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POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (TRANSFUSION MEDICINE) EXAMINATION – SEPTEMBER 2020

Date: 14th September 2020 Time: 1.00 p.m. – 4.00 p.m.

PAPER I

Answer any five (05) questions.
Answer each question in a separate book.

1.

1.1. What are the therapeutic goals in the management of massive haemorrhage? (20 marks)

1.2. Briefly discuss the causes and their contribution to coagulopathy of trauma. (60 marks)

1.3. List the complications of massive transfusion. (20 marks)

2.

2.1. List the uses of reagent red cells. (5 marks)

2.2. State the general guidelines required for preparation of reagent red cells. (40 marks)

2.3. Write the specific requirements of reagent red cells for use in red cell antibody identification. (30 marks)

2.4. What is Alsever's solution and state it's main constituents. (10 marks)

2.5. Briefly describe the quality control procedures and parameters of screening cells at National Blood Centre, Sri Lanka. (15 marks)

3. The hospital you are working in has a special unit with an ICU to admit patients with a highly contagious virus which has been newly detected and has no definitive treatment.

3.1. A patient in this special unit needs a blood transfusion.
State the instructions you would give regarding sending the request to the blood bank and handling this sample at blood bank giving reasons. (50 marks)

3.2. The clinician requests convalescent plasma for the management of a patient in this special unit.
List the titles of Standard Operating Procedures (SOP) you will need and briefly state the contents that should be included in each of these SOPs. (50 marks)

Contd…./2-

4.

4.1. State briefly preventive strategies for transfusion transmitted HIV infection with special emphasis on Sri Lankan scenario. (30 marks)

4.2. You have been informed that a 39-year old male donor who donated at one of your mobile blood donation campaigns has been confirmed as positive for HIV infection. On questioning the donor, he informs that his wife also has donated blood at the same mobile campaign.
How would you manage this situation? (70 marks)

5. A 40-year-old woman becomes dyspnoeic and wheezy 10 minutes into an infusion of FFP. Respiratory rate is 28/minute. SaO_2 88%. Blood Pressure is 94/48mmHg.

5.1. What is the immediate management of this patient? (20 marks)

5.2. What are the differential diagnoses? (10 marks)

5.3. How would you differentiate each of these conditions? (40 marks)

5.4. What measures would you take to prevent the conditions you mentioned in 5.2? (30 marks)

6. A 50-year-old multigravida was admitted to the medical ward with a history of shortness of breath and chest pain. On examination she was found to have a Hb level of 6.2g/dl. Unexpected antibody screening was negative. Two units of blood were cross matched and transfused uneventfully. She was diagnosed as a case of iron deficiency anaemia and was discharged with iron supplements.
She was readmitted to the ward after six days with severe anemia. On examination she was febrile and icteric. Unexpected antibody screening was positive and anti-Jk^b was identified.

6.1. Describe the pathophysiology of the above condition. (60 marks)

6.2. How would you manage this patient? (20 marks)

6.3. What actions would you take to prevent such incidents in future? (20 marks)

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MD (TRANSFUSION MEDICINE) EXAMINATION – SEPTEMBER 2020

Date: 15th September 2020 Time: 9.00 a.m. – 12.00 noon

PAPER II

Answer any five (05) questions.
Answer each question in a separate book.

1.

1.1. Give a brief account on pathophysiology of vaso-occlusive crisis in sickle cell anaemia. (40 marks)

1.2. Discuss the indications for emergency transfusion management in sickle cell anaemia. (60 marks)

2. An aplastic anaemia patient is identified as a candidate for Haematopoietic Progenitor Cell (HPC) transplantation. Patient's physician requests the opinion on transfusion management during the pre-transplantation period.

2.1. Explain how you would respond to this request giving reasons. (20 marks)

2.2. This patient is to undergo a blood group incompatible HPC transplantation. State the special preparations required during the pre-transplantation period giving reasons. (10 marks)

2.3. What are the causes for haemolysis in patients after HPC transplantation? (30 marks)

2.4. Briefly explain the pathophysiology of each condition mentioned in 2.3. (40 marks)

3.

3.1. Discuss the identification and management of pre-operative anaemia. (50 marks)

3.2. Anaesthetist in your hospital is interested in practising Acute Normovolaemic Haemodilution (ANH) and seeks your support. As a Consultant Transfusion Physician, how would you advice and guide him? (50 marks)

Contd……./2-

4.

4.1. Explain how the pre transfusion testing of neonates and infants less than four months of age differ from adults. (30 marks)

4.2. A day 1 sick pre-term baby delivered by a caesarean section has been transferred from a remote hospital due to unavailability of a Neonatal Intensive Care Unit (NICU) facilities. Mother was not sent with the baby. Medical officer of the NICU informed that the baby needs a top up transfusion.
What information would you seek and how would you arrange blood for the baby? (20 marks)

4.3. How would you arrange blood for a neonate in following situations?

4.3.1. Maternal unexpected antibodies are negative and neonate's Direct Antiglobulin Test (DAT) is positive during pre-transfusion testing. (15 marks)

4.3.2. Maternal unexpected antibodies are positive and neonate's DAT is negative during pre-transfusion testing. (10 marks)

4.3.3. Maternal unexpected antibodies are positive and neonate's DAT is positive during pre-transfusion testing. (15 marks)

4.3.4. Maternal unexpected antibodies are negative and neonate's DAT is negative during pre-transfusion testing. (10 marks)

5. A 40-year-old male with recurrent headache, dizziness and blurring of vision was diagnosed as having erythrocytosis.

5.1. What are the diagnostic criteria you would look for in this patient to arrive at a diagnosis of polycythemia vera? (40 marks)

5.2. Describe the treatment goals that need to be achieved in treating this patient? (30 marks)

5.3. The clinician requests the Consultant Transfusion Physician to organize venesection for this patient. Enumerate the steps taken to fulfil the procedure. (30 marks)

6. Write short notes on.

6.1. Uses of IVIg in Transfusion Medicine. (30 marks)

6.2. Establishing a National Stem Cell Donor Registry in Sri Lanka. (40 marks)

6.3. Maximum Surgical Blood Ordering Schedule. (30 marks)