Questions for this month's clinical challenge are based on articles in this issue. The style and scope of questions is in keeping with the MCQ of the College Fellowship exam. The quiz is endorsed by the RACGP Quality Assurance and Continuing Professional Development Program and has been allocated 4 CPD points per issue. Answers to this clinical challenge will be published next month, and are available immediately following successful completion online at www.gplearning.com.au. Check clinical challenge online for this month's completion date.

Rachel Lee

AFP's CPD activities, clinical challenge and *AFP* in Practice, are available online at the new gplearning website at www.gplearning.com.au.
Access to the new *gplearning* website is free for RACGP members as part of their college membership. If you are not a member, you can access both clinical challenge and *AFP* in Practice for a free 30 day trial.
Cost to nonmembers after the 30 day trial is $365.00. For details of RACGP membership please call 1800 331 626.

SINGLE COMPLETION ITEMS

DIRECTIONS Each of the questions or incomplete statements below is followed by five suggested answers or completions. Select the most appropriate statement as your answer.

Case 1 – Janelle Phillips

Janelle Phillips, 46 years of age, is a housewife. She underwent laprascopic adjustable gastric banding (LAGB) 6 months ago and has lost 12 kg since the procedure.

Question 1

Over 12 months following LABG, patients such as Janelle can expect:

A. to lose 30% of their excess weight
B. to lose 50–60% of their excess weight
C. to lose 50–60% of their weight
D. to lose 70–90% of their excess weight
E. to lose 70–90% of their weight.

Question 2

Janelle was very happy with the procedure but has recently noticed reflux, especially at night, epigastric pain and difficulty eating solids. The most likely explanation is:

A. a port complication
B. erosion of the band into the stomach cavity
C. acute food bolus obstruction
D. acute slip with obstruction and ischaemia
E. symmetrical pouch dilatation.

Question 3

Regarding appropriate investigation or management for Janelle's symptoms, which of the following is true:

A. barium swallow is indicated
B. gastroscopy is indicated
C. the volume of fluid within the system should be checked repeatedly
D. a carbonated beverage may provide relief
E. no investigation is indicated.

Question 4

You appropriately investigate and manage Janelle's situation but decide to learn about taking fluid out of the LAGB system in case you need to do this in the future. Regarding the process of removing fluid from the system, which of the following is true:

A. a normal 19 gauge needle can be used
B. you enter at 45 degrees to the skin to access the port
C. a Huber tipped needle is preferred
D. you feel the upper border of the port with the needle
E. the port must never be accessed except by the managing surgeon.

Case 2 – Vince Chinotto

Vince Chinotto, 37 years of age, is a plumber who presents unwell, with bloody diarrhoea and abdominal pain. You suspect inflammatory bowel disease (IBD) and arrange emergency review.

Question 5

Select the best option in regard to diagnostic tests for IBD:

A. anti-saccharomyces cerevisiae antibody (ASCA) is specific to Crohn disease (CD)
B. atypical perinuclear antineutrophil cytoplasmic antibody (p-ANCA) is specific to ulcerative colitis (UC)
C. ASCA and p-ANCA cannot differentiate CD from UC
D. calprotectin is a faecal marker specific to CD
E. lactoferrin is a faecal marker specific to UC.

Question 6

Vince is diagnosed with UC and is later commenced on a 5-amino salicylic acid drug (5-ASA). Select the best option about this group of medications:

A. 5-ASA drugs are poorly tolerated
B. 5-ASA drugs have low compliance rates
C. 5-ASA drugs have a high incidence of adverse effects
D. 5-ASA drugs are more effective orally than rectally for UC proctitis
E. the use of 5-ASA drugs is best established in CD.

Question 7

You see Vince 2 months later with a possible flare up of UC. Select the best option about the use of C-reactive protein (CRP) levels in this setting:

A. CRP does not correlate to disease activity
B. persistently elevated CRP correlates to a lower relapse rate
C. persistently elevated CRP correlates to a lower response to infliximab
D. some patients do not mount a CRP response to intestinal inflammation
E. CRP is a useful indicator if it is in the normal range.

