Name: _____ Date:_____

Total Marks:_____/_____=_____%

Paediatric Clinician Task-Sharing Final Examination Paper 3

Please put the name and date on the top of each page in the space provided.

You will have 2 hours 30 minutes for this exam paper.

You should have a calculator and a list of medication and their doses for reference.

Remember to read the questions carefully.

1) You are called to see a 2-year-old girl who has presented with a 2-day history of fever and vomiting. She had 2 seizures at home lasting for 1 minute.
On examination she is pale but warm and well perfused with a capillary refill time of 2 seconds. She has mild respiratory distress, but her chest is clear. She appears lethargic but responds to voice and her blood sugar is 2.1mmol/L (37.8mg/dl). She is not having any convulsions now. The malarial screen is positive with 3+ malarial parasites.

a. Describe your initial management of this patient. Her weight is 11.7kg. (Please prescribe all treatment in full). (80 marks)

ABCDE Examination

Aim Sp02 94-98%

IV Ringers Lactate + 5% Dextrose = 1085ml/24 hours = 45ml/hr (10 marks)

IV 10% Dextrose 2ml/kg = 23ml (10 marks)

Repeat blood sugar in 20 minutes

IV Artesunate 35mg (3mg/kg) at 0-hour, 12-hour and 24-hour then every 24 hours (20 marks)

IV Ceftriaxone 936mg (80mg/kg) once daily (20 marks)

Close monitoring

Name: _____ Date:_____

b. List 3 other complications of severe malaria (15 marks)

Impaired consciousness
Acidosis
Hypoglycaemia
Hyperparasitaemia
anaemia
Renal impairment
Jaundice
Pulmonary oedema/ respiratory distress
Significant bleeding
Shock

c. She recovers well from severe malaria and is due to be discharged home. List 3 important topics that need to be discussed with the parents/ caregivers prior to discharge? (15 marks)

Sleeping under impregnated nets
Complete treatment
How to recognise malarial symptoms in future
Follow up appointment

2)

a. What is severe acute malnutrition? (5 marks)

Severe acute malnutrition (SAM) is caused by a significant imbalance between nutritional intake and individual needs

Name: _____ Date:_____

b. List the 3 different criteria used to define severe acute malnutrition? (15 marks)

Defined as the presence of oedema of both feet or severe wasting
Weight-for-height/length <-3sd or
Midupper arm circumference < 115 mm

A 2-year-old girl attends the hospital and is diagnosed with severe acute malnutrition.

c. List 5 important questions to ask in the history (25 marks)

Recent intake of food and fluids
Usual diet before the current illness
Breastfeeding
Duration and frequency of diarrhoea and vomiting
Type of diarrhoea (watery/ bloody)
Loss of appetite
Family circumstances
Cough > 2 weeks
Contact with tb
Recent contact with measles
Known or suspected hiv infection/exposure

Max 25 marks

d. List 3 complications to look for in a patient admitted with severe acute malnutrition (15 marks)

Hypoglycaemia
Hypothermia
Shock
Anaemia
Dehydration
Presence of infection

Max 15 marks

e. Answer true or false to the following statements: (20 marks)
   i. ORS should be used for re-hydration in a child with severe acute malnutrition ___FALSE_____
   ii. Children with bilateral pitting oedema of the feet require furosemide treatment _____FALSE _____

iii. F-75 is the first milk used in the management of severe acute malnutrition ____TRUE_____
iv. All patients presenting with severe acute malnutrition should receive treatment with antibiotics on admission ____TRUE_____

3) You are called to see a 5-month-old baby in the emergency department who has presented with a 2-day history of coryza and cough with increased work of breathing and poor feeding. He has not had a fever.

On examination his airway is patent, there is no stridor. His respiratory rate is 75 and oxygen saturations are 88% in air. He has severe respiratory distress. On auscultation of the chest, you hear bilateral wheeze and crepitations. Heart sounds are normal and femoral pulses palpable. He is warm and well perfused with capillary refill time 2 seconds. He is alert but upset. Temperature is 36.9°C.

a. What is the diagnosis? (5 marks)

Bronchiolitis

b. Describe how you would manage this patient. His weight is 6.8kg. (Please prescribe all treatment in full). (25 marks)

Admit to the ward Oxygen - Aim Sp02 94-98% IV maintenance fluid Ringer's Lactate + 5% dextrose 100ml/kg/day - 100ml x 6.8kg = 680ml in 24 hours - 28ml/hour (10 marks) Close monitoring of vital signs

