

Question 34

Patient details:

Anita Ren

Age: 76, F

Weight: 46Kg

Reason for admission: Fall at home, awaiting package of care

PMHx: Type 2 diabetes mellitus, Hypertension, Asthma, Depression

No known drug allergies

Task Part 1:

You are the FY1 Doctor working on a COTE ward, you are currently performing your daily reviews of inpatients.

Your next patient, Anita Ren, has just had their observations and bloods returned.

Anita has been struggling with pain in her wrist since the fall, with this diagnosed as a soft tissue injury only. You have noted she had no pain relief prescribed.

Taking into account her below bloods and observations and ongoing pain, please amend her attached Kardex as you feel appropriate.

Observations:

Resp rate: 15, SATS 97%

HR: 80bpm, BP: 98/58

GCS 15, Temp 36.9

Bloods:

FBC: Hb 120 (115-165 g/L), WCC 8 (4-11 x10⁹/L)

U&Es:

Na⁺: 139 (133–146 mmol/L)

K⁺: 5.3 (3.5–5.3 mmol/L)

Urea: 15 (2.5 – 7.8 mmol/L)

Creatinine: 200 (♀ 45–84 µmol/ L)

Answers:

To suspend drugs on a Kardex, it is good practice to put in the date discontinued and initials box, and totally score out the drug. Also acceptable to score out future dates for administering drug.

1) Metformin

- From the BNF: "Manufacturer advises avoid if eGFR is less than 30 mL/minute/1.73 m²"
- eGFR is purposefully not given, as students are expected to suspend Metformin without BNF guidance in this stage 2 AKI, as it will accumulate in renal impairment.

2) Ramipril

- From the BNF: "Caution (hyperkalaemia and other side-effects of ACE inhibitors are more common in those with impaired renal function)."
- This is two fold for this question:
 - Students are expected to recognise BP is low and stop an anti-hypertensive in light of this
 - Students are also expected to recognise that Ramipril, an ACE inhibitor, is contraindicated in AKI and to stop this as well.

3) Analgesia

- Paracetamol is the first step on the pain ladder.
- Given low weight <50Kg, appropriate to start at 500mg QDS.

4) Ensuring Kardex is correct

- Mostly pre filled
- However allergies box needs completed and signed

Task Part 2

Using the above information, bloods and observations, please also fill in the attached fluid prescription for appropriate fluids for the next 24 hours.

Answers:

Note there are *many* correct ways around fluid prescribing and these are one way to reach the roughly appropriate fluids according to guidelines.

In reality this patient will also need re-assessed following boluses. However, answers that would be accepted could be:

Fluid bolus

- This patient has low BP and an AKI, therefore a bolus is appropriate
- In this case the high K⁺ makes Hartman's a poor choice
- *Also remember in any case not to exceed 10-20mmol/hour of potassium in a WRISKE*
- An appropriate bolus would be 250-500mL of 0.9% NaCl over 15-30 mins
- This is due to their age and weight, it could be argued 500mL would risk fluid overloading the patient

Maintenance fluids:

We have been asked to prescribe 24 hours of fluids, thus:

- Calculating fluid needs:
 - o 25-30 ml/kg/day of water;
 - o approximately 1 mmol/kg/day of potassium, sodium and chloride;
 - o approximately 50-100g/day of glucose to limit starvation ketosis (however note this will not address the patient's nutritional needs)
- In this case:
 - o Note potassium is borderline high, we don't want to add any more!
 - o Therefore for maintenance fluids could include:
 - 1 Bag NaCl over 12 hours
 - 1 Bag 5% Dextrose over 12 hours
 - o Variations in this are acceptable, including fluids over 8-12 hours, and using 2 bags of 0.9% NaCl.