

CME questions on the Infection issue

1 Which of the following is least likely to be considered a core principle of management of chronic osteomyelitis and infected non-unions?

- A Adequate debridement of infected bone and soft tissue
- B Antibiotic treatment until the field is shown to be sterile
- C Appropriate sampling for microbiological diagnosis
- D Bony stabilisation and soft tissue coverage
- E Targeted antibiotics (empiric followed by culture-specific)

2 Approximately what proportion of patients taking systemic antibiotics stop treatment because of side effects?

- A 2%,
- B 5%
- C 10%,
- D 30%,
- E 50%

3 Which of the following ceramic antibiotic carriers provides excellent compressive strength but is reabsorbed within 12 months?

- A Calcium phosphate
- B Calcium sulphate
- C Hydroxyapatite, amorphous precipitated form
- D Hydroxyapatite, sintered form
- E Tricalcium phosphate

4 Which of the following imaging modalities is best for identifying sequestrum and periosteal reaction associated with bone infection?

- A CT
- B MRI
- C Plain radiograph
- D Positron emission tomography
- E Ultrasound

5 What is the maximum thickness of cancellous bone autograft that can be used to fill a defect before graft resorption becomes a significant problem?

- A 5 mm
- B 10 mm
- C 15 mm
- D 20 mm
- E 30 mm

6 Which of the following best explains the performance of rifampicin in managing biofilm-associated infection?

- A It acts on the metabolic pathway of the organism that is producing the biofilm
- B It has excellent penetration of the pore structure of biofilm
- C It can dissolve away the biofilm to expose bacteria
- D It is effective alone, avoiding the need for combination therapy
- E It is not reliant on cell division for its action

7 For which of the following is an initial approach with narrow-spectrum antibiotic before surgical debridement least likely to be used?

- A Chronic osteomyelitis with acute flare involving soft tissue
- B Early infection after total knee replacement
- C Pyogenic myositis
- D Septic arthritis of the native hip
- E Vertebral osteomyelitis

8 Which of the following antibiotics in isolation seems most likely to be most active against staphylococcal bone infections?

- A Ciprofloxacin
- B Doxycycline
- C Levofloxacin
- D Moxifloxacin
- E Pristinamycin

9 Which of the following is correct concerning currently available point-of-care fluid alpha-defensin test kits?

- A They will identify 70% of patients who have an infection; a patient with a positive test has a 20% chance of *not* having an infection
- B They will identify 70% of patients who have an infection; a patient with a positive test has a 5% chance of *not* having an infection
- C They will identify 85% of patients who have an infection; a patient with a positive test has a 25% chance of *not* having an infection
- D They will identify 85% of patients who have an infection; a patient with a positive test has a 10% chance of *not* having an infection
- E They will identify 95% of patients who have an infection; a patient with a positive test has a 5% chance of *not* having an infection

10 Which of the following is not a generally held accepted indication for one-stage revision of an infected knee arthroplasty?

- A Availability of a full range of implants and instruments matching the type implanted
- B Healthy patient without immunocompromise
- C Known infecting organism pre-operatively
- D Organism known to be susceptible to available antibiotics
- E Sufficient healthy soft tissue envelope to primarily close wound

11 Which of the following statements about biofilms is incorrect?

- A Bacteria in a biofilm are sessile rather than planktonic
- B Biofilms consist of a homogenous gel through which molecules can only pass by diffusion, limiting the passage of many antibiotics

- C Organisms are found in a matrix of polymeric substances at least partly produced by the organisms themselves
- D *P. acnes* is an organism that can be associated with biofilm
- E Ultrasound can be used to disrupt the biofilm and release it, and contained organisms, from an implant

12 What is approximately the reported revision rate for infection in total elbow arthroplasty according to the UK National Joint Registry?

- A 1%
- B 3%
- C 5%
- D 8%
- E 11%