

7.1 Which of the following statements are correct?

- A Flumazenil is a benzodiazepine agonist
- B Flumazenil is a benzodiazepine antagonist
- C Benzodiazepines are commonly used anxiolytic drugs
- D Benzodiazepines may be used in the treatment of epilepsy
- E Carbamazepine is a benzodiazepine

7.2 Which of the following statements are correct?

- A Lidocaine 0.2% with 1:80 000 adrenaline (epinephrine) is a commonly used dental local anaesthetic
- B Lidocaine has a longer lasting anaesthetic effect than bupivacaine
- C Plain lidocaine provides more pronounced dental anaesthesia than lidocaine with adrenaline
- D Prilocaine 3% with 0.03 IU/ml felypressin is a commonly used dental local anaesthetic
- E Lidocaine must be stored at 4 °C

7.3 Which of the following statements are correct?

- A A 2.2 ml cartridge of 2% lidocaine and 1:80 000 adrenaline contains 4.4 mg of lidocaine
- B Lidocaine and prilocaine contain an ester group
- C Esters are less likely to cause allergic reactions than amides
- D Amide local anaesthetics are metabolised by the liver
- E Prilocaine has a much higher toxicity than lidocaine

7.1 BCD

Benzodiazepines are central nervous system depressants and act as sedatives, hypnotics, anxiolytics and anti-convulsants. Flumazenil is a benzodiazepine antagonist, commonly used to reverse the action of midazolam. Although having a name that sounds similar to benzodiazepine, carbamazepine is not a benzodiazepine.

7.2 D

Lidocaine 2% with 1:80 000 adrenaline is a commonly used dental local anaesthetic. It has a more pronounced effect than lidocaine alone as adrenaline causes vasoconstriction, which prevents the solution dispersing away from the site of action. Bupivacaine is a longer lasting local anaesthetic than lidocaine.

7.3 D

A 2% solution will contain 20 mg/ml, so a 2.2 ml cartridge contains 44 mg of lidocaine. Lidocaine and prilocaine contain an amide group, and as such are less likely to cause an allergic reaction than an ester-containing local anaesthetic. Lidocaine has higher toxicity than prilocaine.

7.4 Which of the following drugs interact with warfarin and may increase a patient's international normalised ratio (INR)?

- A Fluconazole
- B Vitamin K
- C Metronidazole
- D Erythromycin
- E Oral contraceptives

7.5 Non-steroidal anti-inflammatory drugs (NSAIDs) are best avoided in:

- A Patients with a history of gastric bleeding
- B Asthmatic patients
- C Patients who are hypersensitive to aspirin
- D Children under the age of 6 years due to the possibility of Reye's syndrome
- E Patients on paracetamol

7.6 Penicillins:

- A Are the antibiotic of choice for anaerobic infections
- B Interfere with bacterial cell wall synthesis
- C Are bacteriocidal
- D Are antagonistic to tetracycline
- E Rarely cause allergic reactions

7.4 ACD

Fluconazole, erythromycin and metronidazole may interact with warfarin and potentiate its action. The oral contraceptive pill and vitamin K may interact with warfarin, but they reduce its effect hence lowering the INR.

7.5 ABCD

NSAIDs should be avoided in any patient with a history of hypersensitivity to aspirin or any other NSAID. They should also be avoided in patients with gastric/duodenal ulceration, and if it is necessary to prescribe them, then they should be given in conjunction with a selective inhibitor of cyclo-oxygenase-2 or gastroprotective treatment. Reye's syndrome can be caused by patients under the age of 16 years taking aspirin and hence it should be avoided in children. Patients on paracetamol can take NSAIDs as well as they have different modes of action and do not interact.

7.6 BCD

The penicillins all act by interfering with bacterial cell wall synthesis, by inhibiting cross-linking of the mucopeptides in the cell wall and as such are bacteriocidal. Bacteria are attacked when cells are dividing and so in theory antibiotics that are bacteriostatic would decrease the efficacy of bacteriocidal drugs. However, this doesn't often cause a problem but tetracycline and penicillin are antagonistic and should not be used at the same time. Metronidazole is the antibiotic of choice for anaerobic infections.