Question 8

Several years later Vince's UC becomes difficult to control and you refer him back to his gastroenterologist. Select the correct option about infliximab in this setting:

A. infliximab has no efficacy for UC
B. infliximab is funded by the PBS for use in UC
C. infliximab must be given by subcutaneous injection
D. infliximab is used monthly for maintenance treatment
E. infliximab binds tumour necrosis factor alpha.

Case 3 – Angélica Garcia López

Angélica Garcia López, 29 years of age, is a police officer who returns to you after a thorough assessment for advice about managing her irritable bowel syndrome (IBS.)

Question 9

Angélica has heard conflicting stories about the aetiology of IBS. Which of the following has NOT been implicated as a possible aetiological factor in IBS:

A. abnormalities of central pain processing
B. postsurgical changes
C. genetic factors
D. sensory dysfunction
E. postinflammatory changes.

Question 10

Angélica tried 1 month of probiotics but found no improvement in her symptoms. You explain:

A. different strains of probiotics appear to target different dominant symptoms
B. the probiotic species are now part of her permanent bowel flora
C. there is no evidence that probiotics are useful for abdominal pain
D. there is no evidence that probiotics are useful for global IBS symptoms
E. there is no evidence that probiotics are useful for abdominal bloating.

Question 11

You discuss peppermint oil as a possible treatment and Angélica asks about the side effects and contraindications. Select the best option:

A. perianal staining from the oil is a common side effect
B. peppermint oil is known to be safe during pregnancy
C. reflux may occur due to oesophageal sphincter relaxation
D. peppermint oil is contraindicated in people with asymptomatic gallstones
E. peppermint oil is contraindicated in all forms of liver disease.

Question 12

Angélica's main complaints are of pain and constipation. She wants to discuss the use of soluble fibre in her diet. Select the best option about the use of soluble fibre in IBS:

A. there is no evidence that soluble fibre improves IBS related abdominal pain
B. there is no evidence that soluble fibre improves IBS related constipation
C. there is no evidence that soluble fibre improves global IBS symptoms
D. soluble fibre is not fermented or digested in the gut
E. soluble fibre acts by retaining water thereby increasing stool bulk.

Case 4 – Joseph Deng

Joseph Deng, 23 years of age, is a kitchen hand and student who you suspect has IBS.

Question 13

You consider food intolerance as a contributing factor. Select the correct statement about the processing of carbohydrate:

A. fructose requires fructase in the brush border for digestion
B. fructose absorption is impaired by luminal glucose
C. fructose is absorbed via a low capacity carrier mediated facilitated diffusion
D. lactose absorption is increased by luminal glucose
E. some individuals have no lactase present and therefore cannot digest lactose.

Question 14

Which of the following foods has the highest lactose load:

A. 100 mL regular milk
B. 50 g swiss cheese
C. 200 g cottage cheese
D. 100 g yoghurt
E. 50 g ice-cream.

Question 15

Joseph asks about other potential food intolerances. Select the best option about the content of different foods:

A. sorbitol is a synthetic sweetener added to many foods
B. sorbitol rarely occurs in fructose containing foods
C. fructans are storage carbohydrates in Graminaceae plant species, such as wheat
D. fructans are in high concentrations in corn and rice
E. fructans are storage carbohydrates in Compsitae plant species, such as asparagus.

Question 16

You ask Joseph about the presence of alarm symptoms. Which of the following is not considered an alarm symptom:

A. alternating bowel habit
B. rectal bleeding
C. anaemia
D. weight loss
E. none of the above.

ANSWERS TO NOVEMBER CLINICAL CHALLENGE

Case 1 – Lola Parkes

1. Answer A

'Toxindrome' refers to the symptoms and signs of a medically significant spider bite. Araneism or arachnidism is a term for systemic effects resulting from spider bite. Latrodectus species are known for their neurotoxins whereas Loxosceles have predominantly cytotoxic effects.

