Answers to ECG quiz 1

1. Sinus arrhythmia
   Normal breathing pattern

2. Atrial ectopics
   No treatment required

3. Atrial and ventricular pauses
   Sick sinus
   Needs treatment if symptomatic. Refer for opinion

4. A Flutter with variable block
   Main thing to consider is anticoagulation, as may not be acute
   Do a CHADS2 score. If >/=2 warfarin, if <2 aspirin. OP echo
   Follow AF guidelines for rhythm control

5. May present with collapse or palpitations SVT or AF
   WPW, caused by accessory pathway – bundle of Kent.
   Classified by where the pathway is L or R – not relevant to ED
   Do not give Digoxin, Verapamil or B blockers. Care with Adenosine.

6. Horrible irregular wide complexes, peaked T waves. Peri-arrest rhythm.
   The wide QRS are more worrying than the peaked T waves
   Hyperkalaemia or other metabolic / toxic cause

7. Slow broad complex tachycardia, fusion beats, A-V dissociation
   Often a reperfusion rhythm
   Treat as VT. If unstable DC sync shock, if not Amiodarone

8. SR going into SVT/ A Flutter with 2:1 block.
   Carotid sinus massage, valsalva. Then Adenosine.

9. Varying P wave morphology. SA node disease.
   Treat only if symptomatic.

10. A Flutter with 1:1 block. Rate 300/min. Risk of going into VT.
    Causes PE, MI ETOH acutely and chronic atrial damage from HT, IHD, ETOH, MV disease. (as for AF)

11. Dominant R wave in V1, T inversion V1-2. RV strain pattern due to RVH.
    Causes - PE, cor pulmonale, Pulm stenosis, Primary pulm HT. Plus abnormal chest shape leading to anti-clockwise rotation of the heart, odd lead position

12. ST elevation II and III. ST down V1 and V2. Infero-posterior MI. plus lateral iscaemia. NB Posterior MI usually occurs with an inferior.
    Refer for PCI. Aspirin 300mg and Clopidigrel 600mg. Some places give Heparin 5000iU on the way.

13. AF
    Aberrant conduction through AV node.

14. Inf Lat MI with Mobitz 2 2:1 block.
    PCI, aspirin, clopidigrel etc

15. MI, myocardial aneurysm, myocarditis, pericarditis, high take off.
    Pericarditis, PR depression visible.

16. A flutter with 2:1 block.
    Causes PE, MI ETOH acutely and chronic atria damage from HT, IHD, ETOH, MV disease. (as for AF)
    Adenosine for diagnosis + may cardiovert
    CHADS2 score ? anticoagulate
    Refer for echo. Amiodarone if does not cardiovert with time.

17. Multifocal ectopics. Some say non-sustained VT if 3 successive beats, some if 4 beats. If no structural heart beats, may not be pathological. If sick heart more risk of VT.
    Check U&E + Mg. Refer for opinion.

18. SVT
    May be AVNRT (70%) or AVRT (30%).
    Treat the same acutely but look for pre-excitation on the post cardioversion ECG . If accessory pathway like in WPW – risk of sudden death. (AVRT)
    Carotid sinus massage, valsalva. Adenosine

19. SR with ST depression going into VT. ? reperfusion rhythm

20. long QT
    Congenital – Romano ward, Timothy, Anderson syndromes
    Drugs – all the antis. Anti-arhythmics esp Amiodarone. Sotalol
    Anti-psychotics common
    Anti-biotics Erythromycin
    Anti – depressants, TCA, SSRI
    Anti- histamines, terfenadine.
    Grapefruit
    Electrolyte disturbances
    Post MI