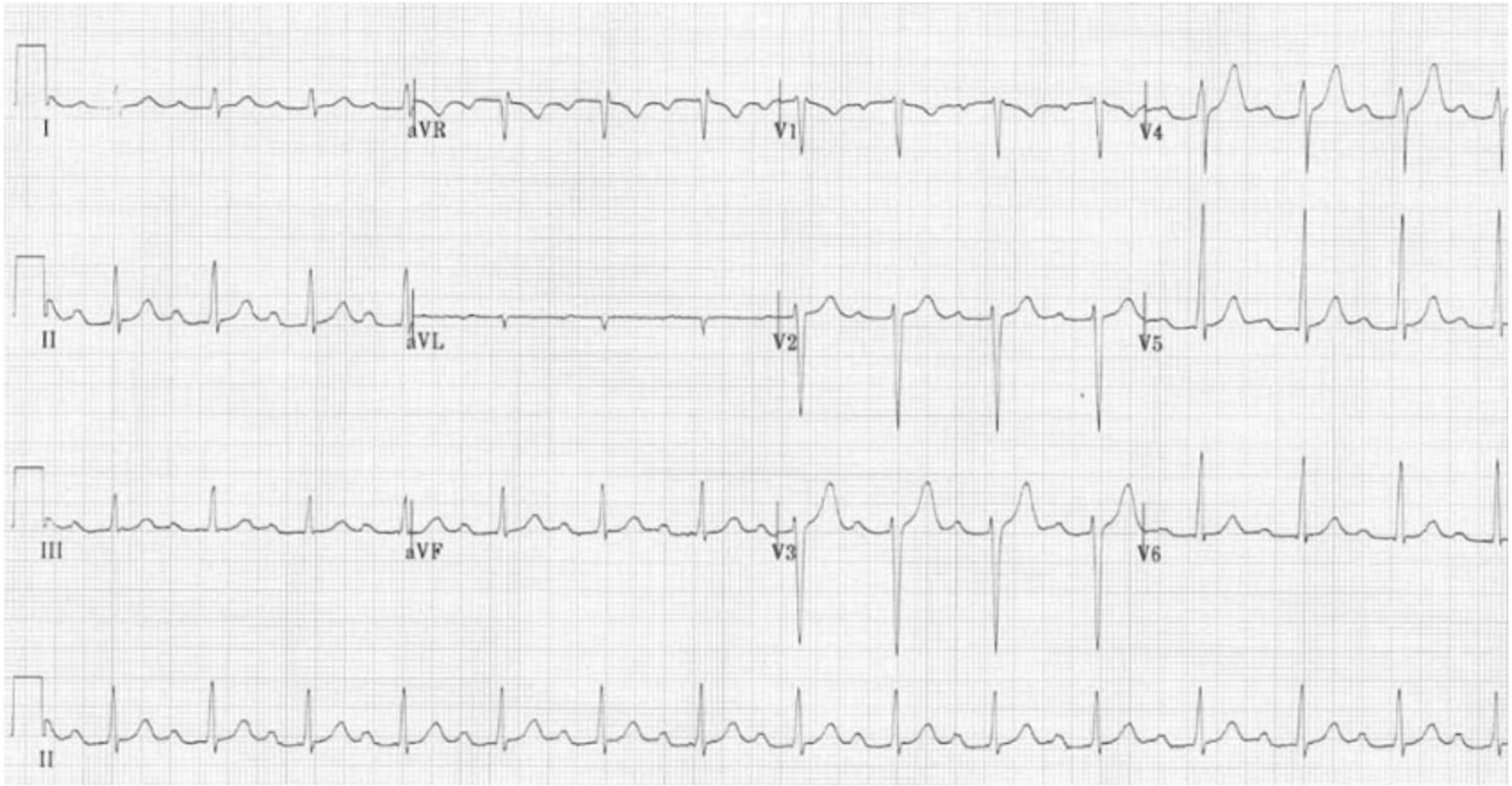
ECG #7

WAMSS SGR 2022

Trigger

You are a GP working in private practice. Jane, a 70F comes in for a routine medical. As part of her workup, you decide to perform an ECG.

Task: Interpret the ECG and provide a diagnosis.


I
aVR
V1
V4
II
aVL
V2
V5
III
aVF
V3
V6
II

Rate	90bpm
Rhythm	Sinus rhythm
Axis	Normal
Intervals (ref. ranges)	PR (120-200) – 260 QRS (<120) - WNL QT (<460) – WNL
Segments	Normal
Other morphology	Normal
Interpretation	In summary, this is an ECG of a 70F presenting for a routine medical. The ECG is abnormal, with a fixed prolonged PR interval without any dropped QRS complexes. My working diagnosis is an incidental finding of 1st degree heart block.

Fixed, prolonged PR intervals

https://litfl.com/first-degree-heart-block-ecg-library/

Follow-up Questions

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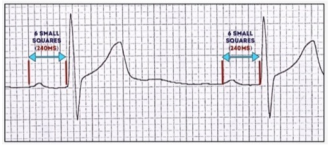
1. What are the different types of heart block and what are their distinguishing ECG features?

2. Outline your management plan for each type of heart block.

3. What is Stokes-Adams syndrome (Stokes-Adams attacks)?

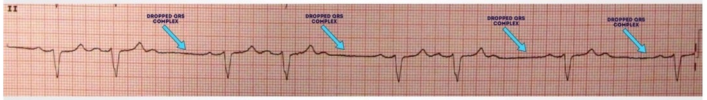
Question 1

- 1st degree – fixed, prolonged PR interval (>200ms)



- 2nd degree, Mobitz type I (Wenckebach) – progressive prolongation of the PR interval until a QRS complex is dropped

- 2nd degree, Mobitz type II – fixed, prolonged PR interval with intermittently dropped QRS complexes

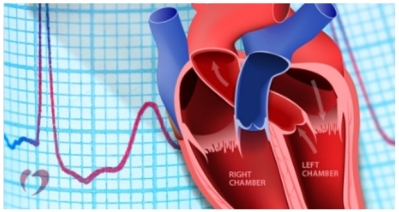


- 3rd degree – P waves and QRS complexes that have no association with one another

https://geekymedics.com/how-to-read-an-ecg/

Question 2

- 1st degree or 2nd degree, Mobitz type I (Wenckebach)
    - Asymptomatic – just monitoring
    - Symptomatic – discontinue medications that slow AV nodal conduction
- 2nd degree, Mobitz type II or 3rd degree
    - Asymptomatic or mildly—moderately symptomatic – manage any specific conditions, discontinue AV nodal blocking drugs. May need placement of a permanent pacemaker (PPM) or cardiac resynchronisation therapy (CRT)
    - Severely symptomatic – as above, but may need temporary cardiac pacing (transcutaneous or transvenous)



https://bestpractice.bmj.com/topics/en-gb/728

Question 3

- Periodic episodes of syncope due to intermittent complete heart block (or another serious arrhythmia) that results in decreased cardiac output and inadequate blood flow to the brain

- Treatment is with a pacemaker as drugs are ineffective in reversing the cardiac conduction problems

https://litfl.com/stokes-adams-syndrome/
https://pubmed.ncbi.nlm.nih.gov/2272057/

Thank you!

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