

SAQ practice

Mapping: 3.5d

Question 1 (This question will score a total of 18 marks. It should be assigned the time of 2 questions)

A 66 year old man presents due to polydipsia and polyuria.

He has not had any insulin for the last 3 days while travelling overseas. On arrival looks unwell.

BP 136/70 HR 110 RR 28 SAO₂ 98% T 35.8 BSL 27.5

- a. What bedside investigations would you request and why? (4 marks)

- b. Here is his vBG. Interpret the findings. (2 marks)

pH: 7.004
pCO₂: 42.3 mmHg
pO₂: 29.8 mmHg
SaO₂ : 60.1 %
HCO₃: 7.1 mmol/L
Base excess: -21.8 mmol/L
Hb: 162 g/L

Na: 130 mmol/L
K: 5.8 mmol/L
Cl: 95 mmol/L
BSL: 29.0 mmol/L
Lactate: 6.9 mmol/L

QTcF 443

--AXIS--

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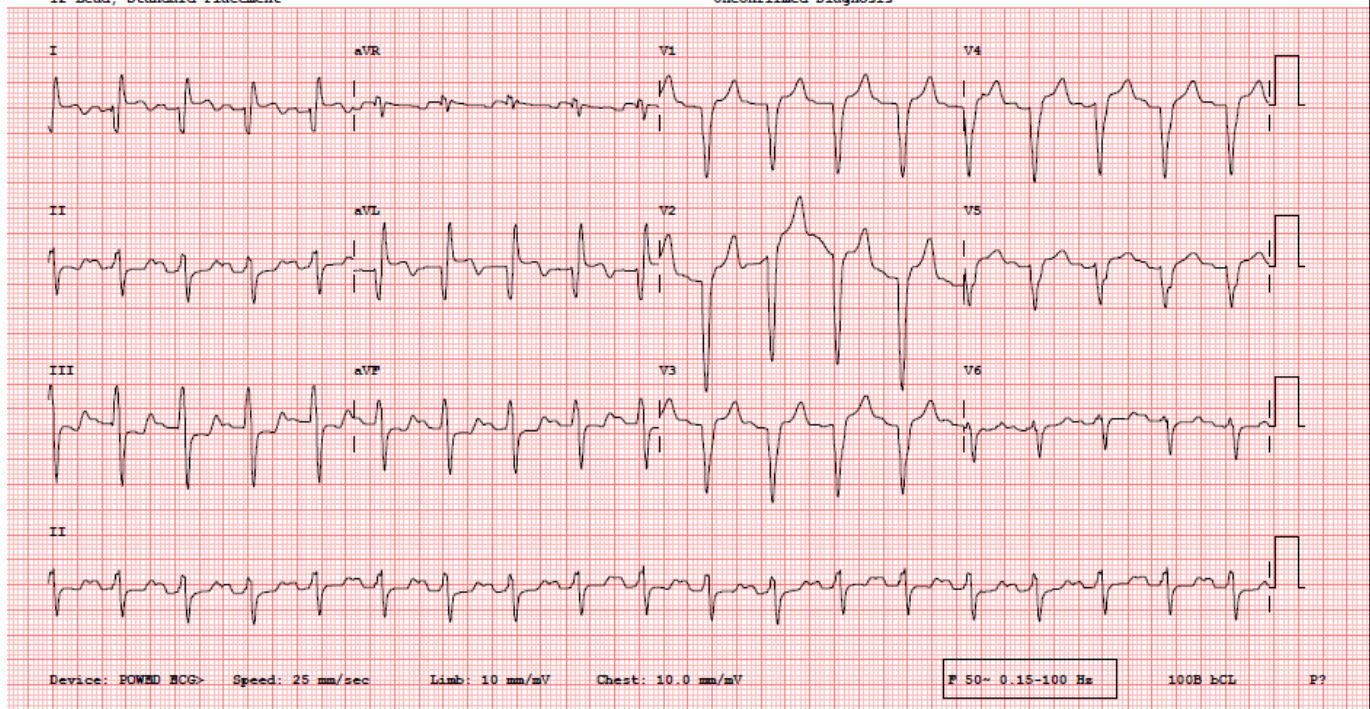
QRS -48

T -33

- ABNORMAL ECG -

12 Lead; Standard Placement

Unconfirmed Diagnosis



c. What are the abnormalities on the ECG and what do they mean? (3 marks)

d. Interpret the following results: (4 marks)

