

Renal and Urology Fellowship Questions

HOT TOPICS

UTI/Pyelonephritis - paed

Acute Renal Failure

Rhabdomyolysis

Hyperkaleamia dialysis patient

Subacute Bacterial Peritonitis in PD Patient

Renal Transplant patient

HUS Paed

PSGN

Renal Colic SSU Patients

Torsion

(Para)Phimosis

Priapism

Question 1

(13 marks)

A 46 years old female presents to ED after a brief episode of witnessed unconscious collapse in the foyer of the hospital. She did not hit her head. She is a haemodialysis patient and was on her way to the dialysis unit for her treatment. She feels short of breath and missed her last dialysis session 2 days ago. She has a history of IHD, AF, heavy smoker and hazardous alcohol use with frequent binge drinking.

Her observations and ECG are shown below

GCS 14

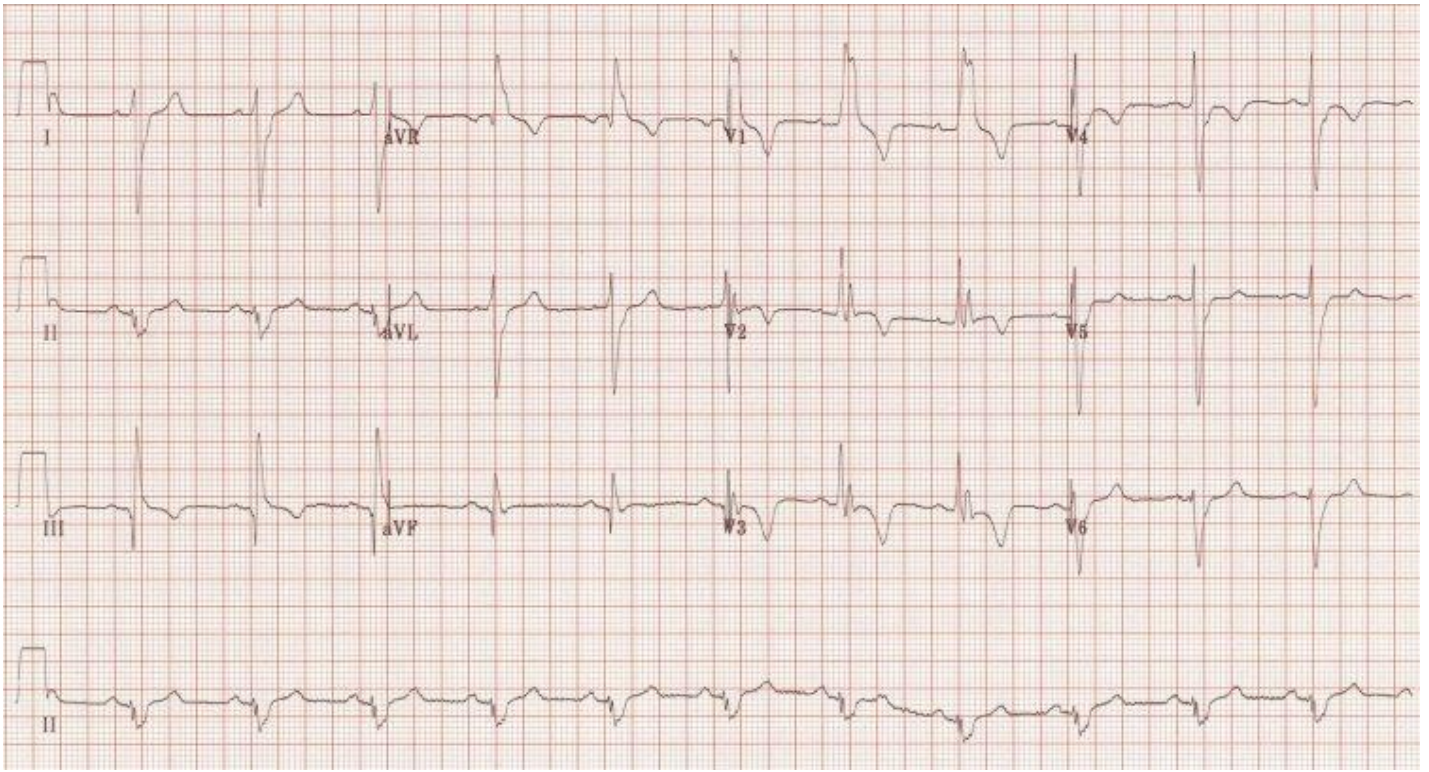
P 110

Sats 94% RA

RR 22

Temp 37.7

BP 90/50



i. List the five (5) **MOST LIKELY** causes of her collapse that you will seek to identify

(5 marks)

ii. List four (4) abnormal features on the ECG

(4 marks)

The renal registrar calls the department to ask whether the patient will be able to attend dialysis in her allocated slot 90 minutes from now

iii. List the four (4) **MOST** important tests you would like to perform in the next 60 minutes prior to answering the renal registrar's question.

(4 marks)

Question 2

(11 marks)

A 66 year schizophrenic old man presents with first episode of left loin pain radiating to his umbilicus. He has been given morphine. The RMO thinks that the patient is suitable to go to the ED Short Stay Unit (SSU) to wait for his CT scan.

Observations

P 90

BP 160/90

Sats 98

RR 12

T 37.0

i. List five (5) features in the ASSESSMENT of this patient that would exclude this man from being sent to SSU

(5 marks)

The man is transferred to short stay, he is given Panadol and indomethacin with good effect and his observations are now within normal limits. There are no striking abnormalities on routine bloods. The image below shows the a subsequent slice of the man's CT



ii. What is the most striking abnormality on the CT

(1 mark)

