

master copy 

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

POSTGRADUATE DIPLOMA IN TRANSFUSION MEDICINE
EXAMINATION – FEBRUARY 2023

Date: 27th February 2023

Time: 1.00 p.m. – 4.00 p.m.

PAPER I

Answer all eight (08) questions.

Answer each question in a separate book.

1. You are the medical officer in charge of a blood bank. An intern house officer is seeking your advice regarding a 58-year-old lady who has developed moderately severe dyspnoea during blood transfusion which was commenced 15 minutes back.
 - 1.1. Mention the advice you would give the house officer regarding the immediate management. (30 marks)
 - 1.2. List the differential diagnoses. (20 marks)
 - 1.3. Outline further details in the patient's history needed in arriving at a tentative diagnosis. (20 marks)
 - 1.4. List the investigations you would request to manage this patient. (30 marks)
2.
 - 2.1. List the methods available to perform donor hemoglobin estimation. (10 marks)
 - 2.2. What are the advantages and disadvantages of the techniques mentioned in 2.1? (30 marks)

As the medical officer in-charge of the training unit, National Blood Transfusion Service, you are requested to prepare a check list to assess the competency of donor bleeding procedure of trainee nursing officers.

- 2.3. List the steps to be included in formulating a complete checklist. (60 marks)

Contd...../2-

3.
 - 3.1. List the methods available to screen HIV in donated blood and the viral markers detected in each test method. (20 marks)
 - 3.2. Describe the strategies to minimize the transfusion transmitted HIV. (80 marks)

4. An 8-year-old schoolboy diagnosed with Thalassaemia major was admitted to a local hospital for routine blood transfusion.
 - 4.1. Briefly discuss the challenges encountered when providing red cell transfusion support for this patient. (50 marks)
 - 4.2. Outline the leuco-reduction methods available for red cell components. (15 marks)
 - 4.3. List the advantages and disadvantages of transfusion of blood products mentioned in 4.2. (35 marks)

5.
 - 5.1. Briefly discuss the risk of blood component transfusion in neonates. (30 marks)
 - 5.2. Discuss safe practices you recommend to the clinical staff to minimize the risk of transfusion in neonates. (20 marks)
 - 5.3. What are the suggested thresholds for platelet transfusion in neonates? (20 marks)
 - 5.4. Write specifications for,
 - 5.4.1. Platelet concentrate for intra uterine transfusion.
 - 5.4.2. Red cells for top up transfusions in neonates. (30 marks)

6. A 45-year-old male patient with Haemophilia A is awaiting right knee replacement due to severe haemophilic arthropathy.
 - 6.1. Briefly outline the management of this patient during pre, intra and post-operative period. (60 marks)
 - 6.2. Mention the options available to replace factor VIII for this patient and briefly discuss the advantages and disadvantages of each product. (40 marks)

7. A reaction was reported from the plastic surgery unit regarding the death of a 45-year-old female patient who received red cell transfusion at Haemoglobin of 8 g/dl. She was in the recovery phase of severe burn injury and waiting for discharge after top up transfusion. No abnormality detected in the transfusion reaction investigation workup. She had received several blood products during her hospital stay and all transfusions were uneventful.

After this incident, leuco-reduced red cells (LRRC) or washed red cells (WRC) are requested for all patients who need red cell transfusions from the same ward.

- 7.1. Briefly describe the advice you would give to the clinical staff of this ward regarding the above incident and the practices. (40 marks)
- 7.2. List the other measures that can be adopted to prevent this type of practices in your hospital in the future. (30 marks)
- 7.3. Mention the indications for the following red cell components.
- 7.3.1. Leuco-reduced red cells. (LRRC)
- 7.3.2. Leuco-depleted red cells. (LDRC)
- 7.3.3. Washed red cells. (WRC) (30 marks)
8. You are representing the transfusion medicine department in a multidisciplinary team formulated for management of a liver transplantation for a 47-year-old woman, diagnosed with hepatitis C viral infection associated cirrhosis and hepatocellular carcinoma. Baseline hemoglobin is 8.3 g/dl, platelet count $54 \times 10^9/L$, and INR-2.46. Her blood group is A Rh D positive. Anti e and anti K antibodies were identified.
- 8.1. Discuss concerns and suggestions for the preoperative preparation of this patient. (40 marks)
- 8.2. Estimated blood loss during surgery is 1500cc. List the strategies to minimize bleeding during surgery. (30 marks)
- 8.3. Outline the post-operative blood conservation strategies available for this patient. (30 marks)