CLINICALCHALLENGE

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.racgp.org.au/clinicalchallenge. Check clinical challenge online for this month's completion date.

Jennifer Presser

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 – Keith Needham

Keith Needham, aged 50 years, presents after vomiting a small amount of fresh blood following a night of heavy drinking. He says he has had intermittent upper abdominal pain (UAP) and burning for years and takes antacids to settle it down.

Question 1

Regarding recurrent UAP, which of the following is false:

A. most patients with UAP have chronic or recurrent symptoms
B. the prevalence of UAP in western countries is ~20%
C. no organic cause is found in most patients investigated for dyspeptic symptoms
D. the most common causes of recurrent epigastric pain are gastro-oesophageal reflux disease (GORD) and peptic ulcer disease
E. there is an association between GORD and asthma.

Question 2

You explain to Keith that early endoscopy is advisable as he has 'alarm' symptoms of gastrointestinal (GI) bleeding and vomiting. Guidelines indicate upper GI endoscopy (UGIE) for those:

A. over 50 years of age
B. with a family history of GI cancer
C. with a positive serology for *Helicobacter pylori*
D. with anaemia
E. B and D.

Question 3

In considering possible causes, which of the following is false:

A. myocardial ischaemia should be considered
B. pain lasting hours suggests gallstones and/or pancreatitis
C. gallstones are common and often asymptomatic
D. pancreatitis is readily detected with imaging and lipase levels
E. plain abdominal X-ray is often unhelpful in the investigation of UAP.

Question 4

Diagnostic criteria for functional dyspepsia include:

A. abdominal discomfort and pain present for 3 days per month, for at least 3 months
B. variable stool frequency and consistency
C. early satiation
D. bloating
E. a sense of incomplete evacuation.

Case 2 – Tania Azari

Tania Azari, aged 39 years, attends your practice after hospital discharge. She has been in hospital for 5 days with severe right upper quadrant pain, fever and vomiting. Ultrasound showed gallstones and she has been booked for cholecystectomy in 6 weeks time.

Question 5

In patients presenting to general practice with UAP, which of the following is false:

A. the two commonest surgical causes are gallstone disease and peptic disease
B. women present with UAP more commonly than men
C. if symptoms are atypical, CT abdomen is the first choice investigation
D. irritable bowel syndrome and food intolerances should be considered if no surgical cause is found on investigation
E. children present with UAP more commonly than adults.

Question 6

Regarding gallstone disease, which of the following is false:

A. in biliary colic, the patient is usually afebrile with no systemic disturbance
B. in biliary colic, ultrasound shows a thickened oedematous gallbladder wall
C. variable epigastric and/or right upper quadrant pain present on most days suggests acute on chronic cholecystitis
D. biliary colic attacks typically last 30 minutes to 2 hours
E. in acute cholecystitis there is usually severe ongoing pain with fever and systemic symptoms.

Question 7

If gallstones are found on ultrasound, but pain is atypical, which of the following is true:

A. a nuclear medicine biliary (HIDA) scan with a fatty meal challenge is the next step in investigation
B. if gallbladder function is normal on HIDA scan there is very little chance of improvement with surgery
C. if there is abnormal gallbladder function on HIDA scan there is a very good chance of improvement with surgery
D. many surgeons would perform UGIE before surgery
E. C and D.

Question 8

If ultrasound and UGIE are both unrevealing, which of the following is true:

A. a CT scan is not indicated if bowel pathology is suspected
B. a CT scan with IV and oral contrast is indicated
C. the small intestine may be investigated with a small bowel series and/or enteroscopy
D. if colonic pathology is suspected, colonoscopy is the next step
E. B, C and D.

Case 3 – Gwen Barclay

Gwen Barclay, aged 90 years, attends your practice for repeat prescription of her proton pump inhibitor (PPI) for GORD. You recall the new guidelines for management of H. pylori infection and wonder if she has been tested.

Question 9

In *H. pylori* infection, which of the following is correct:

A. incidence decreases with age
B. in Australia 10–15% of the population is infected
C. socioeconomic level is a major determinant of infection
D. in some indigenous communities prevalence is 2–3 times higher
E. C and D.

Question 10

In testing for *H. pylori* infection, which of the following is correct:

A. the diagnostic accuracy of serology is >95%
B. the urea breath test has a diagnostic accuracy of 80–84%
C. antibiotics should not be used for 4 weeks before a urea breath test
D. PPIs should be stopped 4 weeks before a diagnostic test
E. stool specimens for the stool antigen test must be kept at room temperature.

Question 11

You check Gwen's records and find that she had a positive *H. pylori* serology and histology on endoscopy and was treated with the preferred Hp7 regimen. In treatment of *H. pylori*, which of the following is false:

A. investigation of allergic reactions to penicillin is warranted
B. compliance is improved if the patient is prepared for common side effects
C. if a patient has previously been treated with clarithromycin for any reason, there is a higher risk of resistance
D. taking the medications with food impedes eradication
E. for a second eradication attempt 10–14 days of treatment is recommended.

