



The University of Fiji

**Umanand Prasad School of Medicine and Health Services Department
of Clinical Sciences**

Year 2022

FINAL COURSE EXAMINATION PAPER

PAED 604

Important Instructions to Students:

1. Read the questions, instructions carefully and answer the questions.
2. You are allowed an extra 10 minutes reading time and 120 minutes (2 Hours) to complete this test examination.
3. There will be a Google meeting before the final examination for further instructions. Attendance and test code will be sent in Top Hat chat box message ahead of time before the said 10:00 AM examination.
4. Choose the right answers in the TOP HAT questions provided.
5. This Final Course Examination Paper is worth 100 marks contributes 40% of the total course assessments. Students must at least score 50% in this final exam to pass the course.
6. This test contains four (4) answer selections A, B, C, and D. All questions are compulsory to answer.
7. Any form of unusual activities in Top Hat will be a dishonest practice as serious offences and if found, offenders are penalized.
8. Please prepare all your devices and connectivity available and working properly.

Examination Paper Content (Format):

<u>Section</u>	<u>Question</u>	<u>Content</u>	<u>Marks</u>	<u>Suggested Time</u>
A	1-100	Multiple Choice Questions	100	120 minutes
		TOTAL	100	120 minutes



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November 21, 2022 Monday

Multiple Choice Questions- Choose the right answers from the question given in this Examination. (100 mark points)

1. Emergency management in children and adults differs in many aspects including which of the following statements is true:

- A. The cricoid ring is the narrowest part of the airway in the infant, compared to the larynx in the adult.
- B. The cardiac output in infants is directly related to the heart rate rather than the stroke volume.
- C. The pathway leading to cardiac arrest in children is different from that in adults
- D. Children have flexible ribs which give them increased protection against lung injury

2. The sodium content of ReSoMal (Rehydration Solution for Malnourished children is which of the following values below?

- A. 90 mmol/L
- B. 60 mmol/L
- C. 45 mmol/L
- D. 30 mmol/L

3. Pneumatosis intestinalis can be seen in which various conditions, EXCEPT:

- A. Hirschsprung's disease
- B. Necrotizing enterocolitis (NEC)
- C. Pseudomembranous enterocolitis
- D. Meconium ileus

4. The antenatal administration of magnesium sulfate before preterm delivery has been suggested to which of the following statements?

- A. It reduces rates of necrotizing enterocolitis.
- B. It decreases the risk of cerebral palsy in surviving infants.
- C. It improves overall survival.
- D. It decreases respiratory distress syndrome in premature infants.

5. A 7-year-old boy presented to the out-patient department with fever and cough, you have diagnosed him as a case of pneumonia and decided to admit and give parental therapy but the child refused. Which of the following ethical statements is the best response?
- A. Explain to father about dangers of omitting the treatment.
 - B. Try to explain the risk to the child.
 - C. Given the chance for oral antibiotics and accept the child decision.
 - D. Inform your consultant.
6. What is the most frequent pathogen of pneumonia in children ages 4 months-4 years?
- A. *Streptococcus pneumoniae*
 - B. *Mycoplasma pneumoniae*
 - C. Group A streptococci
 - D. Respiratory syncytial virus
7. What is the WHO recommendation for antibiotic coverage treatment in the stabilization phase of malnourished boy free from any initial complications?
- A. Oral amoxicillin
 - B. Parenteral penicillin
 - C. Oral second generation cephalosporin
 - D. Parenteral gentamicin
8. What is the aim of the rehabilitation phase in the treatment of malnutrition?
- A. Repair cellular function
 - B. Correct fluid and electrolyte imbalance
 - C. Restore homeostasis
 - D. Catch-up growth
9. Which of the following baby is least vulnerable to develop vitamin K bleeding tendency?
- A. A three-day old neonate of a healthy mother that started immediate breastfeeding after birth.
 - B. A three-year old child spent 21 days in intensive care unit receiving total parenteral nutrition.
 - C. A nine-month-old infant with prolonged history of diarrhoea and multiple antibiotics therapy.
 - D. A six-hour neonate of an epileptic mother that received phenobarbital during pregnancy.
10. What is the common neonatal respiratory problem associated with premature infants?
- A. Bronchopulmonary dysplasia
 - B. Apnoea
 - C. Congenital pneumonia
 - D. Pneumothorax