2. Answer B

Lactodectism causes synaptic vesicle exocytosis from presynaptic terminals that lead to release of catecholamines and acetylcholine. Options A, C and E are correct statements about funnel web spider envenomation. Symptoms of red back spider bite last a median of 48 hours with almost all cases resolved within 1 week.

3. Answer C

Antivenom is recommended for patients with pain not controlled with simple analgesia, those who require repeated doses of opiates, or have signs of systemic envenomation. Children receive antivenom more commonly as they are considered at greater risk. Allergic reactions in Australia appear to be rare.

4. Answer B

Funnel web spiders are the most venomous in the world and envenomation should be considered a life threatening emergency. Lola requires immediate transfer to hospital for antivenom with a pressure immobilisation bandage. Funnel web spiders are mainly confined to NSW and Queensland and fasciculation occurs in around half of patients.

Case 2 – Michael Tran

5. Answer C

A petechial rash or minor bleeding may occur in uncomplicated dengue fever and thrombocytopenia occurs in around 25–50% of cases.

6. Answer D

Three blood films are indicated to exclude the important differential diagnosis of malaria. Serum dengue PCR is useful in early illness as it may detect virus up to day 10. Serum IgM becomes positive after day 4–5, but IgG is delayed until about day 7. There is cross reactivity with other flavivirus infection with IgG and FBE is useful at baseline and again at day 3–4.

7. Answer E

IgM appears after 4–5 days but IgG does not become positive until around day 7. This picture indicates Michael has probably been exposed to another serotype of dengue, which increases his risk of haemorrhagic fever. Other flavivirus infection typically causes reduced IgM response.

8. Answer A

A rise of haematocrit by ≥20% from baseline (or a reduction with rehydration) is a 'red flag' not a drop in haematocrit. The other factors listed are red flags for severe disease.

Case 3 – Randy Simpson

9. Answer E

Children aged less than 5 years are at greater risk of dog bite and male unsterilised dogs are higher risk. Around 66% are from dogs known to the victim and about 50% are unprovoked.

10. Answer B

Human bites have higher infection rates than animal bites. An intercanine distance of >3 cm indicates a likely adult bite and should raise suspicion of child abuse, particularly for bites on the genitals. HIV prophylaxis should be considered in high risk bites and hepatitis immunoglobulin would be appropriate if Randy is unvaccinated and Maddison is hepatitis B positive. Human bites infected with *Eikenella corrodens* may cause septic arthritis and is sometimes complicated by infective endocarditis.

11. Answer A

Staphylococcus aureus can be part of the oral flora of both humans and dogs. The other options are incorrect (see Table 1 from the Dendle and Looke article about bites for details).

12. Answer B

Wounds to the trunk are not especially high risk. Bites to the hands, feet, face and genitals are high risk, as are all other factors listed and bites to immunocompromised individuals.

Case 4 – Jacinta Quick

13. Answer B

Dark spotting on the bed is typical from bug faecal deposition. The bugs are small and oval, but wingless, and distribution is typically over the arms, shoulders and legs.

14. Answer E

Numerous bites can present as a widespread erythematous rash or urticaria. Reactions can be delayed up to 9 days, the classic wheal is over 1 cm and up to 20 cm. Bullous eruptions are not uncommon and most bites do not occur in a linear pattern, although this can occur.

15. Answer D

Fever and malaise can occur, particularly with the bullous forms. Anaphylaxis is a rare occurrence but ulceration and infection secondary to scratching is relatively common. There have been no proven cases of transition of infectious disease by bed bug bites.

16. Answer C

Symptomatic treatment with antihistamines and topical or systemic corticosteroids can be useful. Bed bugs have high resistance levels and infestations should be handled by an experienced pest manager.

AFP CORRESPONDENCE afp@racgp.org.au