



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 multiple choice questions of the RACGP Fellowship exam. The quiz is endorsed by the RACGP Quality Improvement and Continuing Professional Development Program and has been allocated 4 Category 2 points per issue. Answers to this clinical challenge are available immediately following successful completion online at [www.gplearning.com.au](http://www.gplearning.com.au). Clinical challenge quizzes may be completed at any time throughout the 2011–13 triennium, therefore the previous months answers are not published.

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## 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

#### Alicia Moldovan

Alicia, 26 years of age, has been newly diagnosed with hepatitis C. She is 12 weeks pregnant.

#### Question 1

Which of the following is TRUE regarding acute hepatitis C:

- approximately 30% of patients with acute hepatitis C will progress to chronic infection
- intranasal illicit drug use populations have no higher risk of hepatitis C infection than population level risk
- patients with symptomatic acute hepatitis C are more likely to progress to chronic infection
- previous hepatitis C infection protects against future infection with the same genotype
- the presence of jaundice is associated with spontaneous clearance of hepatitis C.

#### Question 2

Regarding vertical transmission of hepatitis C, which statement is CORRECT:

- elective caesarean section reduces the risk of hepatitis C transmission
- hepatitis C in Australia is predominantly acquired via vertical transmission
- it is always safe for mothers with hepatitis C to breastfeed their infants
- maternal hepatitis C antibodies are present in infants for up to 6 months
- mother-to-baby hepatitis C transmission is estimated at 5–7%.

#### Question 3

Which of the following factors is associated with faster progression of chronic hepatitis C:

- age <16 years at acquisition of infection
- female gender
- marijuana use
- low body mass index
- persistent low grade fevers.

#### Question 4

Regarding the treatment of hepatitis C, which of the following statements is CORRECT:

- approximately 25% of hepatitis C patients in Australia are currently receiving treatment
- approximately 50% of hepatitis C patients should be considered for active treatment
- patients with poorly controlled substance abuse habits should not be referred for treatment
- patients with decompensated cirrhosis may potentially gain from viral eradication
- patients with HCV PCR negative 6 months after treatment cessation have been cured.

### Case 2

#### Peter Chu

Peter, 64 years of age and a non-drinker, has persistently abnormal liver function tests (LFTs) on routine bloods.

#### Question 5

In the setting of abnormal LFTs, which of the following investigations is LEAST useful in evaluating differential diagnoses:

- anti-smooth muscle antibody
- coeliac antibodies

- fasting lipids
- iron studies
- thyroid function tests.

#### Question 6

Regarding the diagnosis of non-alcoholic fatty liver disease (NAFLD) and non-alcoholic steato-hepatitis (NASH), which of the following is most accurate:

- diagnosis of NAFLD requires evidence of liver fatty infiltration on liver biopsy results
- medications such as synthetic oestrogens may be an alternative cause of hepatic steatosis
- NASH is more likely in patient populations in Australia aged more than 40 years
- NASH is more likely where ALT is elevated more than four times the upper limits of normal
- ultrasound for detection of NAFLD has a sensitivity of 97% and specificity of 65%.

#### Question 7

Which of the following statements is TRUE regarding NAFLD:

- hepatocellular carcinoma may develop in patients with NASH without cirrhosis
- metformin is recommended in the specific treatment of NAFLD
- NAFLD in association with metabolic syndrome is associated with slightly increased mortality
- NASH is more likely in the presence of positive family history and moderate alcohol intake
- simple steatosis is not associated with the development of NASH.

#### Question 8

Which of the following investigations would exclude the presence of cirrhosis:

- normal albumin
- normal platelets
- normal ultrasound

- D. normal LFTs
- E. none of the above.

**Case 3**  
**Amala Shah**

Amala, 56 years of age, presents with abdominal pains typical of biliary colic. Abdominal ultrasound reveals gallstones and a single polyp attached to the gallbladder wall.