7.7 What are the appropriate drugs and dosages for use in the following emergencies?

- A In suspected anaphylaxis – 1:1000 adrenaline 0.5 ml intravenously
- B In suspected anaphylaxis – chlorphenamine 10 mg in 1 ml intramuscularly
- C In a suspected angina attack – glyceryl trinitrate intramuscularly
- D In a suspected diabetic hypoglycaemic collapse where the patient is unconscious – glucagon 10 mg intramuscularly
- E In a suspected diabetic hypoglycaemic collapse where the patient is unconscious – 50 ml of 20% glucose intravenously

7.8 Paracetamol is:

- A Anti-pyretic
- B Anti-inflammatory
- C Locally acting
- D Hepatotoxic in overdose
- E Taken in doses of 500 mg –1 g four times a day

7.9 Which of the following drugs and doses are commonly used in the treatment of atypical facial pain?

- A Amitriptyline 10–25 mg daily
- B Nortriptyline 10–25 mg daily
- C Protirelin 10–25 mg daily
- D Fluoxetine 20 mg daily
- E Flumazenil 20 mg daily

7.7 BE

In suspected anaphylaxis 0.5 ml of 1:1000 adrenaline is given intramuscularly as is chlorphenamine 10 mg in 1 ml (also intramuscularly). In an angina attack glyceryl trinitrate is usually administered sublingually. In a hypoglycaemic collapse glucagon 1 mg is given intramuscularly and/or 50 ml of 20% glucose intravenously.

7.8 ADE

Paracetamol is a centrally acting analgesic with anti-pyretic properties. Unlike the NSAIDs it does not have anti-inflammatory properties. It is hepatotoxic in high doses.

7.9 ABD

Amitriptyline and nortriptyline are both tricyclic antidepressants and are used in the treatment of atypical facial pain. Fluoxetine is a selective serotonin reuptake inhibitor and also used in the treatment of facial pain. Protirelin is a hypothalamic-releasing hormone which stimulates the release of thyrotrophin from the pituitary gland and so is not used for treatment of atypical facial pain. Flumazenil is a benzodiazepine antagonist used to reverse the central sedative effects of benzodiazepines.

7.10 Which of the following are anti-fungal drugs?

- A Miconazole
- B Aciclovir
- C Chlorhexidine
- D Nystatin
- E Itraconazole

7.11 Which of the following must always be included in a prescription?

- A The name and address of the prescriber
- B The age of the patient
- C The date of prescription
- D The dose of the drug in numbers and words
- E The address of the patient

7.12 Which of the following drug doses and concentrations are correct for using in an anaphylactic reaction?

- A Adrenaline 0.5 ml of 1:100 intramuscularly
- B Adrenaline 0.5 ml of 1:1000 intramuscularly
- C Hydrocortisone sodium succinate 2 mg intravenously
- D Hydrocortisone sodium succinate 20 mg intravenously
- E Hydrocortisone sodium succinate 200 mg intravenously

7.10 ADE

Miconazole is an imidazole anti-fungal drug, Nystatin is a polyene anti-fungal drug and itraconazole is a triazole anti-fungal. Aciclovir is an anti-viral drug and chlorhexidine is an antiseptic.

7.11 ACE

The name and address of the prescriber, the date of prescription and the address of the patient must be included. It is desirable to include the age and date of birth of the patient, but this is a legal requirement for only prescription-only medicines for patients under 12 years of age. The drug dose only needs to be put in words and figures if it is a controlled drug.

7.12 BE

Appropriate treatment of a suspected anaphylactic attack involves 0.5–1 ml of a 1:1000 solution of adrenaline administered intramuscularly. Hydrocortisone sodium succinate 200 mg intravenously should also be given.