

Examination for Diploma in: Pediatrics
Course Title: Pediatrics
Date: October 28, 2020 (Paper I)
Time allowed: 3 Hours
Total Assessment Marks: 100 (4 Pages)



Tanta University
Faculty of Medicine

Department of Pediatrics

All questions should be tried:

Q 1) Pediatric Cardiology (20 marks)

- Discuss etiology, clinical manifestations, diagnosis, prevention, and treatment of infective endocarditis in children.

Q 2) Hematology & Oncology (16 marks)

A. Give a short account on erythropoiesis?. (5)

B. Enumerate criteria of relapse in patient with acute lymphoblastic leukemia. (4)

C. Problem solving: (3)

A 4 year old girl is referred for evaluation of a possible inherited bleeding disorder. She has a history of easy bruising and frequent nosebleeds resulting in anemia. A platelet count and platelet morphology on smear are normal. The bleeding time is prolonged. Platelet function studies show absence of secondary aggregation to ADP, epinephrine and collagen but a normal response to ristocetin.

1- What is the diagnosis?

2- What are further investigations?

3- What is the lines of treatment?

D. MCQs :

1- The following is true of iron deficiency anemia (2)

a. Iron deficiency anemia 2nd most common cause of microcytic hypochromic anemia in infancy.

b. Serum transferrin is the most reliable indicator other than BM aspiration, of total iron stores

c. Is commonly present from 2 months of age upward in term infant.

d. The ratio of MCV to the red blood cell count is useful in differentiation from thalassemia.

2- You are counseling a father about the treatment options for his child with β -thalassemia major. In addition to the increased risk of infection, splenectomized patients are at an increased risk of which of the following?(2)

a. Aplastic anemia

b. Increased bleeding

c. Renal failure

d. Thrombosis

Q 3) Respiratory System (16 marks)

A. Write short essay on Mycoplasma pneumonia (5)

B. Mention Treatment of acute moderate attack of bronchial asthma with drug doses if any (4)

C. Problem solving: (3)

A 2-year-old presents to the emergency room with several days of low-grade fever, barking cough, and noisy breathing. Over the past few hours, he has developed a fever of 40°C (104°F) and looks toxic. He has inspiratory and expiratory stridor. The family has not noticed drooling, and he seems to be drinking without pain. Direct laryngoscopy reveals a normal epiglottis.

1. **What is the probable diagnosis?**
2. **What is the etiology of this illness?**
3. **How to treat this child? (please if any drug; write the dose)**

D. MCQs:

1. The MOST frequent pathogen of pneumonia in children 4 mo-4 year is (2)

- A. Streptococcus pneumoniae
- B. Mycoplasma pneumoniae
- C. group A streptococci
- D. Respiratory syncytial virus

2. All the following conditions are associated with false-positive sweat test results

EXCEPT (2)

- A. malnutrition
- B. anorexia nervosa
- C. hypothyroidism
- D. Klinefelter syndrome

Q 4) CNS & Neuromuscular (16 marks)

A. Give short account on refractory epilepsy (5)

B. Mention the diagnostic criteria of cerebral palsy.(4)

C. Problem solving: (3)

A 5-yr-old child has a 6-mo history of increasing difficulty in walking associated with urinary incontinence. Physical examination shows an alert child with increased deep tendon reflexes, clonus and bilateral Babinski reflexes in the lower extremities, and absent deep tendon reflexes in the upper extremities associated with grade 3/5 weakness symmetrically in all extremities.

1. **What is the diagnosis?**
2. **What is the investigation of choice?**
3. **What is the site of the lesion?**

D. MCQs:

1. Oligoclonal IgG in the CSF may be seen in (2)

- a) infective polyradiculopathy
- b) multiple sclerosis
- c) sarcoid
- d) systemic lupus erythematosus

2. The trace element deficiency that can cause neural tube defect in babies is: (2)

- A. selenium
- B. zinc
- C. copper
- D. iodine

Q 5) Pediatric Emergencies (16 marks)

A. Burn prophylaxis and hospital management. (5)

B. Signs and symptoms of pain in infants and young children. (4)

C. Problem solving: (3)

A previously well 19-month-old boy presented with a 4-day history of bloody diarrhoea. He had been seen by his primary care physician on day 2 of the illness and started on amoxycillin. On the day of admission, his mother was not sure when he had last passed any urine and he was lethargic and floppy. He was again seen by his primary care physician and referred to the local hospital.

Examination

On arrival in the emergency department, he looked unwell with a decreased level of responsiveness and was irritable. He was breathing spontaneously with good bilateral air entry, a respiratory rate of 32 and saturations of 99% in oxygen via face mask. His heart rate was 166 with normal heart sounds, blood pressure of 80/42mmHg and a delayed capillary refill time of 4 seconds. His abdominal examination was unremarkable. Glasgow Coma Score (GCS) was assessed as 13/15 (eyes-4, verbal-4, motor-5). Pupils were equal and reactive. He was placed on a cardiac monitor, intravenous access was obtained, and blood was sent for CBC, Urea, creatinin and Electrolytes, glucose and a blood culture. An arterial blood gas was also obtained. He was given a 240 ml bolus of normal saline (20 ml/kg) and started on maintenance fluids. He had a stat dose of a third-generation cephalosporin and a Chest X-Ray (CXR), which was normal. For results

CBC

WCC $23.9 \times 10^9 /l$,

Hb 86g/l

platelet $56 \times 10^9 /l$

Na 119 mEq/l,

K 5.4 mEq/l,

Urea 90 mg/dl, Creatinine 2 mg/dl,

Glucose 124 mg/dl

Arterial blood Gas (ABG)

pH 7.23, PaO₂ 115mmHg, PaCO₂ 29 mmHg HCO₃ 12 mEq/l

1. What are the possible diagnoses?
2. discuss Initial assessment and management in PICU?

D. MCQs:

1. Hypernatremic dehydration is characterized by: (2)

- a. Serum sodium > 140 mmol/L
- b. Signs of dehydration are minimal
- c. ECF volume led
- d. Rapid correction is required

2. Most dangerous dehydration is: (2)

- a. Hyponatremic
 - b. Hypernatremic
 - c. Isonatremic
 - d. Non-diarrheal cause
-

Q 6) Infectious Diseases (16 marks)

A. Discuss the Pathogenesis of Fever?. (5)

B. Mention Pathogenesis, complications and Clinical syndromes of Measles?. (4)

C. Problem Solving: (3)

- A five-year-old female was admitted to Hospital due to abdominal pain, fever, and fistulized mass in submandibular area as suppurative lymphadenopathy. History of azathioprine and prednisolone for leukocytoclastic vasculitis 3month ago, admitted 2 month ago due to fever and severe abdominal pain, mimicking acute abdominal manifestations, received cefixime 2 times because of abdominal pain and fever. Last time the appendectomy was performed since pathological reports showed appendicitis and necrosis, Abdominal sonography revealed several lymphadenopathies, some of which were necrotic along with inflammatory evidence. other organs are normal.

- 1- What is the possible diagnosis?
- 2- How can you confirm diagnosis?
- 3- Prevention?

D. MCQs:

1. Which of these is NOT a treatment for chickenpox? (2)

- a. Acyclovir
- b. VZIG
- c. Lotrimin
- d. Wet compresses

2- What is the incubation period for POLIOMYELITIS? (2)

- a. 1-2 week
- b. 10 to 21 days
- c. 1 to 2 days
- d. 2 to 4 month

=====Good Luck=====

**Chairman of Department
Prof. Abd Elrahman Elmashad**

Abdelrahman Elmashad