Na: * L 130 mmol/L
K: 6.4 mmol/L
Cl: 87 mmol/L
HCO₃: * 4 mmol/L
Urea 11.5 mmol/L
Cr: 110 µmol/L
eGFR * 60 mL/min/1.73m²
BSL: C 33.3 mmol/L

e. Why calculate the osmolality? (2 marks)

f. Why does Na need to be corrected? (1 mark)

g. What is the implication of the HyperK? (2 marks)

Question 2 (total 10 marks)

A 35 year old is referred to you ED from an alcohol detoxication centre.

He is under treatment and developed generalised weakness. He couldn't walk or support his weight on his feet. He has burning pain in his hands and feet.

On examination, he was orientated to time place and person.

BP 120/86 HR 99 RR 14 SaO2 97% Temp 36.4

- a. What information would you seek from your history and examination? (4 marks)

- b. Comment on his ECG. (2 marks)

c. What investigations would you do and why? (4 marks)

Question 3

A 54 year old lady with known alcoholic liver disease arrive to your ED. She has had haemetemesis hourly for the last 8 hours. She has had malaena twice today.

On examination, she is jaundiced and distressed.

BP 98/50 HR 120/min. RR 20/min Sao2 94% on room air

She is cool to touch peripherally.

This is her arterial blood gas.

pH 7.10
pCO2 13.8 mmHg
pO2 103 mmHg
HCO3 4.1 mmol/l

This is her EUC: all units are in mmol/L

Na 131 K 4.2 BSL 35 Urea 22.6 Cr 0.245 Lactate 20.3

FBC: Hb 62g/L WCC 23.8

a. How would you interpret the findings above? (3 marks)

Abnormality	Explanation

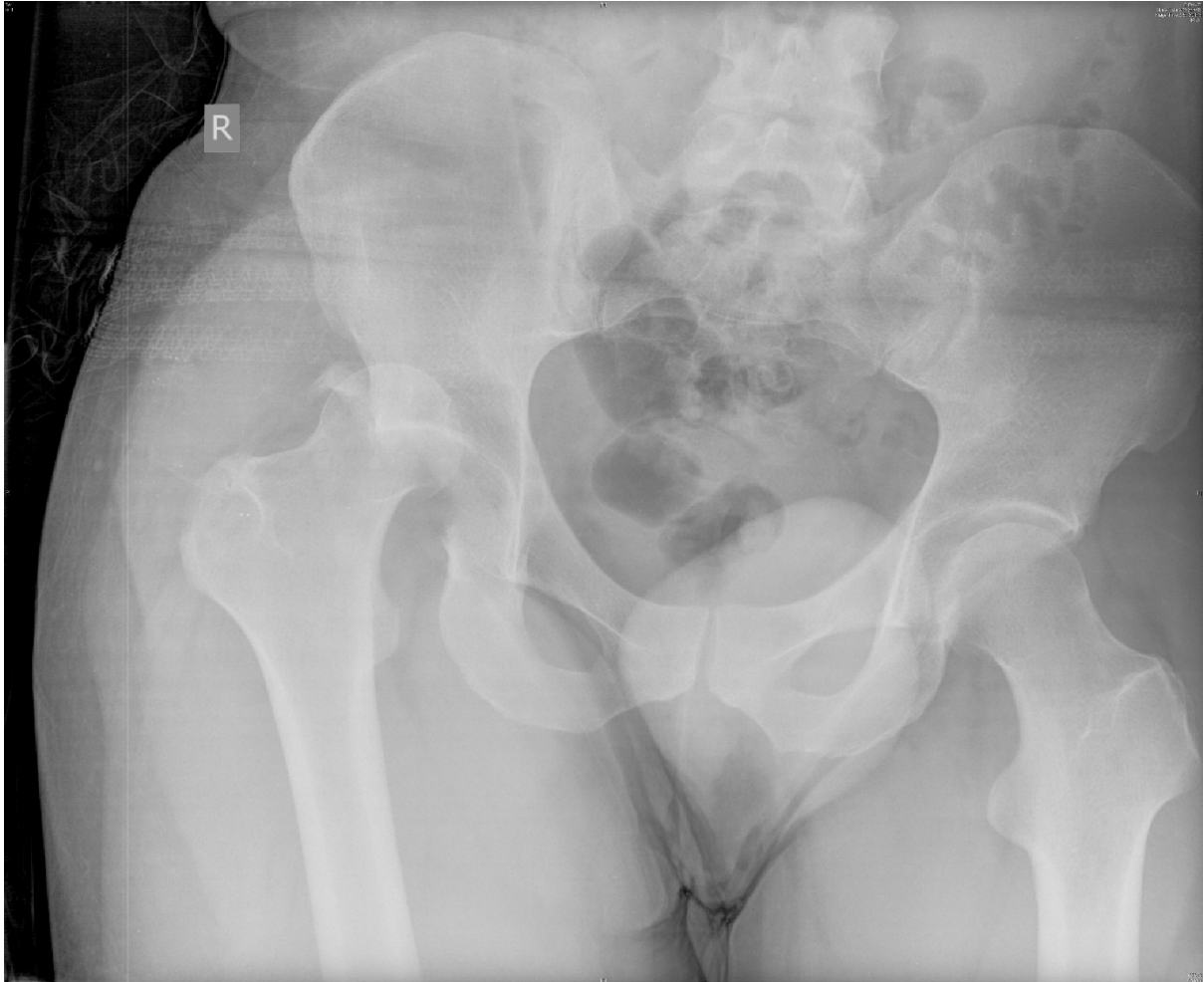
b. What are the major emergency issues with this patient? 2 marks