11. Contraindications to performing a lumbar puncture include the following, **EXCEPT**:
- A. Suspected mass lesion of the brain
 - B. Suspected mass lesion of the spinal cord
 - C. Skin infection at the site of the lumbar puncture
 - D. Thrombocytopenia with a platelet count $<50,000 \text{ mm}^3$
12. An elevated polymorphonuclear (PMN) cells count in cerebrospinal fluid (CSF) suggests which of the following infections?
- A. Tuberculous meningitis
 - B. Early phase of aseptic meningitis
 - C. Fungal meningitis
 - D. Brain or spinal cord tumour
13. Cranial CT is a valuable diagnostic tool in the evaluation of the following conditions, **EXCEPT**:
- A. Skull fractures
 - B. Intracranial haemorrhages
 - C. Acute infarcts
 - D. Hydrocephalus
14. All the following are true regarding diazepam in neonatal seizures **EXCEPT**:
- A. Diazepam is highly lipophilic.
 - B. It is cleared very quickly.
 - C. It carries a risk of apnoea and hypotension.
 - D. It is currently recommended as a first-line agent.
15. A history of personality change in a patient with seizure could suggest which the following as a cause of seizure?
- A. Intracranial tumor
 - B. Degenerative disease
 - C. Metabolic disease
16. Guidelines on the evaluation of a first unprovoked non-febrile seizure, which of the following studies are recommended in specific clinical situations?
- A. Head CT
 - B. Head MRI
 - C. Spinal tap
 - D. Electro-encephalogram (EEG)

17. Subtle seizures in neonates include all the following signs, EXCEPT:

- A. Blinking
- B. Apnea
- C. Fluctuations in heart rate
- D. Hypotension episodes

18. Prematurity is a major cause of which of the following type of cerebral palsy?

- A. Spastic diplegia
- B. Spastic quadriplegia
- C. Spastic hemiplegia
- D. Dyskinetic CP

19. Seizures are common during the course of bacterial meningitis. Immediate therapy for seizures includes intravenous diazepam (0.1- 0.2 mg/kg/dose) or lorazepam (0.05-0.10 mg/kg/dose). After immediate management of seizures, patients should receive which of the following anticonvulsant to reduce the likelihood of recurrence?

- A. Valproic acid
- B. Phenytoin
- C. Carbamazepine
- D. Midazolam

20. What are the most common neurologic sequelae of bacterial meningitis?

- A. Recurrent seizures
- B. Delay in acquisition of language
- C. Hearing loss
- D. Cognitive impairment

21. What is the most common cause of bacterial meningitis that results in sensorineural hearing loss after the neonatal period?

- A. Hemophilus influenza
- B. Escherichia Coli
- C. Streptococcus pneumonia
- D. Listeria monocytogenes

22. The following statements are true regarding respiratory distress syndrome (RDS), EXCEPT:

- A. Signs of RDS usually appear within minutes of birth.
- B. In most cases, the symptoms and signs reach a peak within 7 days.
- C. Apnoea and irregular respirations are ominous signs.
- D. Improvement is often heralded by spontaneous diuresis.

23. Gastroesophageal reflux disease (GERD) is the most common oesophageal disorder in children of all ages. Which of the following is the most common symptom in infants?

- A. Excessive crying
- B. Regurgitation
- C. Failure to thrive
- D. Abnormal posturing

24. What is the typical first sign of infection in infants with respiratory syncytial virus (RSV)?

- A. Rhinorrhoea
- B. Cough
- C. Low-grade fever
- D. Tachypnoea

25. All the following are clinical features of Typhoid fever, EXCEPT:

- A. Incubation period is usually 24-45 days.
- B. Macular or maculopapular rash (rose spots) may be visible around the 7th-10th day of the illness.
- C. If complications not occur, the symptoms and physical findings gradually resolve within 2-4 wk.
- D. Relative bradycardia, neurologic manifestations, and gastrointestinal bleeding, are rare in children.

26. Steroids are of benefit in the treatment of which of the following conditions, EXCEPT:

- A. Neurosyphilis
- B. Hemophilus Influenzae type B
- C. Severe Typhoid fever
- D. Meningococcal meningitis

27. How much serum bilirubin in $\mu\text{mol/L}$ if jaundice of Kramer's rule at 4 had been noticed accordingly from a newborn baby:

- A. 250 mmol/L
- B. 200 mmol/L
- C. 150 mmol/L
- D. 100 mmol/L

28. What is the recommended initial ventilation to a 1250 grams premature baby now admittedq in NICU due to acute respiratory syndrome?

- A. Synchronized Intermittent positive pressure ventilation (SIPPV)
- B. Synchronized Intermittent mechanical ventilation (SIMV)
- C. Intermittent mechanical ventilation (IMV)
- D. Assist - control ventilation (AC)

29. The recurrent aspiration of small quantities of gastric, nasal, or oral contents can lead to several clinical presentations, including recurrent bronchitis or bronchiolitis, recurrent pneumonia, atelectasis, wheezing, cough, apnoea, and/or laryngospasm. What is the most common underlying problem associated with recurrent pneumonias in hospitalized children?