Question 12

Gwen's follow up serology after eradication therapy is negative. Which of the following is correct:

A. she does not need re-testing as risk of re-infection is low
B. the negative predictive value of serology testing can be as low as 50%
C. there is level one evidence that *H. pylori* infection exacerbates GORD
D. routine testing for H. pylori is recommended in GORD
E. C and D.

Case 4 – Eric Lee

Eric Lee, aged 75 years, is brought to your rural practice by his concerned family. He is pale and distressed with abdominal pain, nausea and vomiting, which has been present for about 4 hours. He has hypertension, but is otherwise normally well.

Question 13

In your approach to Mr Lee, which is your first consideration:

A. he is in a high risk population for non abdominal causes of abdominal pain
B. the elderly more commonly present with atypical features of acute coronary syndrome (ACS)
C. particular attention must be paid to excluding ACS, as this is a time critical condition
D. assessment of cardiopulmonary stability and the need for resuscitation
E. take a comprehensive history of the patient's symptoms.

Question 14

In your further assessment, which of the following is false:

A. the trilogy of anorexia, nausea and vomiting suggests a primary GI cause
B. clinical response to antacids has been reported in ACS
C. exertional features in abdominal pain suggest ACS
D. epigastric pain associated with eating has been described in coronary artery disease
E. the sensitivity of initial ECG is only about 50% for detection of acute myocardial infarct.

Question 15

Regarding the neurological basis of abdominal pain which of the following is true:

A. visceral pain pathways are more numerous than autonomic
B. parietal pain is better characterised within the cerebral cortex than visceral pain
C. visceral organ innervation reflects the embryological origin of precursor cells
D. visceral and parietal pain pathways synapse with second order neurons in close proximity to each other
E. B, D and C.

Question 16

In the assessment of acute abdominal pain in general, which of the following is true:

A. in up to 40% of cases the cause of pain is never determined
B. history taking and examination findings poorly correlate the site of anatomical pain with the aetiology of the pain
C. deficiencies in obtaining and documenting patient's symptoms are the most common cause of misdiagnosis in malpractice cases involving acute abdominal pain
D. one-third of patients requiring surgery present with at least one atypical clinical feature
E. all of the above.

ANSWERS TO JULY CLINICAL CHALLENGE

Case 1 – Rebecca Smith

1. Answer E
It is essential to check available equipment and to try to obtain more history, but waiting until all clinical information is available may cause considerable delays in retrieval. Anticipate the need for retrieval and initiate contact early. The retrieval team can provide vital advice.

2. Answer C
Oxygen saturation in the right arm is indicative of the oxygen saturation of blood flowing to the brain before ductal entry into the descending aorta.

3. Answer C
Blood glucose should be assessed early and hypoglycaemia (<2 mmol/L) corrected with 2 mL/kg of intravenous (IV) 10% dextrose.

4. Answer C
Umbilical catheters must be properly secured to the abdomen without kinks in the tubing. Close monitoring is required as an accidental dislodgement can cause massive haemorrhaging.

Case 2 – Iris Ryding

5. Answer B
Palpitations are a sensitive, but not specific symptom of cardiac arrhythmia. They are usually of benign origin.

6. Answer D
The only high risk feature in Iris' history is her age.

7. Answer A
Second degree heart block has some P waves not followed by a QRS complex.

8. Answer B
Asymptomatic patients do not require treatment.

Case 3 – Vicki Rossi

9. Answer E.
Testing of intraocular pressure is only necessary if significant hyphaema is present.

10. Answer B
Vicki has mild blunt trauma injury to her right eye. The recommended action is dilated fundus examination and referral within 48 hours and/or speak to a tertiary referral centre for guidance.

11. Answer B
Slit lamp examination is not indicated in the immediate management of chemical injury to the eye. Twenty to thirty minutes of eye irrigation is the cornerstone of initial management.

12. Answer B
Class II ocular burns (Roper-Hall) show corneal haze and less than one-third limbal ischaemia with iris details visible.

Case 4 – Greg New

13. Answer E
In asystole or severe bradycardia consider atropine 20 µg/kg in a child.

14. Answer C
There are no contraindications to adrenaline in anaphylaxis other than known allergy.

15. Answer C
If there is no response to inhaled salbutamol, an IV bolus of 250 µg can be given in adults.

16. Answer C
For a child with severe asthma, give ipratropium using a 20 µg/dose MDI with a spacer. Give 2–4 puffs every 20 minutes in the first hour.

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Erratum

In the article 'Initial management of cardiac arrhythmias' by Jaycen Cruickshank (*AFP* July 2008), Table 1. Drug doses for treatment of arrhythmias, incorrectly stated the dosage for digoxin. The correct dosage is 1000 µg in 3–4 divided doses over 24 hours. The Editors apologise for any confusion this may have caused.