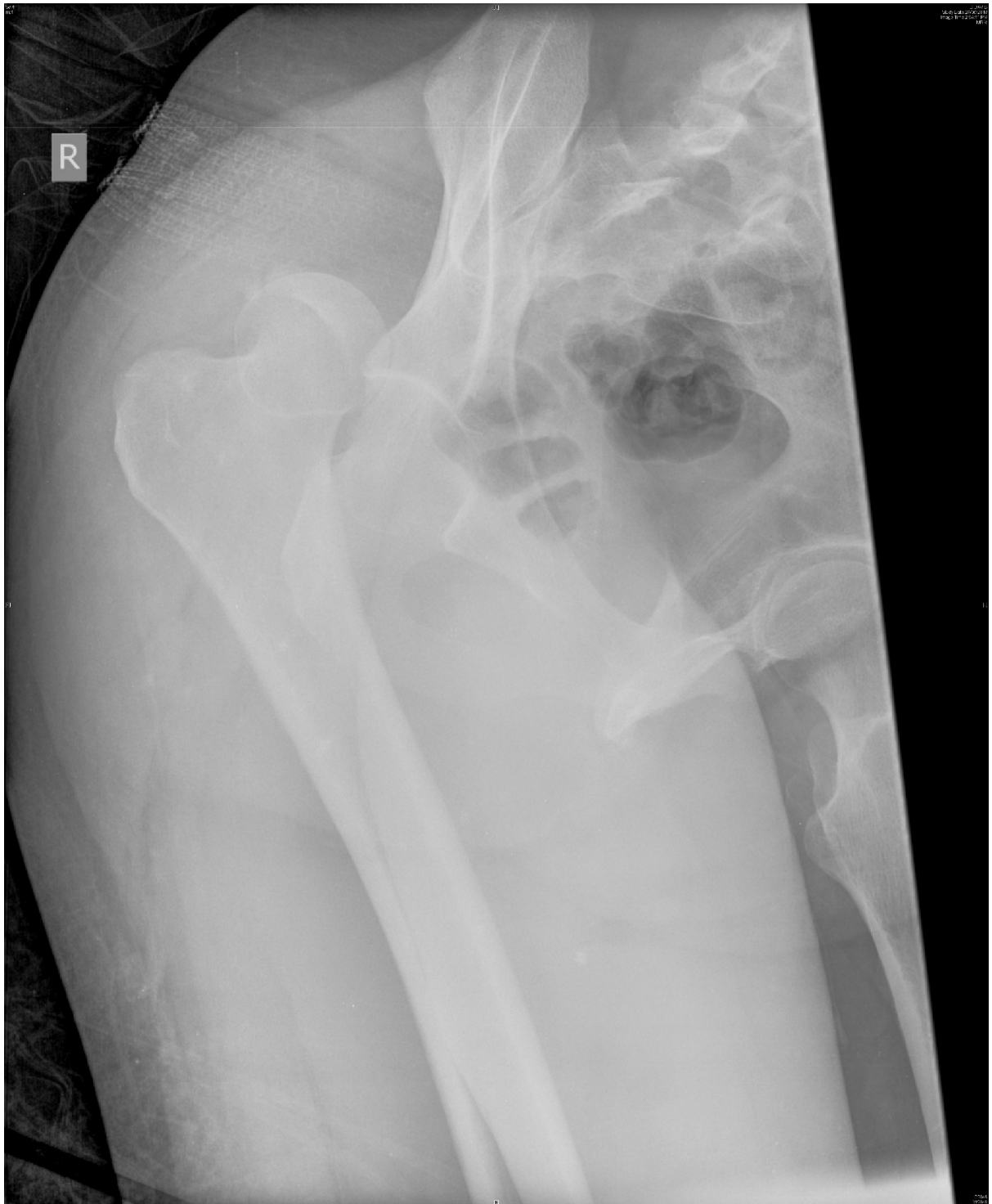
c. What is your management plan?(5 marks)