- A. Oropharyngeal incoordination
- B. Esophageal foreign body
- C. Nasogastric tube
- D. Bronchopulmonary dysplasia

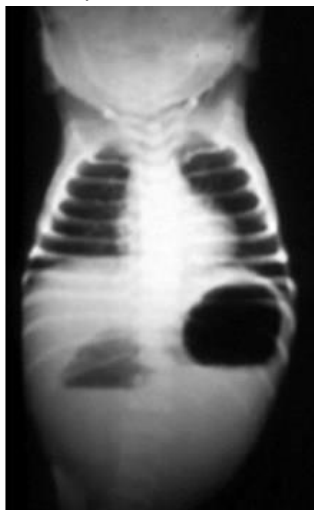
30. All of the following are true regarding physiologic anaemia of infancy, EXCEPT:

- A. It is exaggerated in premature infants.
- B. The hemoglobin concentration range is between 9-11 g/dL.
- C. Hemoglobin concentration rarely falls below 10 g/dL in healthy infants.
- D. Iron deficiency is a contributing factor.

31. All the following conditions may be associated with iron deficiency, EXCEPT:

- A. Hookworm infestation
- B. Prolonged intravascular haemolysis
- C. Congenital heart disease with right to left shunt
- D. Prolonged use of isoniazid (INH)

32. A primigravid 22-year old Mother had a history of polyhydramnios, 6 hours after delivery her newborn baby begins regurgitating small amounts of mucus and bile-stained fluid. Physical examination of the infant is normal, and an abdominal x-ray is obtained (see below). Which of the following is the most likely diagnosis of this neonate?



- A. Pyloric stenosis
- B. Esophageal atresia
- C. Duodenal atresia
- D. Midgut volvulus

33. The following statements are risks associated with severe dehydration that might necessitate intravenous resuscitation include:

- A. Age < 9 months
- B. Postmaturity
- C. Fever >38°C if 3-36 months of age
- D. Depressed level of consciousness.

34. The nurse from NICU calls you to evaluate a baby. The infant, born at 32 weeks' gestation, is now 5 days old and had been doing well on increasing nasogastric feedings. However, the nurse noted that the infant has vomited the last two feedings and seems less active and pale. As an Intern-on-call your examination reveals a tense and distended abdomen with decreased bowel sounds. As you are evaluating the child, he has a grossly bloody stool. The plain film of his abdomen has been requested as shown below. The next step in your management of this infant should include which of the following?



- A. Surgical consultation for an emergent exploratory laparotomy.
- B. Continued feeding of the infant, as gastroenteritis is usually self-limited.
- C. Stool culture to identify the etiology of the bloody diarrhea and an infectious diseases consultation.
- D. Stopping feeds, beginning intravenous fluids, ordering serial abdominal films, and initiating systemic antibiotics.

35. There are many anomalies associated with anorectal malformations. Which of the following is the MOST commonly associated?

- A. Kidney anomalies
- B. Cardiac anomalies
- C. Esophageal atresia
- D. Spina bifida

36. 9-year-old Vineeta was brought into hospital because she was pale. She had occasional diarrhoea. Abdomen appeared distended and had a doughy feel on palpation. Her appetite was poor. Full blood count and peripheral blood smear was requested. What would be the BEST test result to establish a diagnosis?

- A. FBC showed eosinophilia and microcytic, hypochromic anaemia
- B. FBC showed basophilia and microcytic, hypochromic anaemia
- C. FBC showed lymphocytosis and macrocytic, hyperchromic anaemia
- D. FBC showed leukocytosis and normocytic, normochromic anaemia

37. The signs and symptoms of meningitis in an infant can be different than those in an adolescent patient. Which of the following signs and symptoms of meningitis is more helpful in an older patient than in a 4-month-old?

- A. Lethargy
- B. Jaundice
- C. Vomiting
- D. Brudzinski sign

38. A previously healthy full-term infant has several episodes of duskeness and apnoea during the second day of life. Diagnostic considerations should include which of the following?

- A. Hemolytic anemia
- B. Congenital heart disease
- C. Idiopathic apnea
- D. Hyperglycemic state

39. What is the most important & effective action in neonatal resuscitation?

- A. Perform chest compressions to improve circulation.
- B. Start prompt positive pressure ventilation to prevent respiratory failure.
- C. Administer fluids for adequate volume requirement.
- D. Wipe baby warm and stimulate to cry.

40. Which of the following symptoms is not common in Covid-19 symptom?

- A. Cough
- B. Blurring of vision
- C. Unusual fatigue
- D. Inability to smell and taste.

41. Previous premature infant born at 27 weeks' gestation and now 6 months of age presents with macrocephaly and hydrocephalus on ultrasonogram. Which of the following head injury had a major effect to the patient most likely to be associated?

