Dr. Peter Loewen / Dr. Peter Zed

PHRM 211
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ECG Interpretation Cases and ECG Key

For each ECG

(1) read the case scenario
(2) go through your 6-step approach and summarize your findings
(3) reflect on how the findings are consistent (or not) with the case scenario

CASE 1

64 y/o F presents with complaints of fatigue and chest pain x 36 hours.

ECG findings: NSR

CASE 2

80 y/o M on your medical unit admitted for COPD exacerbation.

ECG findings: AF, the weird QRSs are BBB! (QRS 122ms), don't look at the ST-T segment

CASE 3

57 y/o M presents to your primary care clinic with palpitations and feeling his heart is "racing".

ECG findings: AF with tachycardia. Looks like SVT, but if you put **3** notches on paper, you'll see R-R instability.

CASE 4

77 y/o F with longstanding HTN reports during routine visit that she has been feeling "less energetic" x 1 month.

ECG findings: AF, tachycardia. Anterior T-wave inversion ?ischemia. inferior Q-waves. ?BBB in II?

CASE 5

60 y/o F in hospital for treatment of CAP. PMH of AF on diltiazem CD 240mg. Complaining of chest tightness now.

ECG findings: a flutter (4:1) with controlled Vrate. Q waves in inferior leads. T-inversion in V1-V6. Possible acute ACS.

CASE 6

90 y/o F with NSTEMI 3y ago, on ASA 81mg/d and bisoprolol 10mg OD. Seeking your advice because she feels "faint" when doing her daily walk.

ECG findings: sinus rhythm with 1st degree AV block, left axis deviation, L BBB. **IGNORE ST segments, avoid calculating LVH because of BBB.**

CASE 7

90 y/o M with PMH of AF, NSTEMI (PCI & BMS) 5 y ago, symptomatic bradycardia 3 mos ago. On metoprolol 150mg PO bid.

ECG findings: pacing at the AV node. QRS>120, QTc>500 BECAUSE OF PACER. What's his pacemaker rate set to? **Pacemakers make it impossible to interpret ST changes, and impossible to look at the AXIS, hypertrophy.**

CASE 8
77 y/o F presents to UCC with respiratory distress and lobar consolidation, ?COPD exacerbation.

ECG findings: [2 rhythm strips] Sinus rhythm, left atrial enlargement, right bundle branch block (RBBB), left axis deviation, and anteroseptal MI (age undetermined). Q waves in V1-3.

CASE 9
33 y/o F in clinic with complaints of fatigue.

ECG findings: sinus bradycardia. LVH. Wide QRS. BBB barely visible in V1-3 S-waves. More visible in I.

CASE 10 a/b
79 y/o F in ED with retrosternal chest pain.

ECG findings: (a) acute inferior infarct (STEMI, Q-waves) (b) post-TPA. Prominent Q-waves persist.

CASE 11 a/b
77 y/o F with severe CAD, prior stroke, DM2, in ED with retrosternal chest pain.

ECG findings: evolving inferior / inferiolateral infarct. (b) V3R, V4R (right lateral) leads.

CASE 12 a/b
59 y/o M in ED with syncope.

ECG findings: (a) SVT (b) got adenosine and converted to NSR.

CASE 13
61 y/o M in ED with palpitations.

ECG findings: AF, RBBB.

CASE 14
95 y/o F in ED with ?CAP.

ECG findings: paced. Capturing at SA and AV nodes.

CASE 15

78 y/o F who experienced diaphoresis, then lightheadedness, then collapsed, without loss of consciousness.

ECG findings: 3rd degree AV block

CASE 16
55 y/o obese M in ED with retrosternal chest pain.

ECG findings: 2nd degree AV block, Type I Wincheback (or type II? Could be either) (most visible in V3)

CASE 17
55 y/o M in clinic with fatigue, SOB.

ECG findings: AF with bradycardia

CASE 18
55 y/o obese F in ED with retrosternal chest pain.

ECG findings: inferior STEMI, anterior ischemia.

CASE 19 [DELETE THIS… non contributory]
95 y/o M with stable CAD, HTN x 20 years, AF on metoprolol 50 po BID presents for routine checkup after walking to your clinic.

ECG findings: PVCs on SR with 1st degree heart block or AF (computer sees P's but I don't… and there's R-R instability. !!! (? The PRs don't look that long) and Left Axis deviation.

CASE 20 a/b/c/d/e
ID: 88 y/o F presents to ED after several hours of feeling unwell, nausea, diaphoresis.
HPI: unremarkable other than feeling nonspecifically unwell x 7 days with reduced activity.
PMH: HTN, COPD, anxiety, cognitive dysfunction, cataracts, CAP.
MPTA: Advair ii puffs bid, lorazepam 1mg PRN, HCTZ 25mg PO OD, atorvastatin 10mg OD.

ECG findings: evolving inferior infarct, anterior involvement, deepening bradycardia. #20d has RIGHT-sided leads (V3R, 4R, 5R), and POSTERIOR leads ("7, 8, 9"); #20e angiogram shows 100% RCA occlusion and anterior 70% occlusions.