The diagnosis is explained to the patient

iii. List the next five (5) actions you will take immediately

(5 marks)

Question 3

(14 marks)

A 6 year old boy presents 1 week after the onset of diarrhoeal illness. He initially had bloody motions but today passed a semi formed stool. He is lethargic, nauseated and pale. Mum states that he has not passed much urine for 24 hrs. He is clinically euvolemic. He was seen in ED 1 week prior and had normal bloods including EUC, FBC and CRP.

His observations and currently available pathology results are shown below

BP	130/95	pH	7.21	Na	136
P	130	pCO2	19	K	6.6
Sats	98% RA	HCO3	14	Ur	7.0
RR	40	Lact	3.2	Cr	180
T	37.3			Cl	98

Hb 90

Plt 70

WCC 15.4

CRP 45

Stool culture – pending

BC – pending

i. Interpret the bloods gas result, including any calculations you would perform

(5 marks)

ii. List your most likely and 3 other differential diagnoses for this presentation

(4 marks)

iii. List the five (5) MOST important additional tests that you will request in ED, with reasons for each

(5 marks)

iv. List the organism that is most likely implicated

(1 mark)

Question 4

(13 marks)

A 3 years old African refugee presents to ED with priapism. He is screaming in pain and refusing to let anyone examine him.

i. List the stepwise actions you will take to manage this situation, assuming at each stage that the action is unsuccessful in resolving the priapism

(5 marks)

ii. What is the most likely cause of priapism in this child

(1 mark)

iii. In the table below compare low and high flow priapism

(8 marks)

	Low Flow Priapism	High Flow Priapism
Degree of Pain		
Causes		
Blood Gas Analysis of Cavernosal Aspirate		
Treatments		

Question 5

(14 marks)

A 34 year old male presents to ED with 2 days of gradual mild right-sided abdominal pain deteriorating renal function. Bloods taken by the GP 2 days ago show a creatinine rise from 120 to 230. He has no upper GI symptoms, no urinary Sx or bowel habit alteration. He had a renal transplant 2 months ago for IgA nephropathy and is taking prednisolone, tacrolimus and mycophenolate mofetil.

