitations and near syncope. She has a history of rheumatic heart disease, and has had prior mitral valve replacement, bypass grafting, and pacemaker implantation. Systolic blood pressure is 90 by palpation.



Atrial Tachycardia with Varying AV Conduction

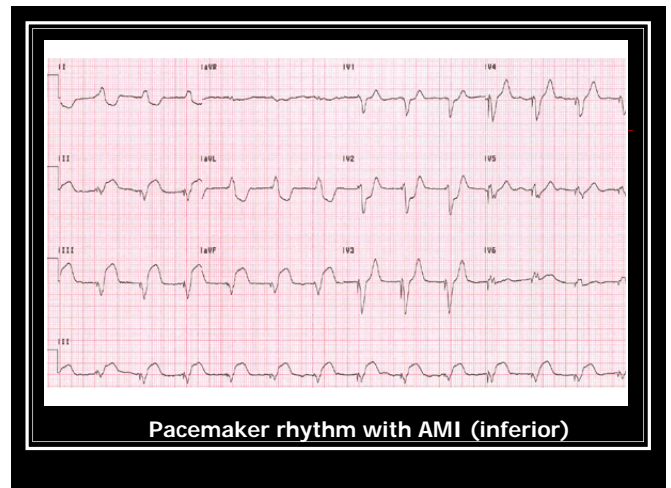
## Case 14

- A 71-year-old female presents to the emergency room with chest pain, shortness of breath, and nausea of 6 hours duration. On examination, she is pale and diaphoretic. Her heart rate is 90, blood pressure 90/60, and respiratory rate 24.



## Case 15

- An eighty-three year old female presents to the emergency room with shortness of breath, nausea, and vomiting. Her medical history is significant for atrial fibrillation, hypertension, and sick sinus syndrome. She is status-post permanent pacemaker implantation.



Thanks for Attention