



Part 1 examination

Haematology: First paper

Tuesday 23rd March 2010

Candidates must answer ALL questions

Time allowed: 3 hours

- 1 A 60-year-old female patient was prescribed 1 unit of apheresis platelets and 4 units of fresh frozen plasma (FFP). The platelets and first 3 units of FFP were transfused without incident over a period of an hour and a half. Ten minutes after starting the 4th unit of FFP she became acutely short of breath and hypotensive with a temperature of 38°C. Discuss the differential diagnosis, laboratory investigation and management of this adverse reaction

- 2 One of your patients with moderate haemophilia A (Factor VIII = 4iu/dl) is admitted with unstable acute angina. The lesion is not suitable for stenting and he will require urgent coronary artery bypass grafting. Describe in detail your pre-, peri- and post-operative management for this patient.

- 3 Define the optimal treatment strategy in CLL. What patient factors and laboratory-based analyses would make you modify your strategy?

Please turn over for Question 4

- 4 Discuss the investigation and management of a 16-year- old girl with a platelet count of $46 \times 10^9/l$. She has a history of easy bruising but no other bleeding. Blood film demonstrates large platelets. There is a family history of thrombocytopenia.

Part 1 examination

Haematology: First paper

Tuesday 22 September 2009

Candidates must answer ALL questions

Time allowed: 3 hours

1. Discuss the measures that can be used to reduce the risk of transmitting viruses to patients via red cells, platelets and fresh frozen plasma.
2. Discuss the assessment and management of a 35 year old man who presents with distressing pruritus. His blood count is abnormal; WBC $19.3 \times 10^9/l$, Hb 196g/l, Hct 39%, platelets $726 \times 10^9/l$.
3. Discuss the different techniques for assessing minimal residual disease in haematological malignancy giving examples of how the results can affect management and outcome.
4. Explain how currently available tests detect lupus anticoagulants. Critically assess their utility in identifying patients at increased risk of thrombosis.



The Royal College of **Pathologists**
Pathology: the science behind the cure

Part 1 examination

Haematology: First paper

Tuesday 24 March 2009

Candidates must answer ALL questions

Time allowed: 3 hours

1. Discuss the management of massive blood loss in a hospital setting.
2. Critically evaluate the approach to investigation and management of a 57 year old man found to have a serum ferritin of 1250ug/L when presenting to his GP with non-specific symptoms of fatigue.
3. You have been asked to set up a late effects clinic for adult patients who are more than 5 years from receiving curative treatment for haematological malignancy. What would you cover in the consultations and explain which tests you would do and why?
4. Critically evaluate the use of laboratory tests in assessing the risk of recurrence after a first idiopathic venous thrombosis.



The Royal College of Pathologists

Pathology: the science behind the cure

Part 1 examination

Haematology: First paper

Tuesday 23 September 2008

Candidates must answer all FOUR questions

Time allowed: 3 hours

- 1 Explain the pathogenesis of neonatal alloimmune thrombocytopenia (NATP), and critically evaluate treatment options for a woman with anti-HPA1a, who is now in the early stages of her second pregnancy. Her first child suffered an in-utero intracranial haemorrhage.
- 2 Your Director of Pathology wishes to establish a 'core' laboratory combining haematology and chemical pathology in one facility, and has asked for your views as head of the haematology laboratory service. Compose a written reply, examining the pros and cons of this proposal, with a final opinion based on these arguments.
- 3 Thalidomide has recently been licensed for use in myeloma as first line therapy in combination with melphalan and Prednisolone for patients over the age of 65. Discuss the benefits and problems with using thalidomide in this combination particularly focussing on the impact that this would have in terms of clinical effectiveness and service delivery compared with melphalan and Prednisolone alone.
- 4 Which laboratory tests can be used to detect the anticoagulant effect of heparin? Critically evaluate their usefulness and limitations in monitoring heparin therapy.



The Royal College of Pathologists

Part 1 examination

Haematology: First paper

Tuesday 18th March 2008

Candidates must answer all FOUR questions

Time allowed: 3 hours

1. A pandemic flu outbreak has led to a reduction of 50% in available blood stocks. Design an emergency blood management plan for your hospital to be activated in this situation.
2. Critically evaluate the management options for a 16 year old schoolgirl who presented 6 months earlier with immune thrombocytopenic purpura. Her platelet count at presentation was $5 \times 10^9/l$ and rose to $170 \times 10^9/l$ on 40mg prednisolone per day. She is now taking 10mg prednisolone per day and her platelet count is $20 \times 10^9/l$. Indicate the short-term and long-term management plan that you recommend.
3. A central review of 745 lymph node biopsies in England and Wales in 1998 - 2000 revealed significant discordance for lymphoma diagnosis in 17% of cases, of which 36% would have led to a change in management (Lester JF et al, Br J Haematol 2003;123:463-8). How should lymphoma diagnosis be organised at both a local and regional level in order to improve diagnostic accuracy? Illustrate your answer by giving examples of the range of diagnostic tests available.