BP 230/120

P 120

Sats 98%

RR 24

T 38.5

i. List five (5) likely potential causes for this patient's presentation

(5 marks)

ii. In the table below outline the **MOST IMPORTANT** initial investigations you will perform with a reason for each

Bedside Tests (3 marks)	Laboratory Tests (4 marks)	Imaging Tests (2 marks)
TEST: REASON:	TEST: REASON:	TEST: REASON:
TEST: REASON:	TEST: REASON:	TEST: REASON:
TEST: REASON:	TEST: REASON:	
	TEST: REASON:	

Question 6

(12 marks)

A 50 year old man presents in cardiac arrest. He has been unwell at home, in bed, for 1 week with diarrhoea and vomiting. He has a history of AF, IHD, and peri-dialysis diabetic nephropathy. He was being worked up for renal transplant and has a fistula in his left arm which is still immature. He takes digoxin, aspirin, amlodipine, allopurinol and simvastatin.

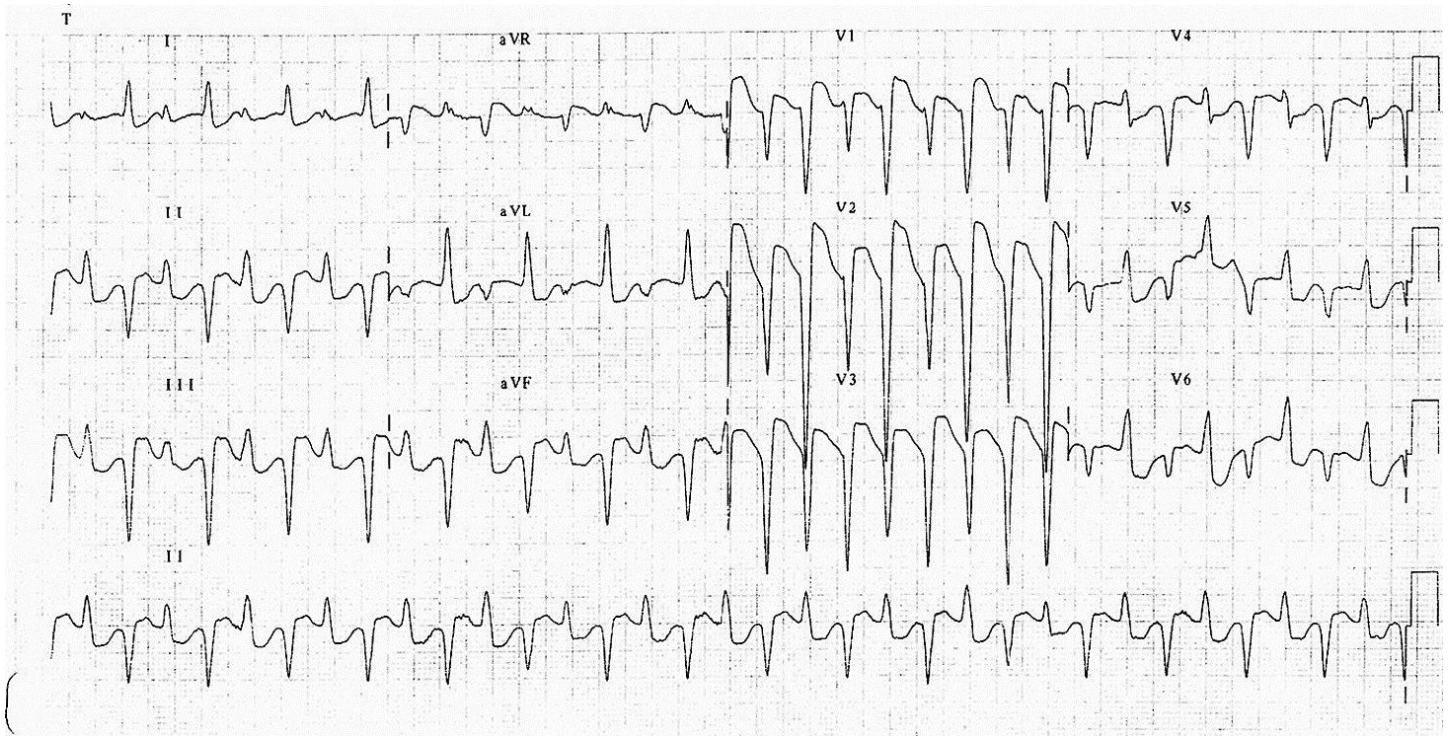
He has been shocked 3 times en route to ED and has the ALS algorithm has been initiated in the resus bay. He has been intubated