- A. Intraventricular haemorrhage
- B. Caput succedaneum
- C. Subdural haemorrhage
- D. Subarachnoid haemorrhage

42. Which of the following signs and symptoms of heart failure are correct?

- A. Lung crackles and bronchial breathing.
- B. Stridor, wheeze, rales, cough and cyanosis.
- C. Angioedema, anasarca and hypotension.
- D. Effort intolerance, tachypnoea, tachycardia, and oedema.

43. A 3-month old infant is brought to ER with marked respiratory distress. On examination, he has cyanosis and bilateral lung crepitation. Heart rate is 185/minute, respiratory rate of 58/minute and liver span of 7 cm from subcostal right mid-clavicular area. He has repeated episodes of fever, cough and respiratory distress noted on and off according to mother. Cardiovascular examination reveals a grade 3 ejection murmur in left parasternal border and chest roentgenogram showed cardiomegaly with narrow base and phlethoric lung fields. What is the most likely diagnosis of this case?

- A. Congenital Methemoglobinemia
- B. Transposition of great arteries
- C. Tetralogy of fallot
- D. Cystic fibrosis

44. Which of the following drugs are used in patient above case # 43?

- A. Digoxin, Furosemide and Oxygen
- B. Morphine, Sodium Bicarbonate, and Propranolol
- C. Atenolol and Direct Cardioversion
- D. Captopril and Aminophylline

45. A 1-day-old infant has a fronto-occipital head circumference that is 2 cm. larger than the initial measurement (35 cm.) several hours before, the scalp has a “squishy” feel to it, and the infant has developed tachycardia. Which of the following head injury from birth had a major effect to the patient most likely to be associated?

- A. Intraventricular haemorrhage
- B. Caput succedaneum
- C. Subdural haemorrhage
- D. Subgaleal haemorrhage

46. Which of the following congenital cardiac lesion will most likely spontaneously close as a 3-year old child continues to grow and age?

- A. Tetralogy of Fallot
- B. Patent ductus arteriosus
- C. Small ventricular septal defects
- D. Large atrial septal defects

47. Supply the most correct answer about murmurs originating from the mitral valve?

- A. Pansystolic
- B. Best heard over left sternal edge.
- C. Radiates to axilla
- D. Best heard over right sternal edge.

48. Which of the following statements in tuberculosis of children is most likely correct?

- A. Mantoux test is usually read at 24-48 hours.
- B. Redness not induration is read in the Mantoux test.
- C. An induration of 10 mm or more is regarded as positive.
- D. TB meningitis does not require adjuvant steroid therapy.

49. All of the following are features of prematurity in newborn baby, EXCEPT:

- A. No creases on sole
- B. Abundant lanugo hair
- C. Thick ear cartilage
- D. Empty scrotum

50. A 6-month old comatose infant has multiple broken bones in various stages of healing, a bulging anterior fontanel, and retinal haemorrhages. Which of the following head injury had a major effect to the patient most likely to be associated?

- A. Intraventricular haemorrhage
- B. Caput succedaneum
- C. Subdural haemorrhage
- D. Subarachnoid haemorrhage

51. A 2-year-old arrives in the accident and emergency department after having swallowed a button battery from one of her toys. She is breathing comfortably, without stridor. Radiographs show the battery to be lodged in the esophagus. Which of the following is the correct next step?

- A. Induce emesis with syrup of ipecac.
- B. Admit for observation, and obtain serial radiographs to document movement of the battery.
- C. Discharge home with instructions to monitor the stool for the battery.
- D. Immediate removal of the battery via endoscopy.

52. An awake, alert infant with a 2-day history of diarrhoea presents with a depressed fontanel tachycardia, sunken eyes, and the loss of skin elasticity. Which of the following is the correct percentage of dehydration?

- A. Less than 1%
- B. 1 to 5%
- C. 5 to 9%
- D. 10 to 15%

53. A 9-month-old is brought to the emergency room by ambulance. The child had been having emesis and diarrhea with decreased urine output for several days, and the parents noted that she was hard to wake up this morning. Her weight is 9 kg, down from 11 kg the week prior at her 9-month check-up. You note her heart rate and blood pressure to be normal. She is lethargic, and her skin is noted to be "doughy." After confirming that her

respiratory status is stable, you send electrolytes, which you expect to be abnormal. You start an IV. Which of the following is the best solution for an initial IV bolus?

- A. One-fourth normal saline (38.5 mEq sodium/L)
- B. D10% water (110 g glucose/L)
- C. Normal saline (154 mEq sodium/L)
- D. 3% saline (513 mEq sodium/L)

54. In the medical treatment of babies with PDA, Ibuprofen is preferred rather than Indomethacin due to the following reason:

- A. Lower risk of Necrotizing Enterocolitis.
- B. Lower risk of bleeding.
- C. Lower risk of infection.
- D. Lower risk of Interventricular haemorrhage.

