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NEW DEVELOPMENTS IN THE LABORATORY DIAGNOSIS OF TUBERCULOSIS

- 1. Which one of the following statements about smear microscopy for TB is incorrect?**
 - A. Sample centrifugation improves sensitivity
 - B. LED light sources are a useful alternative to standard fluorescent bulbs
 - C. Fluorescent microscopy improves sensitivity over standard microscopy
 - D. Smear microscopy is highly sensitive for the diagnosis of HIV-associated TB.
- 2. Which of the following statements regarding nucleic acid amplification (NAA) assays for TB is correct?**
 - A. The results of 'in-house' NAA assays should be interpreted with caution
 - B. Commercial NAA assays are nonspecific for TB
 - C. NAA assays do not depend to any large degree on the experience of the person performing the test
 - D. Commercial NAA assays are generally more sensitive for smear-negative than smear-positive TB.
- 3. True (A) or false (B) – fill in only block A or B:** Serological testing may be helpful in confirming a diagnosis of pulmonary TB in adults.

BACTERIAL MENINGITIS IN THE ERA OF PAEDIATRIC VACCINATION AGAINST THE ENCAPSULATED PATHOGENS

- 4. Which polysaccharide-protein conjugate vaccine has recently been introduced into the Expanded Programme on Immunisation (EPI) in South Africa?**
 - A. *Haemophilus influenzae* serotype b
 - B. Oral polio
 - C. Parenteral polio
 - D. 7-valent pneumococcal vaccine
 - E. 13-valent pneumococcal vaccine.
- 5. Vaccines currently available to prevent disease due to *Haemophilus influenzae* serotype b (Hib), *Streptococcus pneumoniae* (the pneumococcus), and *Neisseria meningitidis* (the meningococcus) are based on (choose one):**
 - A. Live, attenuated bacteria
 - B. Polysaccharide capsules
 - C. Outer membrane vesicles
 - D. Killed bacteria
 - E. Cell walls.
- 6. Polysaccharide-protein conjugate vaccines currently available to prevent disease due to *Haemophilus influenzae* serotype b, *Streptococcus pneumoniae* and *Neisseria meningitidis* elicit an indirect effect at a population level due to (choose one):**
 - A. Excretion of bacteria in faeces
 - B. Increased spread of bacteria via respiratory droplets
 - C. Reduced nasopharyngeal carriage
 - D. Transmission of live, attenuated bacteria
 - E. Reduced bacteria in animals.

SEPSIS: AT-RISK PATIENTS, CLINICAL MANIFESTATIONS AND MANAGEMENT

- 7. True (A) or false (B) – fill in only block A or B:** Alcoholics, the elderly, neonates and people who are severely immunosuppressed may present with a normal temperature and sepsis.
- 8. True (A) or false (B) – fill in only block A or B:** Abnormal liver enzymes are a common finding in sepsis.

- 9. True (A) or false (B) – fill in only block A or B:** Appropriate antimicrobial therapy has a significant impact on survival in sepsis if started within 1 hour of diagnosis.

SKIN AND SOFT-TISSUE INFECTIONS

- 10. True (A) or false (B) – fill in only block A or B:** To cause SSTIs, invading organisms must penetrate the skin barrier through a breach caused by direct trauma or an underlying process such as ischaemia.
- 11. True (A) or false (B) – fill in only block A or B:** Pain not in proportion to the appearance of the lesion may indicate a developing necrotising infection.
- 12. True (A) or false (B) – fill in only block A or B:** One of the cardinal factors in managing severe, complicated soft-tissue infections is the early recognition of the need for surgical drainage and/or debridement.

BACTERIAL INFECTIONS IN TRAVELLERS

- 13. Which of the following statements concerning treatment of travellers' diarrhoea is correct (choose one):**
 - A. Bismuth subsalicylate should be used for treatment of travellers' diarrhoea in India
 - B. Rifaximin is a standard antibiotic used to treat travellers' diarrhoea
 - C. *Campylobacter jejuni* is still universally sensitive to fluoroquinolones
 - D. Azithromycin 1 g *po stat* is acceptable empiric treatment
 - E. Loperamide should not be administered to patients with travellers' diarrhoea.
- 14. Which of the following statements is true concerning African tick-bite fever (ATBF) (choose one):**
 - A. Patients may present with multiple eschars
 - B. Vesicular rash is NOT a feature
 - C. *R. africae* is carried by the brown tick
 - D. The Weil-Felix test is sensitive and specific
 - E. Amoxycillin is the drug of first choice for treatment of ATBF.
- 15. Which one of the following statements is true concerning leptospirosis?**
 - A. Leptospirosis is caused by *Treponema pallidum*
 - B. Transmission is via human-to-human aerosol droplet spread
 - C. Myalgia is a common symptom
 - D. Leptospira urinary antigen is the investigation of choice in the first week
 - E. Mortality from Weil's disease averages 50%.

DURATION OF ANTIMICROBIAL THERAPY

- 16. True (A) or false (B) – fill in only block A or B:** No statistical difference was found between the 5-day and the 8-10-day regimens in acute otitis media.
- 17. True (A) or false (B) – fill in only block A or B:** Community-acquired pneumonia can be successfully treated using 3-7 days of antibiotics.
- 18. True (A) or false (B) – fill in only block A or B:** Infections such as endocarditis, osteitis and septic arthritis require extended duration of antimicrobial therapy.

IMPORTANCE OF MINIMUM INHIBITORY CONCENTRATION (MIC) VALUES

- 19. True (A) or false (B) – fill in only block A or B:** The MIC of an isolate is the lowest concentration of an antimicrobial agent that prevents visible growth of that particular micro-organism in an agar or a broth-dilution susceptibility test.
- 20. True (A) or false (B) – fill in only block A or B:** The MIC can guide the choice of antimicrobial used in treatment by predicting efficacy.