



Clinical challenge

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.

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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 – Amanda Cooke

Amanda, aged 32 years, is a primary school teacher. She is eight weeks pregnant and presents for advice as a child in her class has had 'slapped cheek disease'.

Question 1

You tell Amanda that erythema infectiosum (IE) is highly infectious and

- A. the risk of infection for teachers exposed to IE at school is about 20–30%
- B. the risk if exposed to an infected child at home is about 20–30%
- C. the overall risk to a seronegative pregnant woman is less than 5%
- D. patients are most infectious when the facial rash is present
- E. affected children should be excluded from school for 14 days.

Question 2

You advise Amanda

- A. she should stay away from work for at least 21 days
- B. she should have serology to see if she is at risk
- C. if she is seronegative, she should not work in the classroom until 20 weeks gestation
- D. blood tests are of no value because there is no treatment for IE

- E. all pregnant women should have screening for IE.

Question 3

Four weeks later Amanda presents with a maculopapular rash on her trunk and joint pains. You perform IE serology and PCR. Choose the correct response.

- A. positive IgG indicates recent infection
- B. IgM positive and IgG negative indicates possible recent infection
- C. IgG positive and IgM negative indicates recent infection
- D. IgM positive and IgG positive indicates previous resolved infection
- E. IgG is detectable within 1–3 weeks after exposure and remains detectable for about three months.

Question 4

Amanda has positive serology for current IE infection. Choose the incorrect statement.

- A. 3% of fetuses of infected women develop hydrops
- B. 50% of fetuses are unaffected
- C. there is 10% more fetal loss in the first 20 weeks than for unaffected women
- D. specialist follow up and serial ultrasounds would be appropriate
- E. IE causes fetal abnormalities in 10% of maternal infections.

Case 2 – Suzie Platts

Suzie, aged 8 years, is brought in by her mother, Sandra. Sandra is horrified as Suzie has come home from school with a note saying she has nits and must be treated before return to school.

Question 1

Which statement is correct with respect to head lice?

- A. children with dirty hair get head lice
- B. children with head lice always have itchy heads
- C. transmission occurs through head-to-head contact
- D. lice can jump from one child to another
- E. head lice are usually found more than 1 cm from the scalp.

Question 2

You discuss management of head lice with Sandra. You tell her:

- A. all members of the family should be treated
- B. lice and nits are best detected using a 'wet combing' technique with conditioner
- C. the stronger topical pediculocides can be used as a once only application
- D. all bedding should be changed and washed on hot cycle
- E. all of the above.

After a few weeks Sandra and Suzie return. Sandra is feeling very frustrated as treatment of Suzie's head lice has failed.

Question 3

Reasons for apparent treatment failure of head lice include:

- A. inadequate application
- B. resistance of the lice to the pediculocide
- C. not re-treating after 7–10 days

- D. re-infection
- E. all of the above.

Question 4

Suzie has used 'Banlice' and 'Lyban foam'. You suggest (choose the best response):

- A. a pyrethrin product
- B. using a herbal product to prevent re-infestation
- C. re-treating everyone in the family and disinfecting all bedding
- D. treating with a synthetic pyrethroid pediculicide as a one-off treatment
- E. treating with an organophosphate pediculicide and repeating treatment in 7–10 days.

Case 3 – Helen Jones

Helen brings her four year old daughter, Mollie, to see you. Mollie developed blisters on her trunk today and Helen suspects chicken pox.

Question 1

Choose the correct response:

- A. the incubation period for varicella is 5–7 days
- B. Mollie is no longer contagious now the vesicles are out
- C. Mollie will be infectious for 10–14 days from now as further crops of vesicles develop
- D. Mollie was contagious for 1–2 days before the rash appeared and will be for about five more days
- E. varicella is generally a more severe illness in children than adults.

Question 2

Helen has a younger child, Sam aged 2 years. She asks you about immunisation for him. You tell her:

- A. varicella vaccine postexposure can be effective if given up to five days after exposure
- B. Sam should not be vaccinated for three weeks in case he is incubating chicken pox
- C. postexposure vaccination is not effective
- D. Sam is eligible for vaccination as part

of the revised funded routine immunisation schedule

- E. Sam would require two doses of vaccine 1–2 months apart.

Question 3

Helen is 14 weeks pregnant. She doesn't recall having chicken pox as a child. Choose the correct response.

- A. maternal varicella does not cause fetal abnormalities after the first trimester
- B. testing for varicella zoster antibodies is not indicated
- C. Helen should be offered zoster immune globulin (ZIG) if not immune
- D. congenital varicella syndrome most frequently causes hydrops
- E. Helen should not have ZIG if her immune status cannot be determined.

Question 4

Helen's elderly mother lives with her. Helen is concerned that her mother may develop shingles from exposure to Mollie. You tell Helen:

- A. herpes zoster occurs when exposed to varicella over the age of 50 years
- B. herpes zoster is not contagious
- C. Mollie is likely to give her grandmother shingles
- D. exposure to chicken pox as an adult may delay the onset of shingles
- E. Mollie could not give her grandmother chicken pox.

Case 4 – Matthew Jacobs

Matthew, aged 19 years, comes to see you and is quite distressed. His 20 year old flat mate was admitted to hospital last night with meningococcal meningitis. Matthew has not been immunised.

Question 1

Matthew asks you if he is at risk of contracting meningitis. You tell him that as a household contact he may have been exposed to the *Neisseria meningitidis* organism. Many people carry the organism in their nasopharynx without becoming ill. Factors which increase the likelihood of invasive disease include all except:

- A. strains which produce IgA protease
- B. lack of polysaccharide capsule
- C. overcrowding
- D. smoking
- E. recent respiratory infection.

Question 2

You discuss chemoprophylaxis with Matthew. Choose the correct response.

- A. chemoprophylaxis is not indicated for Matthew
- B. chemoprophylaxis should be commenced within five days of exposure
- C. rifampicin 600 mg orally twice per day for two days is suitable prophylaxis
- D. ceftriaxone and ciprofloxacin are less effective than rifampicin
- E. none of the above.

Question 3

Matthew's friend is in intensive care. He asks about the possible outcomes. In invasive meningococcal disease:

- A. the case fatality rate in Australia is 40%
- B. the fatality rate is higher with meningitis than meningococcaemia
- C. neurological sequelae are common in survivors
- D. loss of extremities may occur in survivors
- E. all of the above.

Question 4

Matthew had heard about immunisation against meningitis but had not got around to doing anything about it. He is now, understandably, keen on being vaccinated. You advise Matthew that meningococcal C conjugate vaccine

- A. causes mild local reaction in 10% of vaccinees
- B. will prevent him getting meningococcal meningitis
- C. will cover him if he travels to high risk areas overseas
- D. gives short lived immunity for 2–3 years
- E. covers the most common type of meningococcal meningitis in Australia.