



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

25 July 2019

Paper 1

(3 hours)

All questions are to be answered.

Please answer question 1 in a separate booklet

- 1 There has been new strategies developed in the management of chronic kidney disease (CKD) secondary to autosomal dominant polycystic kidney disease (ADPKD) and autosomal recessive polycystic kidney disease (ARPKD) recently. Discuss the following in the management of (CKD)
- a) Use of statin therapy in autosomal dominant polycystic kidney disease (ADPKD). (8)
 - b) Management of metabolic acidosis in ARPKD. (7)
 - c) Advise on dietary protein intake in children with ARPKD. (5)
 - d) Advise on exercise in children with ARPKD. (5)
- [25]

Please answer questions 2 and 3 in one booklet

- 2 A 10-year-old boy is commenced on intermittent haemodialysis after failing peritoneal dialysis due to severe recurrent peritonitis. Thirty minutes after initiating haemodialysis his blood pressure suddenly drops and he goes into shock. A diagnosis of intradialytic hypotension (IDH) is made.
- a) Briefly describe the factors contributing to the pathophysiology of intradialytic hypotension. (5)
 - b) What are the clinical manifestations and consequences on intradialytic hypotension? (10)
 - c) What are the immediate steps you would take to treat this condition and how do you prevent further episodes? (10)
- [25]
- 3 Siphon is a 6-year-old boy with focal segmental glomerulosclerosis (FSGS). He went into end stage kidney disease three months ago and was commenced on automated peritoneal dialysis. His mum is a potential related living donor and he is referred to you for a renal transplant work-up.
- a) Describe your work-up of this patient for a renal transplant. (15)
- Siphon's mother reads on Google that there is a potential risk of disease recurrence post-transplant
- b) Discuss the risk of FSGS recurrence in Siphon and briefly outline how you would treat it should it occur? (10)
- [25]

Please answer question 4 in a separate booklet

- 4 A 7-year-old male child presents with generalised oedema, hypertension and gross haematuria (cola) coloured urine. On urine microscopy there are >200 000 red blood cells which are dysmorphic and >5 granular casts per high powered field. He also has signs of cardiac failure. There are impetigo lesions on his legs
- a) Discuss the differential diagnosis and what additional findings would support each of these diagnoses. (8)
 - b) Discuss briefly the management of each of these. (10)
 - c) What would be the indications for a kidney biopsy in this patient? (4)
 - d) What is the prognosis in this child? (3)
- [25]



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26 July 2019

Paper 2

(3 hours)

All questions are to be answered.

Please answer questions 1 to 3 in separate booklets

- 1 Write notes on nephrogenic syndrome of inappropriate antidiuresis (NSIAD). [10]
- 2 Discuss your management of a complicated urinary tract infection in a 2-year-old male child. [10]
- 3 Discuss your approach to anti-infective strategies for a child with nephrotic syndrome with respect to the following
 - a) Management of bacterial infections. (5)
 - b) Immunisation in children with nephrotic syndrome. (5)[10]

Please answer questions 4 and 5 in one booklet

- 4
 - a) Discuss the pathogenesis of aminoglycoside induced nephrotoxicity. (10)
 - b) What steps can you take to prevent aminoglycoside induced nephrotoxicity? (10)[20]
- 5
 - a) Describe your diagnostic approach to a patient with hypophosphataemic rickets using an algorithm. (10)
 - b) Describe briefly the most common cause of isolated renal phosphate loss and its management. (10)[20]

Please answer questions 6 and 7 in one booklet

- 6 Discuss the pathogenesis of anaemia in chronic kidney disease. [10]
- 7 A 7-year-old with Takayasu's Disease presents to the paediatric outpatient department with a hypertensive crisis. What would be your management of this patient? [10]

Please answer question 8 in a separate booklet

- 8 Discuss your assessment of a child with hypocalcaemia. [10]