QUIZ 15th April 2020 (answers below)

1. **What is an HME filter?**

2. **What equipment is in our "airway grab bag" for COVID19 intubations?**

3. **What is our COVID19 ventilation circuit?**

4. **What are the initial Oxylog settings for ventilating a COVID19 patient?**

5. **Describe and interpret the following ECG.**

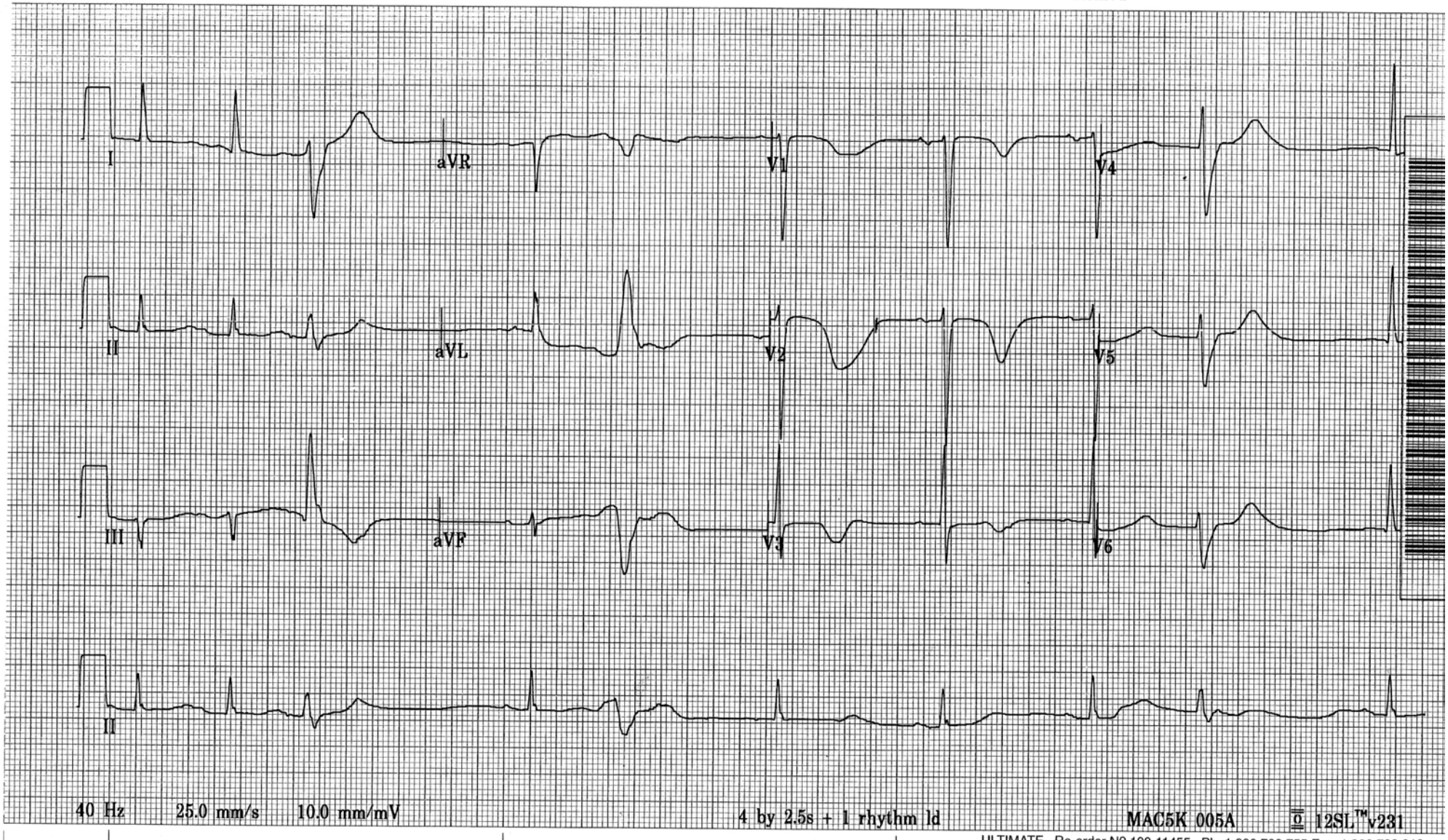
78years
Male

Vent. rate	56 bpm
PR interval	* ms
QRS duration	92 ms
QT/QTc	544/524 ms
P-R-T axes	* 9 121

*** Age and gender specific ECG analysis ***
Demand pacemaker, interpretation is based on intrinsic rhythm
Sinus rhythm with 2nd degree AV block (Mobitz I) with premature ventricular complexes or fusion complexes
T wave abnormality, consider anterior ischemia
Prolonged QT
Abnormal ECG

Test ind: ROUTINE

Unconfirmed



QUIZ answers 15th April 2020

1. **What is an HME filter?**

Heat and Moisture Exchange filters are passive humidification devices that work by not letting heat and moisture escape due to the hygroscopic salt embedded in the paper. They are used in a "dry circuit" as opposed to a "wet circuit" where moisture and heat is actively provided.

It is also called a filter because the paper folds filters out bacteria and viruses with 99.9% efficiency by direct impaction of particles >3um and Brownian diffusion collects virtually all the <3um particles.

2. **What equipment is in our "airway grab bag" for COVID19 intubations?**

Bluey
Kidney dish for dirty cmac blade
Sydpath bags to double bag dirty cmac blade
Bag valve mask with HME filter
Gauze to wipe bougie on withdrawal from ETT
Bougie
Trachy tape
20mL syringe
Clamp for tube if needed
NGT
NG drainage bag for free drainage
Anti-reflux valve
Size 4 LMA
Lubricant
1 x ETT #7 for female patients and 1 x ETT #8 for male patients

3. **What is our COVID19 ventilation circuit?**

ETT – Inline suction – $ETCO_2$ – Swivel – HME filter – Ventilator circuit – Oxylog

4. **What are the initial Oxylog settings for ventilating a COVID19 patient?**

SIMV Mode
TV 5ml/kg
RR 20/min
P_{MAX} 35 cmH_2O
FIO_2 100%
PEEP 10 cmH_2O

5. **Describe and interpret the following ECG.**

Rate *~53/min #2 PAC, #3 VEB, #5 VEB, #9 VEB*

P waves *Small*

PR *Normal*

QRS *Axis zero*

ST segments *Isoelectric*

T waves *Giant and inverted V1-3 with lengthening of terminal portion*

QTc *676msec*

➔ *Grossly prolonged QTc*
Bradycardia
Giant inverted T waves with prolonged Tpeak to Tend
Associated with increased risk of Torsades de Pointes

Causes of prolonged QTC
- *Electrolytes – Hypokalaemia, hypomagnesaemia, hypocalcaemia*
- *Medications – antiarrhythmics, some antimicrobials,*
- *Congenital*
- *Hypothermia*
- *Ischaemia (modest increase in QTc only)*
- *ROSC post cardiac arrest*
- *Raised intracranial pressure*

➔ *This patient was on a cardiology ward*
  - *Amiodarone*
  - *Hypokalaemia*
  - *Hypomagnesaemia*
  - *Commenced azithromycin.....*