

SHOCK

Learning objectives:

1. Define it;
2. Appreciate the importance of it;
3. Spot it;
4. Identify the cause of it;
5. Fix it.

1. An 83 year old man presents from home with a history of weakness and dizziness for three days. Clinical examination reveals a patent airway, resps of 24 with a few bibasal crackles and SpO₂ 94% on room air. Heart rate is 124 in atrial fibrillation and blood pressure 78/56 mmHg. He has cool, mottled peripheries. His GCS is E4M6V4=14/15 with no localising neurological signs. His temperature is 35.8. The paramedics report he 'smells like he has a UTI'.

(a) Is he shocked? What is the definition of shock?

(b) What is the significance of hypotension in terms of in-hospital mortality?

(c) What clinical and laboratory measures of organ hypoperfusion can you assess?

(d) How can you broadly classify causes of hypotension in order to begin therapy?

POCUS demonstrates a thin, collapsing IVC and systolic obliteration of the left ventricle.

(e) How may this guide your immediate therapy?

(f) How can you determine fluid responsiveness?

(g) What does fluid responsiveness mean?

(h) What is/are the limitation(s) of "fluid responsiveness"?

A VBG is drawn: pH 7.27 pCO₂ 28 HCO₃ 14 BE -8 Lac 9

(i) List possible causes of an elevated lactate

He remains profoundly hypotensive despite 2 litres Hartmann's over 1 hour and antibiotics.

(j) Discuss your next steps and the likely time required to complete each one.

2. An obese lady was ejected from a vehicle and presents in cardiac arrest. No peripheral iv access is possible and the trauma team is struggling to find a central vein to cannulate.

(a) Describe your vascular access strategy and the immediate management of blunt traumatic arrest.

3. An 80 year old 70 kg male sustained a cardiac arrest due to VF and was shocked by paramedics into sinus rhythm after 5 minutes in arrest. On arrival his vital signs are:

- A intubated
- B clear chest, ETCO₂ 45, SpO₂ 95%
- C HR 98 sinus, NIBP 60/45 mmHg, peripherally cool. ECG: anterior STEMI on ECG.
- D GCS 3/15

500 mls 0.9% saline is given but the NIBP remains 65/48 mmHg.

(a) What can be given to support the patient's blood pressure?

(b) A (presumed new) systolic murmur is heard. List some possible causes of the hypotension

- (i) _____ (ii) _____ (iii) _____ (iv) _____

(c) What are your ED treatment options?

4. A 75 year old lady presents with syncope. She is awaiting review in the acute assessment area when she becomes unresponsive. The monitor alarms with this trace:



(a) Describe your immediate management

5. A 68 year old Type 2 DM female presents with dizziness

HR 68, NIBP 90/60, JVP 5cm, HS normal, Clear chest, SpO2 94% on room air, CXR normal

(a) List differential diagnosis and approach to management

6. A 79 year old male presents with back pain and syncope

O/E Distended neck veins, BP 80/60 Despite 2 litres Hartmann's from paramedics

HS normal Chest clear SpO2 96% on NRBM GCS 12-14 fluctuating

(a) List differential diagnosis and approach to management

(b) He needs to be transferred to another hospital. How would you prepare / stabilise him for transport? Who would you organise to transport him?