Examination handbook mapping: 4.8

Question 4 (total marks: 8)

A 32 year old man is brought into your ED from the local football game. He fell onto his right knee. He has severe pain in his RLL.





a. What does the Xray show? (2 marks)

b. What posture of his right lower limb is consistent with the Xray findings? (2 marks)

c. What aspects of his care are time-critical and why? (2 marks)

d. What are essential components of your examination for this injury? (2 marks)

SAQ practice

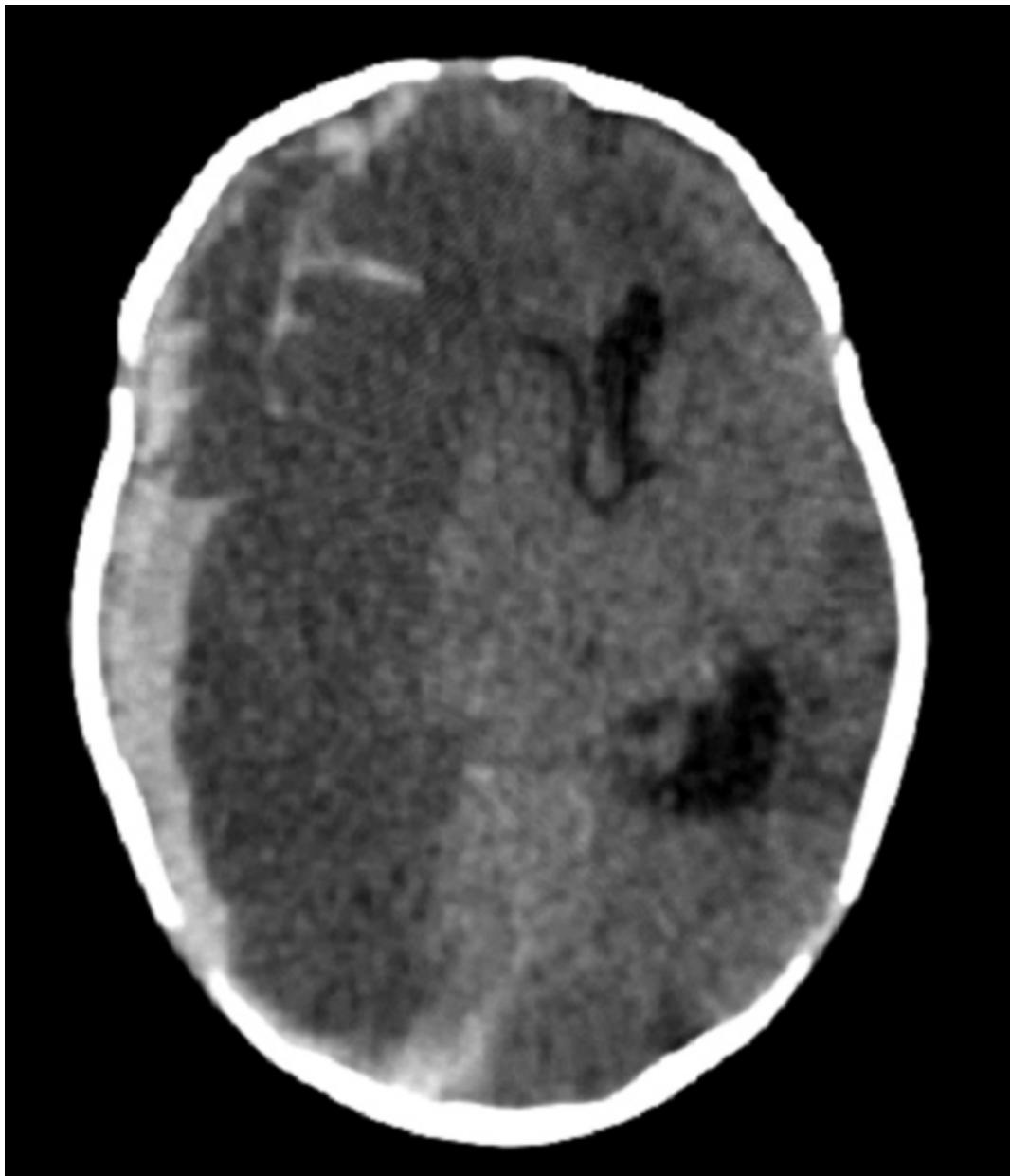
Question 5

A full-term female infant, aged 5 weeks comes to your emergency department by her mother, due to poor feeding.

On examination, the infant is irritable and listless. She has mild swelling with ecchymosis around the right eye and right knee. Her anterior fontanel is bulging, and her right pupil is dilated and unresponsive. She has an episode of apnoea during the examination.

- a. What is your management at this point?

b. This is her CTB. What are the abnormalities seen?



These are her results:

WBC of $20.6 \times 10^9/L$,

hemoglobin (Hb) 89 g/L,

platelets $516 \times 10^9/L$

prothrombin time (PT) >50 s

activated partial thromboplastin time (aPTT) = 90.6 s.

c. What is your synthesis of this case

Question 6



A 14 year old man brings himself to the ED with left sided chest pain. He was riding his skateboard earlier in the day and fell. He hit the metal barrier on the side of the road. He felt light-headed when he got up but was able to ride his skateboard home.

He has come to the ED because of ongoing pain over his left chest and he is concerned about his left shoulder as this also causes pain when he walks.

His BP is 110/90mmHg. He has a PR of 90/min and a RR of 20/min.

You organize a CT scan of his abdomen.

- a. What is the abnormality on the abdominal CT?

- b. What is the management for this abnormality?

Subsequently, he wants to discharge himself and declines your offer to contact his mother.

- c. How are you going to manage his decision to discharge himself?

Question 7

A 44 year old woman is brought in by ambulance due to respiratory distress. She weighs approximately 145 kg. On examination she has a decreased level of consciousness. Her initial assessment includes the following:

HR 110/min

BP 120/80

RR 10/min

SaO₂ 85% on room air.

GCS: E2 V3 M4

This is her ABG:

pH	7.11	(7.35 – 7.45)
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pCO ₂	145	(35-45)
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pO ₂	71	(75-110)
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BE	11	(-2 to +2)
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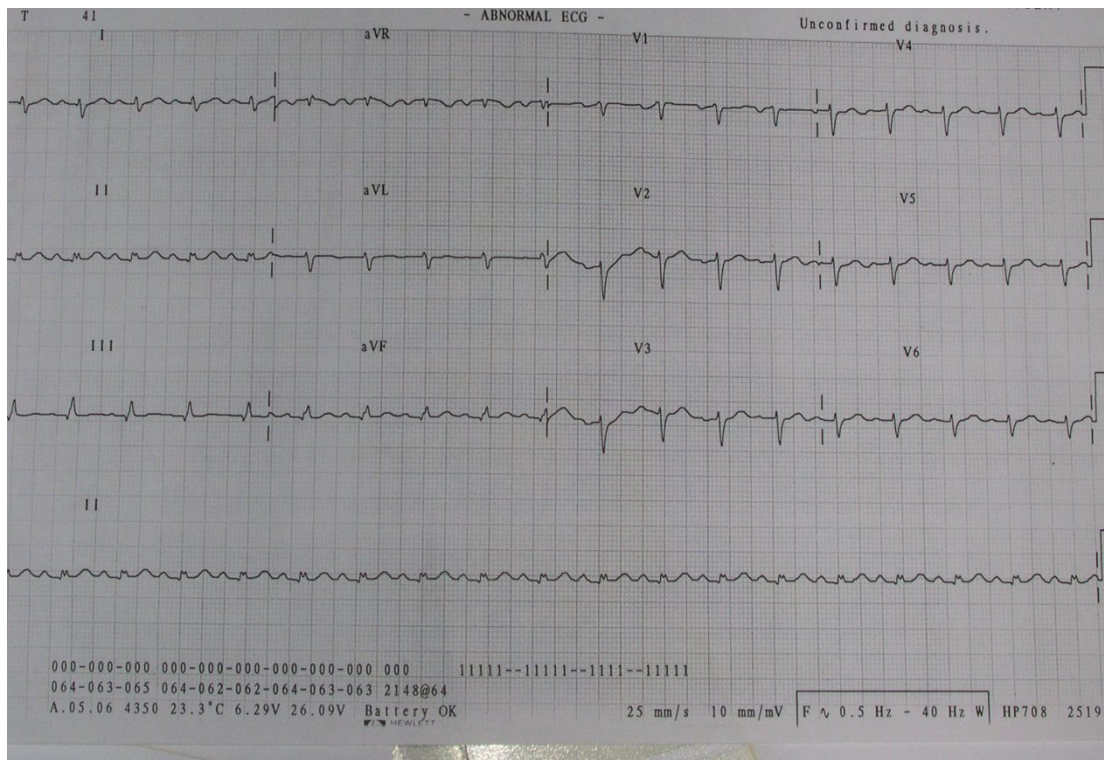
HCO ₃	46	(21-28)
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SaO ₂	85.3%	(95-98)
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Lactate	12	
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- a. Interpret her ABG.

This is her ECG



b. Interpret the ECG

You have decided to prepare for the need for a definitive airway.

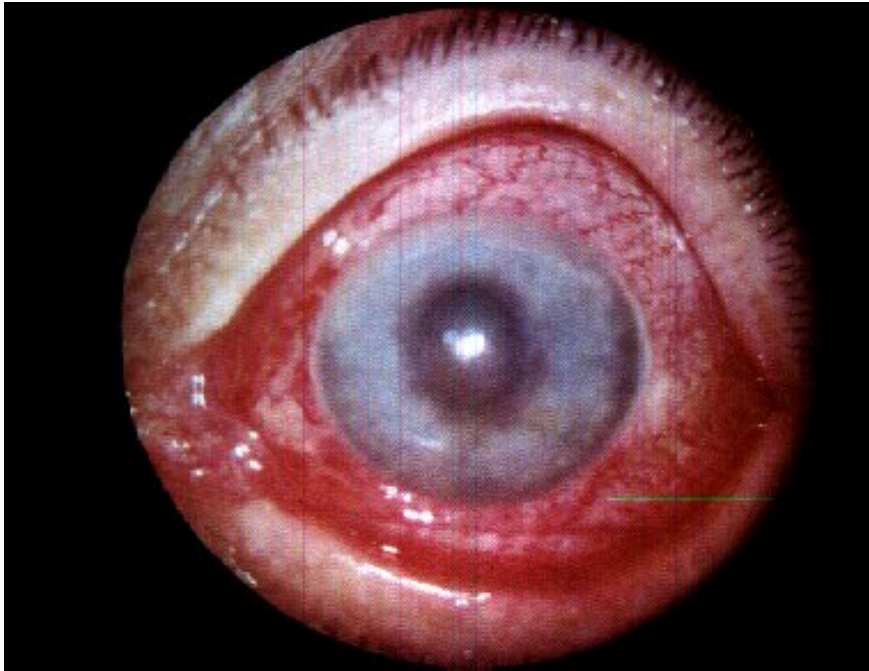
- c. What airway problems do you anticipate and what strategies would you use to overcome these?

Anticipated airway problem	Strategies

- d. What ventilator problems do you anticipate and what strategies would you use to overcome these?

Anticipated airway problem	Strategies

Question 8



A 66 year old woman presented with a frontal headache and nausea. She has been a diabetic since the age of 2 years. She has poor vision bilaterally due to retinopathy.

- a. Describe and interpret the picture

b. List the priorities in her management

Question 9

A 94 year old woman nursing home resident is referred to your ED. The agency nurse noted the swelling of her right elbow.

The patient is fully dependent and bed bound. These are her Xrays.





a. Describe the Xray

b. What is your management of this patient?