55. Infant's body weight had tripled by which of the following age at what month/year?

- A. 5 months
- B. 11 months
- C. 2 years
- D. 3 years

56. The treatment of neonatal sepsis with possible CNS infection, which of the following antibiotic regimen is appropriate?

- A. IV Ampicillin 50 mg/kg every 12 hourly.
- B. IV Ceftriaxone 100 mg/kg once a day.
- C. IV Cefotaxime 50 mg/kg every 12 hourly for preterm.
- D. IV Gentamicin 5 mg/kg dose adjusted according to gestational age.

57. A baby with jaundice after phototherapy was stopped eventually, which of the following risk of significant rebound needs rechecking of the bilirubin level?

- A. ABO incompatibility set-up.
- B. Reticulocyte count of 1.
- C. Cessation of phototherapy more than 72 hours.
- D. Gestational age > 38 weeks.

58. Which of the following statements is true regarding normal fluid regime in term uncomplicated babies?

- A. Fluid required is normal saline solution only.
- B. First day of life may start 60-80 ml/kg/day.
- C. Electrolytes are needed after birth.
- D. Second day of life may give 110-120 ml/kg/day.

59. Which of the following statements is true regarding babies with hypoxic ischemic injury in consideration of their fluid regimen?

- A. They may start 60-80 ml/kg/day on first day of life.
- B. They need fluid restriction as a result of raised intracranial pressure.
- C. They need fluid restriction as a result of raised antidiuretic hormone level.
- D. They may have late onset of hypocalcaemia.

60. Neonates with hypoglycaemia have which of the following clinical features with CNS excitations?

- A. Jitteriness
- B. Lethargy
- C. Apnoea
- D. Poor feeding

61. Which of the following blood of choice for exchange transfusion needed to a baby born with Rh incompatibility and severe hyperbilirubinemia?

- A. Fresh whole blood Type O Rh negative.
- B. Fresh whole blood Type O Rh compatible with mother and infant's blood.
- C. Packed RBC compatible of infant's blood.
- D. Packed RBC compatible of mother and infant's blood.

62. Which of the following immunizations should a 6-week old child classified as no pneumonia cough and cold receive today?

- A. Measles
- B. Mumps
- C. BCG
- D. Pentavalent

63. A 34 weeks and 4 days old neonate is on methylxanthine and his nasal CPAP weaned off 2 days before. If apnoea-free, when would you like to stop it?

- A. 3 days
- B. 6 days
- C. 5 days
- D. 2 days

64. Bubble continuous positive airway pressure (CPAP) thru nasal prong is indicated on which of the following conditions?

- A. Choanal atresia
- B. Persistent pulmonary hypertension
- C. Bronchopulmonary dysplasia
- D. Poor respiratory effort

65. A 23-kg male patient with Haemophilia A admitted in ED due to traumatic fall injury and needed urgent surgery; all of the following will be management guidelines EXCEPT:

- A. 1150 Unit R. factor VIII
- B. Checking inhibitor levels
- C. Approx. 3- 4 units of FFP
- D. Approx. 12- 14 units of cryoprecipitate

66. A 3-day old neonate admitted in NICU with yellow discoloration of palm and soles. The following are high-risk factors, EXCEPT:

- A. Jaundice started in 23 hours of life.
- B. Weight loss 7 % in first 48 hours.
- C. East Asian ethnicity.
- D. Maternal obesity.

67. A 38-week old baby born to unbooked mother, shown on the photograph, delivered via caesarean section had good APGAR score and now in NICU. Which of the following is the possible cause of the condition of this neonate?



- A. Aqueductal stenosis
- B. Intervertebral haemorrhage
- C. Sepsis
- D. Meningitis

68. A newborn whose estimated gestational age is 41-42 weeks born with meconium stained amniotic fluid. Direct suctioned and tracheal intubation reveals meconium below the vocal cords. The infant has respiratory distress thereafter. Which of the following is the most likely radiographic finding?

- A. Coarse patchy infiltrates
- B. Decreased lung volumes
- C. Pleural effusion
- D. Presence of pneumatocoele

69. In neonatal resuscitation program NRP, bag and mask ventilation is contraindicated on which of the following conditions?

