CME: Haematology (140053): self-assessment questionnaire


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1) A 42-year-old woman was brought in by ambulance to the emergency department with a GCS of 10. Her partner reported a two-day history of confusion and drowsiness. Prior to this she had been complaining of abdominal pain, headaches and limb weakness. Her Hb is 92g/L (115-155 g/L), platelets 15x10⁹ (150-450*10⁹/L) and creatinine 230 µmol/L (47-99 µmol/L). Her coagulation profile is normal. Her blood film is shown below and reported as ‘marked thrombocytopaenia, polychromasia and red cell fragments.’ A direct antiglobulin test is negative. She is not pregnant.

The most likely diagnosis is:

A) Disseminated intravascular coagulation
B) Haemolytic uremic syndrome
C) HELLP (Hemolysis, Elevated Liver enzymes and Low Platelets) syndrome
D) Immune thrombocytopenia purpura (ITP)
E) Thrombotic thrombocytopenic purpura

2) A healthy 19-year-old woman was admitted to the medical ward after travelling back from Nigeria. She presented with fatigue, chills, sweats, and myalgia. Her full blood count showed haemoglobin of 98 g/L (115–155) and bilirubin of 90 µmol/L (<21). A blood film is reported as ‘anaemia, ring forms found inside red blood cells.’ Further testing confirmed malaria falciparum.

Which of the following features are characteristic of intravascular red cell destruction?

a) Haematuria, haemosiderinuria, low haptoglobin, low LDH, low bilirubin, low reticulocyte count
b) Haematuria, raised haptoglobin, raised LDH, raised bilirubin, low reticulocyte count
c) Haemoglobinuria, haemosiderinuria, low haptoglobin, raised LDH, raised bilirubin, raised reticulocyte count
d) Haemoglobinuria, haemosiderinuria, low haptoglobin, raised LDH, raised bilirubin, low reticulocyte count
e) Haemoglobinuria, haemosiderinuria, raised haptoglobin, raised LDH, raised bilirubin, low reticulocyte count, thrombocytopenia, and anaemia

3) A healthy and active 62-year-old woman was admitted to the acute assessment unit with a 3-day history of fatigue, jaundice, shortness of breath and palpitations. 5 days previously, she was given some antibiotics by her general practitioner (GP) for an uncomplicated urinary tract infection which
has now resolved. Her blood tests showed haemoglobin of 68 g/L (115–165), mean corpuscular
volume (MCV) of 108 fl (77–100) and LDH of 800 IU/L (<240). A blood film was as ‘anaemia,
polychromasia and spherocytes.’ A direct antiglobulin test was positive for both Immunoglobulin
(IgG) and C3d.

Which of the following management options is the most appropriate?

a) Commence steroids and continue antibiotics  
b) Commence steroids, IV fluids, IV antibiotics  
c) Give a blood transfusion and folic acid and stop the antibiotic  
d) Give blood transfusion and refer to haematology for a bone marrow aspirate and trephine  
e) Give folic acid, IV iron and bring back for outpatient review in two days’ time

4)  
A 45 year old lady presents with new onset mucosal bleeding when brushing her teeth. On
questioning she has felt generally run down during the past week with frequent headaches and
blurring of vision. She appears confused, with a GCS of 14/15. She is usually fit and well, taking only
paracetamol for her headaches. Observations show a regular pulse of 96bpm, BP 110/65 mmHg, RR
18, O₂ saturations 94% and temperature 38.3⁰C. Initial blood results show haemoglobin 70 g/L (120-
160), platelet count 42x10⁹/L (159-400), serum creatinine 150 μmol/L (60-110), urea 12 mmol/L (2.5-
7.5). A blood film confirms thrombocytopenia and red cell fragments.

What is the most important next step in management?

A) Give a stat dose of intravenous immunoglobulin  
B) Give high dose steroids  
C) Give a platelet transfusion  
D) Urgent haemodialysis  
E) Urgent plasma exchange

5)  
A 36 year old woman in the 3rd trimester of pregnancy has been referred after a routine blood test
showed a new isolated thrombocytopenia of 120 x 10⁹/L. Repeat full blood count confirms this
finding. She denies any bleeding, recent infections or drug changes. She is otherwise well. Her
observations, including blood pressure, are within the normal range.

What is the most likely diagnosis?

