



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 clinical challenge is endorsed by the RACGP Quality Improvement and Continuing Professional Development (QI&CPD) program and has been allocated 4 Category 2 points. Answers to this clinical challenge are available immediately following successful completion online at 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.

Melissa Tan

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

Anne Beaumont

Anne, 39 years of age, has fibromyalgia.

Question 1

Which of the following statements is most consistent with the current medical understanding of fibromyalgia:

- A. fibromyalgia is associated with increased 24-hour urinary free cortisol levels
- B. fibromyalgia symptoms are unrelated to psychological stressors
- C. key symptoms include cognitive disturbances such as memory and concentration problems
- D. patients with fibromyalgia have abnormal sleep cycles and do not achieve REM sleep
- E. there is commonly an exaggerated cortisol response to dynamic testing.

Question 2

Which one of the following statements regarding the management of fibromyalgia is most CORRECT:

- A. a randomised controlled trial found improved sleep cycles with mindfulness interventions
- B. anaerobic exercise in particular helps to reduce pain and fatigue symptoms
- C. hydrotherapy may be helpful as the relative weightlessness helps to relieve symptoms
- D. stress management can improve self-efficacy but does not affect physical function

- E. there are large studies supporting the efficacy of yoga and tai-chi in fibromyalgia.

Question 3

Regarding the use of analgesia in fibromyalgia, which one of the following statements is most CORRECT:

- A. combined paracetamol and tramadol has been shown to improve pain
- B. fibromyalgia patients have increased opioid receptor availability
- C. several trials have demonstrated the efficacy of paracetamol as a sole agent
- D. the use of NSAIDs is supported by significant research evidence
- E. there is good evidence for the efficacy of several opioids in fibromyalgia.

Question 4

Regarding the use of pharmacotherapy in fibromyalgia, which of the following statements is most CORRECT:

- A. duloxetine improves pain control but does not improve other fibromyalgia symptoms
- B. low-dose tricyclic antidepressants improve mood thereby improving pain control
- C. meta-analysis found gabapentin to have an equivocal effect on pain management
- D. pregabalin has not been demonstrated to impact upon quality of life or sleep
- E. pregabalin has been shown to reduce pain and reduce calcium influx into sensitised spinal cord neurons.

Case 2

Amelia Golding

Amelia, 38 years of age, has systemic lupus erythematosus (SLE).

Question 5

In Australia, which of the following populations has the highest prevalence of SLE:

- A. Indigenous Australian populations
- B. Mediterranean populations
- C. Middle Eastern populations
- D. Northern Asian populations
- E. Sub-Saharan African populations.

Question 6

Which of the following statements is most CORRECT regarding SLE:

- A. 70–80% of patients have intermittent arthritis with prominent joint swelling
- B. lupus nephritis is a rare complication of SLE, occurring in <5% of patients
- C. most patients with SLE will not experience symptoms of fever and weight loss
- D. patients with SLE are at significantly higher risk of premature atherosclerosis
- E. SLE can present with potentially life-threatening hepatic or splenic complications.

Question 7

Regarding the interpretation of antinuclear antibodies (ANA) in SLE, which of the following statements is CORRECT:

- A. anticentromere pattern ANA is characteristic of SLE
- B. ANA titres greater than 1:320 are clinically significant
- C. ANA titres are stable and do not fluctuate over time
- D. approximately 65% of patients with SLE have a positive ANA
- E. homogenous and speckled pattern ANA are not commonly found in SLE.

Question 8

Which one of the following is TRUE, regarding immunological manifestations of SLE:

- A. anticardiolipin antibodies are part of the SLE classification criteria
- B. antiphospholipid antibodies are highly specific for SLE
- C. complement levels are no longer used to gauge disease activity
- D. increases in antibodies to double-stranded DNA may signify disease flare
- E. serum complement levels may be increased due to formation of immune complexes.

Case 3

Hank Wegner

Hank, 67 years of age, is newly diagnosed with multiple myeloma (MM).

Question 9

Which of the following manifestations is most commonly found in patients with newly diagnosed MM:

- A. anaemia
- B. hypercalcaemia
- C. hyperviscosity
- D. lytic bone lesions
- E. renal impairment.

Question 10

Regarding clinical presentation of MM, which of the following statements is CORRECT:

- A. anaemia in MM is typically macrocytic in nature
- B. patients may present with vertigo and visual changes due to hyperviscosity
- C. recurrent bacterial infections are common in patients with MM
- D. renal impairment due to light chain deposition often presents with uraemia
- E. renal impairment due to hypercalcaemia often presents with oliguria.

Question 11

Regarding prognosis of MM, which of the following statements is CORRECT:

- A. stage I disease has a median survival of approximately 120 months
- B. stage I disease is defined as a β 2-microglobulin of $<3.5\text{mg/L}$ and serum albumin $>35\text{g/L}$
- C. stage II disease has a median survival of approximately 90 months
- D. stage III disease has a median survival of approximately 60 months

- E. stage III disease includes patients with β 2-microglobulin $>12.5\text{mg/L}$.

Question 12

Which of the following statements is CORRECT regarding the management of MM:

- A. bisphosphonates have not been shown to improve pain or pathological fracture rates
- B. following transplant, maintenance treatment should be maintained for a 5-year period
- C. monthly intravenous zoledronic acid has been reported to improve overall survival
- D. patients <75 years of age with few comorbidities should receive autologous stem cell transplant
- E. patients ineligible for transplant should receive maintenance treatment following induction

Case 4

Mary Ryu

Mary, 47 years of age, presents with a clinical picture suggestive of multiple myeloma (MM). Differential diagnoses include monoclonal gammopathy of undetermined significance (MGUS) and smouldering myeloma.

Question 13

You order serum electrophoresis and immunofixation with a serum free light chain analysis. What is the approximate diagnostic sensitivity of these three investigations combined for MM:

- A. $\leq 60\%$
- B. 61–70%
- C. 71–80%
- D. 81–90%
- E. $>95\%$

Question 14

Regarding the investigation of MM and MGUS, which of the following statements is CORRECT:

- A. bone marrow biopsy is the only investigation required for confirmed diagnosis of MM
- B. immunofixation is useful to establish the presence of a monoclonal band
- C. serum electrophoresis increases diagnostic sensitivity and determines paraprotein type
- D. serum free light chain analysis is used for prognosis and not for diagnostic purposes
- E. presence of abnormal serum free light chains in MGUS can determine the risk of transformation to MM.

Question 15

In distinguishing MM from MGUS or smouldering myeloma, which of the following statements is CORRECT:

- A. MGUS has a serum paraprotein $>30\text{g/L}$
- B. MGUS may involve end organ damage
- C. smouldering myeloma has a serum paraprotein $<30\text{g/L}$
- D. smouldering myeloma involves mild end organ damage
- E. smouldering myeloma will be asymptomatic.

Question 16

Regarding MGUS and smouldering myeloma, which of the following statements is CORRECT:

- A. Australian guidelines recommend routine three-monthly monitoring of MGUS
- B. cohort studies indicate MGUS has a risk of 10% per year of progressing to MM
- C. paraprotein type helps to determine the risk of transformation from MGUS to MM
- D. smouldering myeloma has a risk of 30% per year of progressing to MM
- E. smouldering myeloma should initially be treated with high dose pulsed steroids.