- A. Cleft lip and palate
- B. Meconium Aspiration Syndrome
- C. Congenital Diaphragmatic Hernia
- D. Pierre-Robin syndrome

70. A 4-year old boy is brought to IMCI clinic by his mother due to on and off bloody diarrhoea and constipation along with abdominal pain and bloating during the past 4 weeks. Patient's symptoms first started when he had mucoid, watery and foul-smelling stool. He has not had fever or vomiting. Other children in their community had similar symptoms. Vital signs are within normal limits. Physical examination shows mild tenderness on palpation of the abdomen with no rebound tenderness or muscle guarding. Which of the following studies is the most appropriate next step?

- A. Air contrast enema
- B. Colonoscopy
- C. Enzyme immunoassay of stool
- D. Freshly voided stool microscopy

71. The following is the essential elements in the management of all children with diarrhea, EXCEPT:

- A. Zinc supplementation
- B. Continued feeding and prevention.
- C. Rehydration therapy
- D. Vitamin A supplementation.

72. In the WHO recommended Expanded Program of Immunization Cluster sampling for assessing primary vaccination coverage, what age group should have been surveyed?

- A. 0-12 months
- B. 6-12 months
- C. 9-12 months
- D. 12-24 months

73. In case of severe malnutrition and severe anaemia, blood transfusion should be given in the first 24 hours only on which of the following conditions?

- A. Hemoglobin is < 4 g/dl.
- B. Hemoglobin is 6 g/dl with no respiratory distress
- C. Packed RBC should be given with 15ml/kg for 4 hours.
- D. Fresh whole blood should be given with 15ml/kg for 4 hours.

74. Which of the following chest x-ray findings has typical pneumocystis jiroveci pneumonia?

- A. Coarse granular infiltrates bilaterally.
- B. Diffuse interstitial reticulogranular bilaterally.
- C. Wide spread patchy opacities bilaterally.
- D. Bilateral air-bronchogram with decrease AP diameter.

75. A 3-year-old male has been doing well despite his diagnosis of congenital ventricular septal defect (VSD). He presented to emergency room a few days ago with a complaint of an acute febrile illness for which he was started on unrecalled medications. His mother reports that for the past 12 hours or so he has had a headache and is more lethargic than normal. On your examination he seems to have a severe headache, nystagmus, and ataxia. Which of the following would be the most appropriate first test to order?

- A. Urine drug screen
- B. Lumbar puncture
- C. CT or MRI of the brain
- D. Stat Echocardiogram

76. The laboratory technician calls your ward telling you that a newborn baby, now 10 days old, has an elevated thyroid stimulating hormone (TSH) and low thyroxin (T4) on his thyroid function test. If this condition is left untreated, the infant is likely to demonstrate which of the following in the first few months of life?

- A. Hyperreflexia
- B. Hyperirritability
- C. Diarrhea
- D. Prolonged jaundice

77. A 6-year-old child is hospitalized for observation because of a short period of unconsciousness after a fall from a playground swing. He has developed unilateral pupillary dilatation, focal seizures, recurrence of depressed consciousness, and hemiplegia. Which of the following is the most appropriate management at this time?

- A. Spinal tap
- B. CT scan
- C. Rapid fluid hydration
- D. Naloxone

78. The parents of a 2-year old girl rushed her to the emergency room after she had a seizure. Although the parents report she was in a good state of health, the vital signs reveal a temperature of 39°C. She is now running around the room. Which part of the story would suggest the best prognosis in this condition?

- A. A CSF white cell count of 100 mmol/L.
- B. Otitis media on examination.
- C. The seizure lasted more 5 minutes.
- D. The parents reported their child to have had right-sided tonic-clonic activity only.

79. Examination of the cerebrospinal fluid (CSF) of an 8-year old, mildly febrile child with nuchal rigidity and intermittent stupor shows the following: WBCs 85/μL (all lymphocytes), negative Gram stain, protein 150 mg/dL, and glucose 0.9 mmol/L. A computed tomographic (CT) scan with contrast shows enhancement of the basal cisterns by the contrast material. Which of the following is the most likely diagnosis?

- A. Tuberos sclerosis
- B. Tuberculous meningitis
- C. Stroke
- D. Acute bacterial meningitis

80. A 1-day old normal-appearing infant develops tetany and convulsions. He was born at 34 weeks' gestation with Apgar scores of 2 and 4 (at 1 and 5 minutes, respectively) to a woman whose pregnancy was complicated by diabetes mellitus and pregnancy-induced hypertension. Which of the following serum chemistry values is likely to be the explanation for his condition?

- A. Serum bicarbonate level of 22 mEq/dL.
- B. Serum calcium of 1.55 mmol/l.
- C. Serum glucose of 2.5 mmol/l.
- D. Serum magnesium level of 2.0 mmol/l.

81. About 12 days after a mild upper respiratory infection, the parents of a 7-year old boy rushed him in accident and emergency department with the complains of weakness in his lower extremities. Over several days, the weakness progresses to include his trunk. On physical examination, he has the weakness described and no lower extremity deep tendon reflexes, muscle atrophy, or pain. Spinal fluid studies are notable for elevated protein only. Which of the following is the most likely diagnosis in this patient?