i. List the four (4) MOST likely reversible causes for this man's cardiac arrest

(4 marks)

After 4 cycles of CPR you get ROSC.

The ECG and VBG are shown below



pH	7.10
pCO2	79
HCO3	12
Lactate	9.0
Na	124
K	8.0
Cl-	98

ii. What is the abnormality seen on the ECG

(1 mark)

iii. Interpret the blood gas including any calculations you will perform

(4 marks)

iv. List the three (3) MOST immediate treatments you will administer to the patient to address the underlying cause of the arrest

(3 marks)

Question 7

(13 marks)

A 78 year old demented indigenous man from a nursing home presented to ED yesterday in urinary retention. He had a catheter inserted by the intern who it appears forgot to replace the foreskin after the procedure. There is no surgical team at your rural hospital site

The image shown below shows the current problem.



i. What is the abnormality shown in the photograph

(1 mark)

ii. List the stepwise actions you will attempt to deal with the problem, assuming at each stage you are unsuccessful

(4 marks)

The intern who saw the patient is very distressed. She wasn't aware of the need to replace the foreskin after catheterisation. She states that she was supervising the 5th year medical student, who actually inserted the catheter. The consultant who was on duty yesterday is not available at present.

iii. In the table below list the issues that need to be dealt with and the actions you will take

(8 marks)

Issue	Action

Question 8

(7 marks)

A 59 years old female has been brought to your resus bay with a fever and confusion. She usually performs home peritoneal dialysis but has been unwell and did not complete it for the last 2 days. She is unable to give much history. She lives alone and her sister found her sitting on the floor in the bathroom. She has full non-invasive monitoring in situ and two 18G cannulas. She is trying to climb out of bed and is currently being physically restrained

