The Faculty of Intensive Care Medicine

Septic Shock and Cardiac Arrest

Set-up:	
Lines/access:	Single peripheral cannula
Infusions:	1L crystalloid at 100mls/hr
Airway:	Own. Nasal cannulae 4L oxygen
Ventilator:	In bedspace but switched off
Other:	Blood results revealing elevated WCC/CRP/PCT Urinalysis revealing positive nitrites and leucocytes Airway trolley Arrest trolley

Clinical Setting:

I: You are the ICU registrar, called by the ICU Nurse to assess a new admission. The HDU registrar reviewed the patient a few hours prior, and the patient has arrived without warning.

S: He/she would like a plan for the 59F who has just been transferred from the ED

B: Patient been in ED for past 4 hours and transferred with an ED nurse. Suspected diagnosis of LRTI.

A: Assess and formulate ICU plan

R: Assist the HDU resident

Clinical Course Summary:

- Initially A clear, B RR 30/min, clear chest, O2 sats 88% on 4L via nasal cannulae, C HR 48bpm SR, NIBP cycling at the start of the scenario – eventually comes up as 76/54 D responds to painful stimuli by groaning, eyes closed
- Patient collapses into PEA
- Continue in PEA until fluid boluses given, and reversible causes considered
- Agonal breathing at rate of 8/min on ROSC, sats remain low – candidate needs to secure airway and commence mechanical ventilation
- Reassessment of the patient and institutes post resuscitation care
- At this point ICU consultant phones unit to enquire about the new admission. ICU registrar to give summary and formulate a plan with consultant on phone

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Info Sheet For Faculty:

- Initial Settings: RR 30/min
    - O_2 sats 88% on 4L via nasal cannulae
    - Chest fields clear
    - HR 48bpm SR
    - NIBP cycling at the start of the scenario – eventually comes up as 76/54
    - No capnography

Allow candidate time to assess patient and instigate immediate resuscitative measures/investigations

- PEA arrest

- Post arrest: No spontaneous respirations
    - O_2 sats 86% on high flow oxygen
    - HR 126bpm SR
    - NIBP 166/97 – next BP drops to 90/56

- On intubation: RR at whatever ventilator is set at
    - O_2 sats improve to 94% slowly over 1 minute
    - BP 105/63 if patient has given appropriate pressor/inotrope
    - HR 118bpm SR
    - $ETCO_2$ 5.6kPa (only if candidate requests capnography)

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Faculty Roles:

ED Student Nurse:

- You are on your ED placement
- You are quite proud and pleased that ED let you transfer the patient alone
- Patient is 59 years of age and has a chest infection. She has had some antibiotics – you don't know which
- The ED Consultant said she has given her some *"met-arm-olol"* for her blood pressure. She also mentioned that she was concerned she might arrest
- The patient has one cannula and some fluid running through it
- You know nothing else
- If the candidate gets upset or disgruntled you get upset and leave the room
- Otherwise leave when the patient has a cardiac arrest unless specifically told to stay by the candidate

HDU Resident:

- You are admitting a patient from the ED which is routine and have been assured the patient is stable
- When asked by the candidate how the patient is you say they're fine
- You are unaware that the patient is arresting and are quite surprised and shocked
- You are incredibly keen to be involved including intubating the patient, which you will be able to do if properly guided
- You feel upset that you didn't realize this was happening and will seek feedback from the candidate as to what went wrong – you will get upset if the feedback is harsh
- If the candidate is performing exceptionally well you will start to seek reassurance and distract them while they attempt to resuscitate the patient
- Be insistent that doing the "head end" during the intubation would be a brilliant learning opportunity for you

HDU Nurse:

- You are a competent staff nurse who has worked at the unit for a number of years
- You were also reassured the patient was stable. You don't know anything more than the student nurse hands over
- You take direction very well and will perform tasks that are asked of you

HiLLO: 5, 11