- A. Bell palsy
- B. Muscular dystrophy
- C. Guillain-Barre syndrome
- D. Werdnig-Hoffmann disease

82. A 7-year old female who had diagnosis of Kawasaki disease 2 years ago develops sudden onset of high fever, chills, diarrhoea, and irritability. A rapid nasopharyngeal swab in your office identifies Covid-19, adding her to the long list of Covid-19 patients you have seen this September. Over the next few days, she slowly improves and becomes afebrile. However, 7 days after your last encounter you hear from the hospital that she has presented to the emergency room with recurrence of fever, fast heartbeat, shortness of breath, abdominal pain, vomiting, diarrhoea, neck pain, rash, swollen hands/feet with evidence of liver dysfunction. The following statements about her current condition of Multisystem Inflammatory Syndrome in Children (MIS-C) is correct, EXCEPT?

- A. It is a condition where different parts of the body become inflamed. This includes the heart, lungs, kidneys, brain, skin, eyes and gastrointestinal organs.
- B. This condition affects children under the age of 21. In other countries, most cases have been documented between the age of 1 and 14.
- C. These symptoms usually begin several week/s after the original Covid-19 infection.
- D. While these numbers are serious and common after Covid-19 infection, the vast majority of children present with mild symptoms have poor outcomes.

83. The mother and father of a newborn come in for the 2-week check-up. The mother complains of "colic" and asks if she can switch to goat's milk instead of breast milk. Which of the following should be your main concern about using goat's milk instead of breast milk or cow's milk?

- A. It has insufficient calories.
- B. It has insufficient folate.
- C. It has insufficient whey.
- D. It has insufficient casein.

84. A 5-year-old girl without past history of UTI is in the hospital on antibiotics for Escherichia coli pyelonephritis. She is still febrile after 4 days of appropriate antibiotics. A renal ultrasound revealed no abscess, but a focal enlargement of one of the lobes of the right kidney. CT of the abdomen reveals a wedge shaped area in the right kidney distinct from the normal tissue with minimal contrast enhancement. Appropriate management of this patient includes which of the following interventions?

- A. Prolonged antibiotic therapy
- B. Routine treatment with 10 to 14 days of antibiotics for pyelonephritis
- C. Surgical consultation
- D. Renal biopsy

85. Nephrotic syndrome is a hypercoagulable state resulting from which of the following conditions?

- A. Hemodilution
- B. Decreased platelet number
- C. Changes in coagulation factor levels
- D. Decrease in hepatic production of fibrinogen

86. Corticosteroids remain an integral part of many immunosuppressive protocols despite their multifaceted toxicities. In children, what is the most noteworthy side effect of corticosteroid?

- A. Obesity
- B. Hypertension
- C. Aseptic necrosis of bone
- D. Retarded skeletal growth

87. Hyperkalemia can lead to cardiac arrhythmia, cardiac arrest, and death. Serum potassium can be lowered by all the following EXCEPT:

- A. Regular insulin with glucose
- B. Calcium gluconate
- C. Sodium bicarbonate
- D. Kayexalate

88. A recovering premature infant who weighs 1250 gram is fed breast milk to provide 120 kcal/kg/d. Over the ensuing weeks, the baby is most apt to develop which of the following?

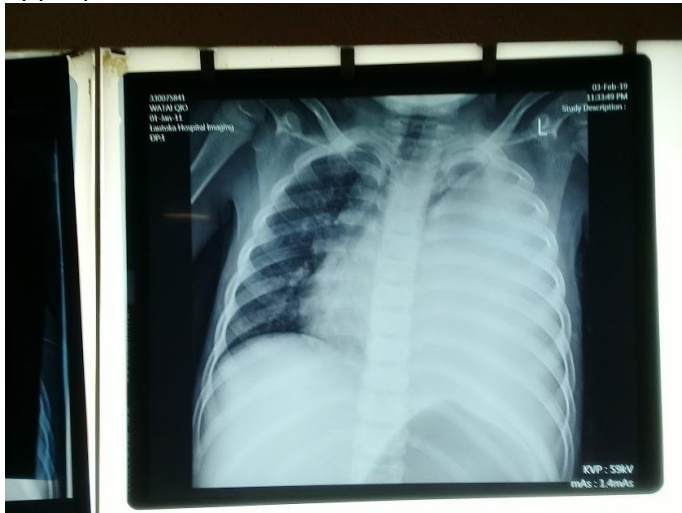
- A. Hypernatremia
- B. Hypocalcemia
- C. Blood in the stool
- D. Hyperphosphatemia

89. A 1-day-old infant who was born by a difficult forceps delivery is alert and active. She does not move her left arm spontaneously or during a Moro reflex. Rather, she prefers to maintain it internally rotated by her side with the forearm extended and pronated. The rest of her physical examination is normal. This clinical scenario most likely indicates which of the following?