Please turn over for question 4

4. An 18-month-old boy with severe haemophilia A develops a FVIII inhibitor of 56Bu. Critically evaluate short-term and long-term management options for this child and indicate the management plan that you recommend.



The Royal College of Pathologists

Part 1 examination

Haematology: First paper

Tuesday 25th September 2007

Candidates must answer all FOUR questions

Time allowed: 3 hours

1. Prepare a guideline for your hospital on the indications for the use of FFP and cryoprecipitate.
2. A 21 year old lady with sickle cell anaemia (HbSS) presents at 8 weeks gestation in her first pregnancy. She has suffered several severe sickle crises in the past and has been on hydroxycarbamide at a dose of 1g daily for the past two years. Critically discuss the management options.
3. "Treatment for haematological malignancies will move away from chemotherapy to more targeted biological therapy in the next 5 - 10 years". Critically discuss this statement, providing examples based on current clinical developments. What effects may this have on the providers of haematology treatment and services required to support their use?
4. What do you understand by the term 'direct thrombin inhibitors'? Why is there increasing interest in them? Critically evaluate the currently available agents and their indications.



The Royal College of Pathologists

Part 1 examination

Haematology: First paper

Tuesday 27 March 2007

Candidates must answer all FOUR questions

Time allowed: 3 hours

1. Prepare a patient information leaflet about blood transfusion, intended for adult patients scheduled for elective surgery attending a pre-admission clinic approximately 1 month prior to the date of admission.
2. A 47 year old publican presents with symptoms of breathlessness and a FBC reveals a Hb level of 6.5g/dl, WBC of $3.5 \times 10^9/l$ (Neuts $2.3 \times 10^9/l$) and Platelets of $75 \times 10^9/l$. The MCV is 105 fl. Describe your approach to investigation and management of this patient.
3. Critically evaluate the management options for a 22 year old woman who is 18 weeks pregnant and has just been diagnosed with AML M1? Her WCC is $110 \times 10^9/l$, Hb 6.5 g/dl, plt $20 \times 10^9/l$ and cytogenetics are normal. State clearly the management plan you would recommend and the reasons for your choice.
4. A 34-year-old woman is referred to you for counselling. Her father has severe haemophilia A (VIII:C $<1IU/dl$) and she is contemplating becoming pregnant. Discuss the issues that you would cover during the consultation. Six months later she is 5 weeks pregnant. How would you manage this pregnancy?



The Royal College of Pathologists

Part 1 examination

Haematology and Transfusion Medicine: First paper

Tuesday 19 September 2006

Candidates must answer FOUR questions ONLY

Time allowed: 3 hours

- 1 Discuss the investigation, diagnosis and management of a patient who presents with general malaise and is found to have an eosinophil count of $25 \times 10^9/l$.

- 2 You have been asked to help draft an antifungal policy for your Trust. Critically appraise the role of each available drug based on available published evidence and cost in the following situations:
 - (i) prophylaxis of fungal infection
 - (ii) treatment of culture-proven invasive pulmonary aspergillus fumigatus.

- 3 Critically evaluate the role of haemostasis screening tests (PT; APTT) in the pre-operative assessment of bleeding risk.

Please turn over for Questions 4 and 5

- 4 Write short notes on all of the following:
 - (i) cold haemagglutinin disease
 - (ii) factor XI deficiency
 - (iii) mean platelet volume (MPV).

- 5 Critically evaluate the role of anti-CD20 monoclonal antibody therapy in haematological conditions associated with disordered auto-immunity. Write an outline business case for the use of this agent in those conditions in which you feel this is an appropriate therapy.



The Royal College of Pathologists

Part 1 examination

Haematology: Second paper

Tuesday 19 September 2006

Candidates **MUST** answer the first question
and any **THREE** of the remaining **FOUR** questions

Time allowed: 3 hours

- 1 Discuss current antenatal prophylaxis for haemolytic disease of the newborn. Critically evaluate methods for the quantitation of fetomaternal haemorrhage. Discuss the management of HDN due to Rh-incompatibility.

- 2 Discuss the pathophysiology of paroxysmal nocturnal haemoglobinuria. Critically evaluate the guidelines for laboratory evaluation and management of this condition and their relationship to its pathophysiology.
- 3 The detection of an inhibitor to coagulation in a patient may indicate a risk of haemorrhage or a risk of thrombosis. How is this possible? Discuss how these risks can be distinguished?

Please turn over for Questions 4 and 5

4 Critically evaluate the significance of all of the following associations:

- (i) FLT-3 abnormalities in AML
- (ii) JAK-2 abnormalities in myeloproliferative disorders
- (iii) Cyclin-D1 abnormalities in NHL.

5 Describe and justify your recommendations for the investigation and management of a 42 year old man who complains of fatigue and is found to have the following blood profile:

WBC $12 \times 10^9/l$ HB 145 g/l Platelets $1100 \times 10^9/l$