



THE COLLEGES OF MEDICINE OF SOUTH AFRICA

Incorporated Association not for gain
Reg No 1955/000003/08

Examination for the Subspecialty Certificate in Nephrology of the College of Paediatricians of South Africa

7 April 2016

Paper 1

(3 hours)

All questions are to be answered. Each question to be answered in a separate book (or books if more than one is required for the one answer)

- 1 A six-year-old girl presents to the paediatric ICU with a one day history of fever and malaise. She has an altered level of consciousness, warm peripheries and a blood pressure of 100/60mmHg. Her urine dipstix shows a pH 5, blood 3+. She is oliguric with a urine output of 0.5ml/kg/hr for the past 8 hours. Her blood results reveal a CRP of 80mg/L, blood cultures are pending and her urea is 15mmol/L and creatinine is 400µmol/L
- a) Discuss her options for renal replacement therapy. Provide advantages and disadvantages of each mode. (10)
 - b) Discuss complications of acute peritoneal dialysis and the management of each of these complications. (15)
- [25]
- 2 Describe the morphological changes in the kidneys and urinary tract and the renal functional/physiological consequences of congenital obstructive uropathy. [25]
- 3 You are consulted for advice on the management of a 12-year-old Zambian girl who travelled to South Africa to join her mother who has been in South Africa for the past 3 months. Her mother is not able to give any informative history other than that her daughter has always been growing poorly. The patient is acutely on chronically ill and is deeply jaundiced. She has features of deranged liver function. Her urine output has been <0.3 ml/kg/hour for the past 48 hours. Her Glasgow coma score is 6/15
- a) List the categories of conditions associated with deranged liver and kidney function (acute/chronic liver disease and deranged acute/chronic kidney function) which you would consider in this patient. Name a few typical causes in each category. (12)
 - b) Why is assessment of kidney function in patients with chronic liver disease complicated with current available diagnostic tools? (3)
 - c) Describe the acute management plan for this patient with liver and kidney failure of which the cause has not been established yet. (10)
- [25]
- 4 You are consulted by a Caucasian mother for her 3-year-old son who has been extremely irritable and complaining of stomach ache for the past 2 days. He has not yet achieved complete bladder control and occasionally still wets his pants. His urine is macroscopically clear, but a urine dipstick test done at the primary health care clinic showed 3+ haematuria.
- a) Describe your workup of a patient with microscopic haematuria associated with clinical manifestations which may be general, non-urinary tract specific or urinary tract specific

Answer this question in table format, in the books provided, using headings as shown. You only need to give 6 categories

	Causes (Categorise)	*Diagnosis	**Clinical manifestations	***Investigations
1				
2				
3				
4				
5				
6				

* List no more than 2 possible diagnoses in each category

** List no more than 2 or 3 of the most important clinical manifestations associated with the diagnosis

*** List only the 2 most important diagnostic/confirmatory investigations

- (19)
- b) From your own list - which 2 conditions would you consider to be the most likely taking his symptoms, age and sex into consideration and give reasons for your answer? (4)
- c) For those 4 conditions you consider to be less likely, give only one reason for each of the categories you have given why the diagnosis is unlikely. (2)

[25]



Cert Nephrology(SA) Paed

THE COLLEGES OF MEDICINE OF SOUTH AFRICA

Incorporated Association not for gain
Reg No 1955/000003/08

Examination for the Subspecialty Certificate in Nephrology of the
College of Paediatricians of South Africa

8 April 2016

Paper 2

(3 hours)

All questions are to be answered. Each question to be answered in a separate book (or books if more than one is required for the one answer)

- 1 Discuss IgA Nephropathy with emphasis on
 - a) Biopsy findings.
 - b) Treatment options.
 - c) Prognostic features in children. [10]
- 2 Discuss the renal indications of the following drugs as well as any expected complications
 - a) Rituximab.
 - b) Intravenous Immunoglobulin (Polygam). [10]
- 3 In table format, list the differences between proximal and distal renal tubular acidosis
 - a) Clinical presentation of each.
 - b) Causes of each type. [10]
- 4 Discuss phosphate homeostasis as well as the clinical role of monitoring Parathyroid hormone. [10]
- 5 Write short notes on encapsulating peritoneal sclerosis. [10]
- 6 In patients with Infantile Nephropathic Cystinosis discuss
 - a. Clinical features.
 - b. Diagnosis. [10]
- 7 You have been asked by your hospital board to develop clinical practice guidelines for the appropriate initiation and withdrawal of dialysis in infants and children. Describe your recommendations briefly. [10]
- 8 A boy is only discovered to have advanced complications of obstructive uropathy due to posterior urethral valves at the age of 4 years. He only started walking at 2 years and now has difficulty in walking. You suspect a combination of rickets and bone mineral disorder of chronic kidney disease. In table format differentiate between the clinical and radiological features of
 - a) Rickets.
 - b) Secondary hyperparathyroidism in this patient. [10]

- 9 A 42-year-old diabetic mother has smoked throughout pregnancy. At 34 weeks gestation she delivers spontaneously on route to the hospital. The baby weighs 1.2kg and has acute respiratory distress on arrival in the emergency room. Shortly describe
- a) Acute.
 - b) Chronic kidney related risks and complications this baby may have. [10]
- 10 You are consulted by a mother for her 14-year-old teenage boy who has a BMI Z score $> +2$. The average of 3 blood pressure measurements is 160/90mmHg. On clinical examination you find no secondary cause for his hypertension. Shortly list the steps in his management. [10]