



THE COLLEGES OF MEDICINE OF SOUTH AFRICA

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Examination for the Subspecialty Certificate in Infectious Diseases of the
College of Physicians of South Africa

24 August 2012

1 Paper Only

(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 45-year-old man who is experiencing increasing difficulty walking over the past two weeks consults you. He has been treated for multi-drug resistant tuberculosis (MDR-TB) with kanamycin, pyrazinamide, ethionamide, moxifloxacin and terizidone for the past 4 months and his primary physician is concerned that his presentation is due to drug side effects
- i) Discuss the adverse effects of the drugs used in his treatment that could cause his symptoms. (10)
 - ii) Discuss the management of two of the adverse drug reactions you have identified. (4)
- A week later his wife, who is a professional nurse, consults you. She has been sending monthly sputum cultures on herself and the most recent is positive for M tuberculosis resistant to isoniazid and rifampicin (two prior cultures have been negative). She does not want to start anti-tuberculosis treatment, feels completely well, and her chest radiograph is reported as normal
- iii) How would you manage this problem? (6)
- [20]
- 2 The World Transplant Games is to be held in Durban 28 July to 4 August 2013. There are 1500 athletes, age range 15-50 years from 40 countries, mainly the Americas, Europe and Asia as well as South Africa. Events include track and field, swimming, gymnastics, rowing, canoeing, sailing, cycling etc. Entry is open to all recipients of allograft and haemopoetic cell transplants, which require or have required the use of immunosuppressive drug therapies. Competitors must have been transplanted for at least 1 year, with stable graft function and be medically fit.
- You are responsible for providing advice for potential athletes, their families and officials with regard to communicable diseases. Outline your plan to highlight the specific infectious diseases risks that would pertain to the South African venue and potential travel at this particular time with particular reference to this group of persons. Include pre-travel advice, precautions to be taken by the event organisers and recommendations for disease surveillance during the event. [20]
- 3 You have been asked to compile a protocol for the prevention of cross-infections with, and the containment of, healthcare associated infections caused by multiple- and pan-drug resistant (MDR and PDR) Gram negative bacteria.
- a) Describe the main recommendations that you would make in your protocol with a brief overview of the evidence to support each recommendation. (7)
 - b) Critically discuss the roles of
 - i) pre-admission microbiological screening of patients. (4)
 - ii) selective decontamination of the digestive tract. (4)

in minimising MDR- and PDR-Gram negative infections in the South African healthcare setting. [15]

- 4 Write short notes on the following
- a) Define febrile neutropenia. (2)
 - b) Discuss the pros and cons of combination antibiotic therapy for empiric treatment of febrile neutropenia. (5)
 - c) Infections associated with tumour necrosis-alpha inhibitors. (4)
 - d) The 2009 European Society of Cardiology guidelines on the management of infective endocarditis recommends “early surgery as a class IIb indication in patients with vegetations >15mm”. Briefly comment on recommendations for early surgery in infective endocarditis (other than haemodynamic indications). (4)
- [15]
- 5
- a) The director of an intensive care unit (ICU) at a regional hospital requests your assistance in setting up an antibiotic stewardship programme. Specify the information you would need to obtain from the ICU director and what data you would like to access or to be collected before planning any interventions. Give brief reasons for these. (10)
 - b) The director tells you that a pharmaceutical company representative has advised her to change the antibiotic-of-choice for nosocomial pneumonia due to methicillin-resistant *Staphylococcus aureus* from vancomycin to linezolid. She asks you for an opinion. (5)
- [15]
- 6
- a) Discuss the clinical manifestations of HHV-8 and their treatment. (9)
 - b) Using examples, discuss the pathogenesis of HHV-8 infection. (6)
- [15]