Name: _____ Date:_____

c. Answer true or false to the following statements: (20 marks)
   i. All patients with this condition require a chest x-ray __FALSE_____
   ii. All patients with this condition must be treated with salbutamol and steroids __FALSE_____
   iii. It would be safe to use NG feeding if the respiratory distress was not severe __TRUE_____
   iv. This condition is caused by a viral infection __TRUE_____

4)

a. List 5 red flag signs that could indicate a patient has cancer (25 marks)

Unexplained generalised extensive lymphadenopathy
Unexplained extensive bruising, petechiae or bleeding
Unexplained persistent bone pain or limping
Enlarged liver or spleen on palpation
Palpable abdominal mass
Unexplained macroscopic haematuria
Persistent headache
New abnormal neurological findings
Unexplained persistent or deteriorating behaviour or school performance
Rapidly increasing head circumference in babies

Maximum 25 marks

You see a 3-year-old boy who has had recurrent chest infections requiring admission to hospital. He presents this time with fever and severe pallor. On examination you note he has a non-blanching petechial rash. On examination he has hepatosplenomegaly, cervical and axillary lymphadenopathy. He appears to be limping when walking.

b. What type of cancer do you suspect this patient to have? (5 marks)

Leukaemia or accept Lymphoma

c. List 4 investigations you would request to support this diagnosis? (20 marks)

Full blood count
Blood film
Chest x-ray
Ultrasound abdomen

Name: _____ Date:_____

Some patients with cancer require palliative care.

d. What is Palliative Care and why is it important? (15 marks)

Improves the quality of life
for people with life limiting or life threatening conditions

It is important to prevent and relieve suffering

Can give marks if reference to pain management, emotional/psychosocial/spiritual, support for the family

5) You are called to see a 13-year-old girl who was acutely unwell with suspected Lassa Fever. There are reported to be other people unwell with similar symptoms in her village. She was vomiting and only tolerating sips of fluids.

a. In an unwell child with a fever, list 3 other diagnoses you need to consider (15 marks)

Sepsis
Malaria
Enteric/Typhoid fever
Pneumonia

Max 15 marks

b. List 3 people you need to contact regarding suspected lassa fever (15 marks)

Lead Doctor/Medical Director
Regional/National Viral Haemorrhagic Fever Team
Lab lead
Lead nurse/Infection Prevention Team

Max 15 marks

c. What advice would you give to families regarding the prevention of Lassa Fever? (20 marks)

Personal Hygiene – wash hands regularly with soap and clean water
Food hygiene – cook food properly and cover food to protect from rodents
House sanitation – keep house and environment clean
Keep rodents away – block holes

d. List 3 infection prevention measures you would take when admitting and assessing this patient with suspected Lassa Fever? (15 marks)

Follow hospital/national policy
Barrier nursing
Isolation in a side room
Full Personal protective equipment
Appropriate disposal of clinical waste

Maximum 15 marks

6) You are called to see a 6-year-old boy with a distended abdomen and bilious vomiting. He has not opened his bowels for 5 days. On examination he has no respiratory distress. He is tachycardic and has cool peripheries with a capillary refill time of 3 seconds. He does not have a fever.

You are concerned this patient has intestinal obstruction.

a. List 3 causes of intestinal obstruction in children (15 marks)

Extrinsic causes: incarcerated hernia and vascular bands, intussusception, anomalies of rotation (volvulus and Ladd's bands, para-duodenal and paracaecal hernias), post-operative adhesions.

Intrinsic causes: inspissation of bowel contents (meconium ileus, DIOS, roundworm obstruction)

Peristaltic dysfunction: Hirschsprung's disease.
Inflammatory lesions: TB, Crohn's disease.

Max 15 marks

Name: _____ Date:_____

b. Describe how you would manage this patient. He weighs 24kg. (Please prescribe all treatment in full). (85 marks)

ABCDE examination

Aim for Sp02 94-98%

IV Ringer's lactate 10ml/kg = 240ml stat and reassess (10 marks)

Nil by mouth

Insert NG tube and leave on free drainage

IV Maintenance fluid Ringer's Lactate + 5% dextrose = 1580ml in 24 hours = 67ml/hr (10 marks)

Broad Spectrum Iv Antibiotics (40 marks)

- IV Ceftriaxone 1.9g (80mg/kg) once daily
- IV Metronidazole 180mg (7.5mg/kg) every 8 hours

  Or
- IV Ampicillin 1.2g (50mg/kg) every 6 hours
- IV Gentamicin 168mg every 24 hours
- IV Metronidazole 180mg (7.5mg/kg) every 8 hours

Close monitoring

Urgent referral to surgical team

Max 85 marks