- A. Fracture of the left clavicle
- B. Fracture of the left humerus

- C. Left-sided Erb-Duchenne paralysis
- D. Left-sided Klumpke paralysis

90. A 6-year-old girl presents with a 2-day history of cough and fever. At your office she has temperature of 39.4°C, a respiratory rate of 45 breaths per minute, and decreased breath sounds on the left side. Her chest x-ray is shown below. Which of the following is the most appropriate initial treatment?



- A. Do chest physiotherapy.
- B. Start with 3rd generation Cephalosporin.
- C. Partial lobectomy
- D. Postural drainage

91. An 8-year-old girl presents with well-controlled, moderately persistent asthma. Her therapies consist of occasional use of short-acting β -agonists, daily inhaled steroids, and a leukotriene inhibitor. She presents with white patches on her buccal mucosa. You recommend which of the following?

- A. HIV testing
- B. Tuberculosis skin testing
- C. Discontinuation of all her asthma medications
- D. Rinse her mouth after use of her inhaled medications

92. Which of the following statements about TB Genexpert are true, EXCEPT?

- A. It is a cartridge-based polymerase chain reaction test
- B. It is a simultaneous rapid active pulmonary tuberculosis diagnosis.
- C. It can identify DNA Mycobacterium tuberculosis and resistance to rifampicin.
- D. It is a molecular blood test needed for rapid TB infection.

93. A 9-year old boy is suspected to have recurrent rheumatic carditis. Which of the following ECG findings is most likely to reveal?

- A. Prolong PR interval
- B. Prolong QT interval
- C. ST-T wave changes
- D. Sinus bradycardia

94. You admitted to the hospital the previous evening a 1-year-old boy who presented with cough, fever, and mild hypoxia. At the time of his admission, he had evidence of a right upper lobe consolidation on his chest radiograph. A blood culture has become positive in less than 24 hours for *Staphylococcus aureus*. Approximately 20 hours into his hospitalization, the nurse calls you because the child has acutely worsened over the previous few minutes, with markedly increased work in breathing, increasing oxygen requirement, and hypotension. As you move swiftly to the child's hospital room, you tell the nurse to order which of the following?

- A. A second chest radiograph to evaluate for pneumatocele formation.
- B. A large-bore needle and chest tube kit for aspiration of a probable tension pneumothorax.
- C. A change in antibiotics to include gentamicin.
- D. A sedative to treat the child's attack of severe anxiety.

95. Allergic shiners represent which of the following conditions?

- A. An upward rubbing of the nose with an open palm.
- B. Continuous open-mouth breathing.
- C. Dark circles under the eyes.
- D. Transverse crease of the nose.

96. Struvite calculi (secondary to urinary tract infections) are most often caused by which of the following organisms?

- A. *Escherichia coli*
- B. *Proteus*
- C. *Klebsiella*
- D. *Pseudomonas*

97. The MOST common manifestation of cerebral oedema from an overly rapid decrease of serum sodium concentration during correction of hypernatremic dehydration:

- A. Irritability
- B. Hyperreflexia
- C. Seizure
- D. GCS-3-8

98. In emergency department, the patient may be discharged to home if there is symptomatic improvement, normal physical findings, PEF >70% of predicted or personal best, and oxygen saturation >92% in room air for 4hr. Which of the following is the MOST likely discharge medication to be used by the patient?

- A. Inhaled β -agonist only
- B. Oral corticosteroid only
- C. Inhaled corticosteroid only
- D. Inhaled β -agonist plus oral corticosteroid

99. A 4-day old SGA neonate admitted in NICU with excess jitteriness with normal sepsis workup and a CBG of 1.6 mmol/l. The following are the treatment plan for this patient, EXCEPT:

- A. Monitoring for other CNS features such as seizures, apnea etc.
- B. Hourly glucose monitoring.
- C. Keep blood glucose 2.4 mmol/l.
- D. Additional feeding.

100. A newborn delivered at 37th weeks of gestation with a birth weight of 1.9 kilogram noted on the 2nd day of life having breastfeeding intolerance, lethargic and abdominal distension. A septic screen showed a negative results and other physical examinations and assessments are unremarkable. A full blood count result notably with PCV of 72% is observed. Which of the following will be the best management offered to your case?

- A. IV fluid hydration.
- B. Presumptive Septic treatment
- C. Partial exchange transfusion
- D. Medical and Surgical referral for intestinal obstruction.

END