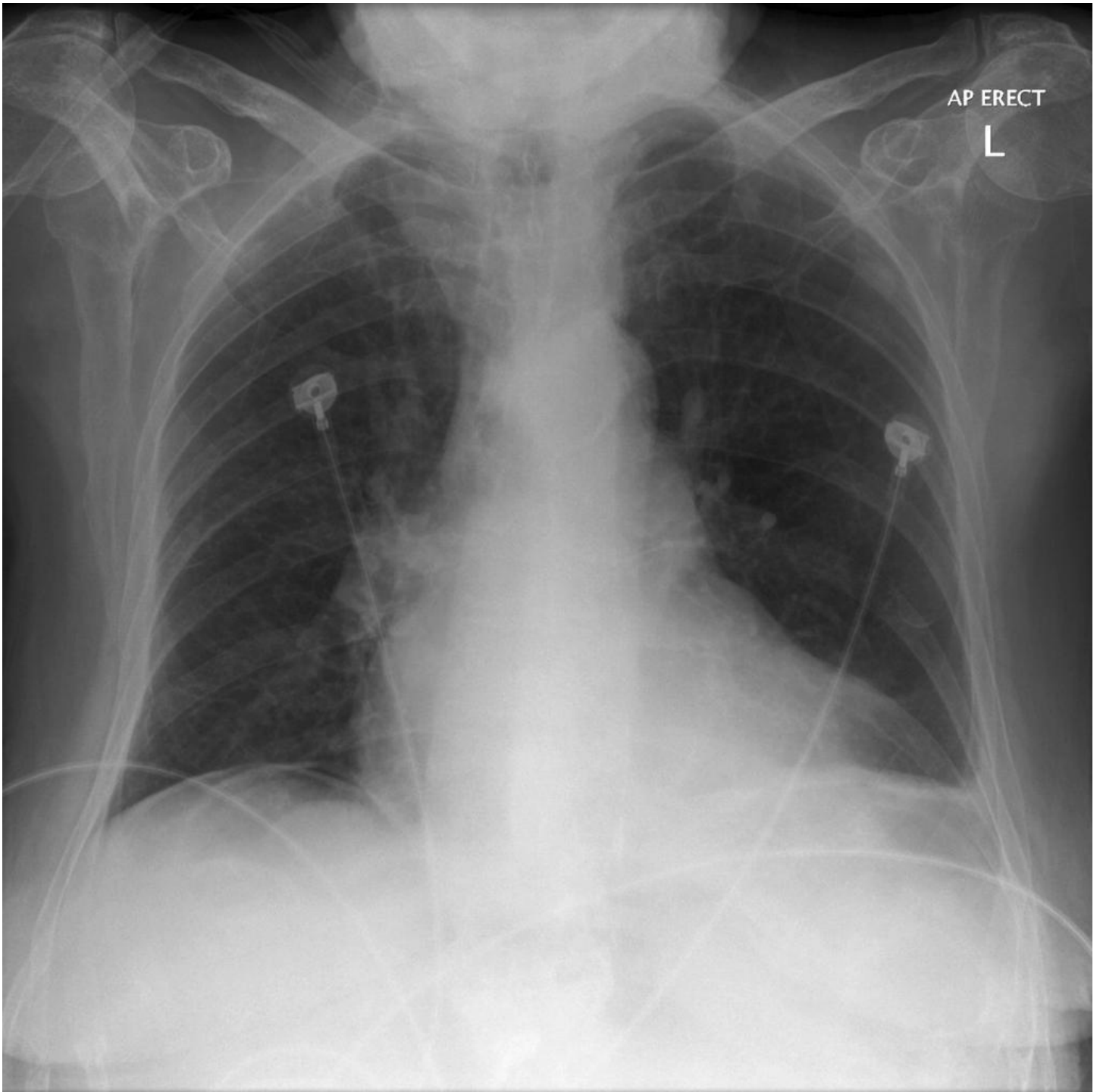
PMH – Type 2 DM, IHD, AF, replacement of Tenckhoff catheter 4 days ago

P	130	pH	7.14
BP	70/50	pCO2	22
Sats	91% RA (99% on 15L)	HCO3	14
RR	28	Lact	4.3
T	38.9	Na	131
GCS	12 (M 5, V3, E4)	K	5.7
		Cr	490
		Cl	102
		Hb	105

Blood has been sent for FBC, EUC, LFT, BC, CMP, CRP and results are pending

UA from IDC specimen – leuc trace, blood neg, nit neg

Her CXR is shown below



i. What is the one (1) most obvious abnormality on the CXR

(1 mark)

ii. List the two (2) most important further investigations would you like to perform to define the underlying cause

(2 marks)

iii. Outline four (4) immediate treatments for this patient

(4 marks)

Question 9

(12 marks)

A 9 week old boy presents with a reported fever at home. He has no overt focus on full clinical examination and looks well. He is feeding well, has good hydration and normal amounts of wet nappies. You are keen to get a urine sample.

P 180

BP 90/60

Sats 98

RR 40

T 36.9

i. List three (3) methods of gaining a urine sample with 1 pro and 1 con of each.

(9 marks)

Method	Pro	Con

The most sterile method of collecting urine is utilised and the following result is obtained

SG 1.02

pH 6.0

Leuc 2+

Nit pos

Ket neg

Gluc neg

ii. List your three (3) MOST important investigation and management steps

(3 marks)