A) Disseminated intravascular coagulation  
B) Gestational thrombocytopenia  
C) Primary immune thrombocytopenic purpura  
D) Spurious result  
E) Thrombotic thrombocytopenic purpura

6)  
A 25 year old man with sickle cell disease presented at midday with rib and back pain which felt like
his usual sickle cell pain. He was not able to control his pain at home with 1g paracetamol, 400mg
ibuprofen, 5mg oxycodone immediate release liquid, all last taken at 11:00. He had three admissions
for painful crises over the last five years and took only folic acid 5mg OD and Penicillin V 250mg BD regularly. He had a cough and had noted some coryzal symptoms in the last few days. He was apyrexial, with oxygen saturations 96% OA, RR16, BP 148/80 and HR 90bpm. On examination he was clearly in pain. His chest was clear and he appeared euvoelaemic. His bloods demonstrated a Hb of 69g/L WBC 13 x10⁹/L retics 189 x10⁹/L CRP 46mg/L.

What is the most appropriate initial intervention in ED?

A) Transfuse 2 units packed red blood cells
B) IV paracetamol and review pain scores in 30 minutes, start IV antibiotics
C) Paracetamol, NSAIDS, SC oxycodone and oral antibiotics
D) SC oxycodone and oral antibiotics
E) IV antibiotics, IV fluids, oxygen via nasal specs, broad spectrum antibiotics IV

7) A 37 year old man with HbSC presented with a painful crisis in his legs, chest and back. He also reported rigors and had crepitations at the right base on examination. Other than a temperature of 38.5 degrees his observations were normal. He is normally well and takes no regular medications. He was prescribed regular paracetamol, ibuprofen, and oral oxycodone MR, with oral oxycodone IR on the PRN side of his chart. His CRP was found to be 95mg/L and he was commenced on IV coamoxiclav and clarithromycin. Blood cultures, an atypical screen and respiratory viral panel were sent. By the time he was moved to the ward he reported his pain was better controlled but that he felt quite drowsy with the oxycodone. On day 2 of admission his RR was 9 and oxygen saturations were 88% OA. GCS was 14 (E3V5M6). His repeat CXR showed worsening consolidation on the left and new infiltrate on the right. His haemoglobin was 99g/L.

What should happen next?

A) IV fluids, escalate antibiotics to IV meropenem, ITU review
B) Review opiate requirements, oxygen to aim >94%, crossmatch 2 ABO compatible, extended Rh and Kell-matched HbS negative units
C) 200 micrograms naloxone, oxygen to aim 88-92%, escalate antibiotics to IV meropenem, urgently transfuse 2 ABO matched units
D) Crossmatch 8 ABO compatible, extended Rh and Kell-matched HbS negative units, ABG, review opiate requirements, oxygen to aim >94%, consider ITU review and exchange transfusion
E) Urgent red blood cell transfusion with ABO compatible blood, 400 micrograms naloxone, escalate antibiotics to IV meropenem, ITU review

8) A 23 year old woman with known sickle cell disease was admitted via ED with a vaso-occlusive crisis. She was treated with paracetamol, ibuprofen, and oxycodone. She reported some mild respiratory symptoms and had a temperature of 37.8 degrees, and was started on oral antibiotics in addition to pain relief. Her Hb was 78g/L WBC 4.1 x10⁹/L PLT 179 x10⁹/L neutrophils 2.1 x10⁹/L. The clerking F1 identified that the patient usually takes folic acid 5mg OD, penicillin V 250mg BD, and hydroxyurea 1g OD.

What should be done about this patient’s regular medications?
A) Hold the folic acid, penicillin V and hydroxycarbamide
B) Give the folic acid, penicillin V and hydroxycarbamide
C) Give the folic acid and hold the penicillin V until the treatment course of antibiotics is completed, continue the hydroxycarbamide after discussion with haematology
D) Give the folic acid, hold the penicillin V until treatment course completed, increase the hydroxycarbamide dose after discussion with haematology
E) Give the folic acid, hold the penicillin V until treatment course completed, hold the hydroxycarbamide after discussion with haematology

9) A 78 year old patient is reviewed in A&E. He has presented confused and lethargic. During your history taking, he keeps asking for a drink of water. You note his GP blood results from last week which show an IgG paraprotein of 33g/L and serum-free kappa light chains of 1500.

Which of the following would explain this gentlemen’s symptoms?

A) Acute kidney injury
B) Anaemia
C) Hypercalcaemia
D) Type 2 diabetes
E) Addisonian crisis

10) A 72 year old patient is found to have an IgG paraprotein level of 20g/l. Bone marrow aspirate shows 33% monoclonal plasma cell infiltrate. The patient has no evidence of anaemia, hypercalcaemia, renal impairment or lytic lesions.

What would be the appropriate management plan for this patient?

A) Bortezomib
B) Cyclophosphamide
C) Monitor with 3-monthly review
D) Thalidomide
E) High dose steroids

Answers

1) E
2) C
3) A
4) E
5) B
6) D
7) D
8) C
9) C
10) C