# On Call Cases

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# A nurse calls....

Doctor, the patient has a low BP. Can you come review?

What do you do next?

# What would you ask over the phone?

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- Observations – BP, HR, SpO2, RR, Temperature
- Normal BP? Trend?
- Manual BP or automatic?
- Reason for admission
- Is the patient symptomatic?
- Any losses/bleeding? Background medical history – heart failure, kidney failure, liver failure?
- Any current intravenous fluids?
- Does the patient have access?

# What could be going on?

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- Fluid/blood loss
- Sepsis
- Cardiogenic shock
- Obstructive shock
- Anaphylaxis

# How would you assess the patient?

- History
- Examination
- Investigations
- Management

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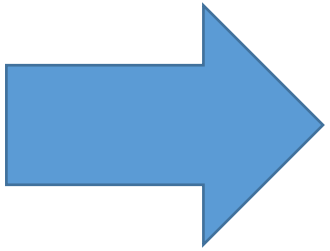

- **ASSESS NEED FOR RESUSCITATION**
- History
- Examination
- Investigations
- Management

# Scenario 1

45 year lady admitted with nausea and vomiting with profuse diarrhoea.

No significant background medical history.

BP 90/60, HR 95, SpO2 98% on room air, RR 16, temperature 36.5

What else do you want to know?

How would you examine her?

How would you manage her?

# Scenario 2

- 58 year old male with cough and shortness of breath.
- Background of COPD

- BP 90/50, HR 110, SpO2 92% on 2L nasal prongs, RR 22, temp 38.4

- What else do you want to know?
- How would you examine him?
- How would you manage him?

# Scenario 3

- 45 year old man with chest pain and shortness of breath
- Background of hypertension and hypercholesterolaemia.
- BP 90/60, HR 110, SpO2 94% on RA, RR 20, Temp 37.0
- What else do you want to know?
- How would you investigate?
- How would you manage?

# Another nurse calls…

…the patient had a fall but he’s fine now. Just letting you know.

What do you do next?

What else do you want to know?

# Any injuries? Any concerning symptoms

- Head strike?
- Neck pain?
- Long bones?
- Ribs?
- Skin tears?
- Bruising?
- Neurological symptoms? Nausea/vomiting?
- Any coagulopathy/bleeding risk?

# Why did the patient fall? Can it be prevented?

- Mechanical?
- Dehydration?
- Postural hypotension?
- Confusion?
- Arrhythmia?
- Medications?
- Environmental factors?
- Sensory deficits?
- Deconditioning?

# As you’re about to leave the ward…

…doctor! I have a patient with low urine output. What should I do?

What do you want to know?

How would you assess the patient?

How would you manage the patient?

# Acute Kidney Injury

- Pre-renal
  - hypotension
- Renal
  - Acute tubular necrosis
  - Nephrotoxic drugs
  - glomerulonephritis
- Post-renal
  - Urinary obstruction/retention

# Management

- Post renal
  - Bladder scan
  - IDC
  - Flush IDC
  - Stents
- Renal
  - Cease nephrotoxic drugs
  - Treat underlying disease process – involve the med reg/renal reg!
- Pre renal
  - IVF

# As soon as you've finished…

…Doctor can you review my patient? They have a heart rate of 130!

What do you want to know?

How would you assess them?

How would you manage?

# AF with RVR

- Is the patient haemodynamically stable????
- Causes
  - Dehydration
  - Sepsis
  - Thyrotoxicosis
  - Electrolyte disturbances (aim K >4, Mg >1.0)
  - PE
  - acid-base disturbance
  - Drugs (e.g. sympathomimetics)
- Management
  - Treat underlying cause!!!
  - Beta blockers, digoxin, amiodarone
  - DC cardioversion

# In a parallel universe….

- Doctor the HR is 130, they’re desaturating to 88% on RA, and they’re complaining of chest pain!

- What is going on?
- What information do you need to know?
- What will you do next?

# Well's criteria

**Wells criteria and modified Wells criteria: clinical assessment for pulmonary embolism**

| | |
|---|---|
| Clinical symptoms of DVT (leg swelling, pain with palpation) | 3.0 |
| Other diagnosis less likely than pulmonary embolism | 3.0 |
| Heart rate >100 | 1.5 |
| Immobilization (≥3 days) or surgery in the previous four weeks | 1.5 |
| Previous DVT/PE | 1.5 |
| Hemoptysis | 1.0 |
| Malignancy | 1.0 |
| **Probability** | **Score** |
| **Traditional clinical probability assessment (Wells criteria)** | |
| High | >6.0 |
| Moderate | 2.0 to 6.0 |
| Low | <2.0 |
| **Simplified clinical probability assessment (Modified Wells criteria)** | |
| PE likely | >4.0 |
| PE unlikely | ≤4.0 |

DVT: deep vein thrombosis; PE: pulmonary embolism.

*Data from van Belle A, Buller HR, Huisman MV, et al. Effectiveness of managing suspected pulmonary embolism using an algorithm combining clinical probability, D-dimer testing, and computed tomography. JAMA 2006; 295:172.*

# PERC rule

**The pulmonary embolism rule out criteria (PERC rule)***

| |
|---|
| Age <50 years |
| Heart rate <100 bpm |
| Oxyhemoglobin saturation ≥95% |
| No hemoptysis |
| No estrogen use |
| No prior DVT or PE |
| No unilateral leg swelling |
| No surgery/trauma requiring hospitalization within the prior four weeks |

DVT: deep venous thrombosis; PE: pulmonary embolus; bpm: beats per minute.

* This rule is only valid in patients with a low clinical probability of PE (gestalt estimate <15 percent). In patients with a low probability of PE who fullfil all eight criteria, the likelihood of PE is low and no further testing is required. All other patients should be considered for further testing with sensitive D-dimer or imaging.

# As you’re walking past…

…you hear a nurse comment to another nurse “is this melaena?”

What do you do?

How would you assess the patient?

How would you manage the patient?

# Is it real melaena?

- Management
  - Hb
  - Urea/creatinine ratio
  - Group and hold
  - NBM
  - IV PPI infusion (bolus 80mg pantoprazole + 80mg over 10 hours)
  - Stool chart
  - Contact gastroenterology
  - Cease anticoagulants/antiplatelets

# 10 minutes left until the end of your shift…

Your pager beeps. Answering your page diligently, a worried nurse tells you about a BGL of 18.

Do you care?

What information do you need to know?

How do you assess the patient?

How do you manage the patient?

# Random Question Time