**Question 9**

Which of the following scenarios is the most concerning:

- A. polyps larger than 5 mm in patients with inflammatory bowel disease
- B. polyps detected in younger patients
- C. polyps detected in patients without gallstones
- D. polyps with a narrow base
- E. polyps larger than 2 mm in patients with primary sclerosing cholangitis.

**Question 10**

In which of the following scenarios would cholecystectomy NOT be considered reasonable:

- A. asymptomatic gallstones undergoing other abdominal surgery
- B. asymptomatic gallstones detected in diabetic patients
- C. calcification in the gallbladder wall detected on ultrasound
- D. gallbladder wall polyps larger than 10 mm
- E. chronic acalculous cholecystitis with typical biliary pain with sludge found on ultrasound.

**Question 11**

Amala is reluctant to undergo cholecystectomy, as her mother suffered with ongoing pain post-cholecystectomy. Which of the following is CORRECT regarding complications associated with cholecystectomy:

- A. biliary dyskinesia, or spasm of the sphincter of Oddi, commonly occurs within the first week after cholecystectomy
- B. bile leak occurs in 1–2% of patients undergoing laparoscopic cholecystectomy
- C. conversion from elective laparoscopic to open cholecystectomy occurs in 10% of patients
- D. post-cholecystectomy pain may be caused by bile leak, usually about 3–4 weeks after surgery

- E. studies suggest an incidence of 1–5% of diarrhoea developing post-cholecystectomy.

**Question 12**

Amala decides to proceed with cholecystectomy and sees you 4 weeks post-operatively. She complains of new onset loose stools. At this stage, which of the following would be the most appropriate management:

- A. advise Amala to decrease her fibre intake and review her in 4 weeks
- B. advise Amala to increase her monounsaturated fat intake and review in 4 weeks
- C. refer Amala for early gastroenterology assessment
- D. refer Amala for consideration of bile acid therapy
- E. review in 2 weeks and advise that loose stools usually resolve completely within 6 weeks.

**Case 4**  
**Bradley Larson**

Bradley, 39 years of age, has hepatitis B and hasn't attended your clinic for 2 years. Liver ultrasound and other initial investigations performed 2 years ago were unremarkable. Liver biopsy has not been performed.

**Question 13**

Regarding hepatitis B, which of the following statements is CORRECT:

- A. healthy hepatitis B carriers maintain a low hepatitis B viral load and normal LFTs
- B. hepatitis B is estimated to affect approximately 1% of the Australian population
- C. if not appropriately managed, 35–40% of patients with hepatitis B develop liver disease
- D. most patients diagnosed with primary liver cancer survive between 1 and 5 years after diagnosis
- E. two-thirds of Australians with hepatitis B currently remain undiagnosed.

**Question 14**

Which set of further investigations is most appropriate to determine the phase of hepatitis B infection:

- A. LFT, HBV viral load and liver ultrasound
- B. LFT, HBV viral load, FBE, INR and non-invasive testing for fibrosis
- C. LFT, HBV viral load, HBsAg, anti-HBc and

anti-HBs

- D. LFT, HBV viral load and liver biopsy
- E. LFT, HBV viral load, HBeAg and anti-HBe.

**Question 15**

Which one of the following patient groups with hepatitis B is recommended for 6 monthly surveillance liver ultrasounds:

- A. African females aged over 10 years
- B. Asian men aged over 30 years
- C. family history of hepatocellular cancer
- D. intravenous drug users
- E. patients with two or more episodes of jaundice per year.

**Question 16**

Regarding the treatment of hepatitis B, which of the following is TRUE:

- A. determining the phase of hepatitis B infection is used to make decisions regarding treatment
- B. evidence shows that 4 years of treatment can decrease the risk of liver cancer by 25%
- C. first-line oral treatments have good efficacy but cause significant lethargy and nausea
- D. liver biopsy results demonstrating fibrosis is required for PBS eligibility for treatment
- E. response to treatment is monitored by hepatitis B viral load, albumin, platelets and INR.