

A no-rash diagnosis (answers on page 51)

Part one

Oliver, a 4-year-old boy living in Malawi, was brought to the clinic by his mother. He had been constantly unwell over the previous 9 days with fever, a chesty cough, tenderness in the armpits and neck, a sore throat, and sore red eyes. His mother said that he had had no previous health worries, and she could not think of anything that might have initiated his illness. He had been playing normally with the other children in his village up to the onset of his illness. On examination he had a temperature of 39.5° C, a heart rate of 110 beats per minute, his respiratory rate was 22 breaths per minute, and he had fine crackles throughout his chest on inspiration and expiration. There was no rash.

Q1 What other aspects of Oliver's physical examination are pointers to, or rule out, your suspected diagnosis?

- (a) The appearance of the inside of his mouth.
- (b) Is there general lymph node swelling and tenderness?
- (c) Can you feel his spleen?
- (d) The absence of a rash.
- (e) The lack of variation in his fever and discomfort.

Part two

Q2 The mucous membranes inside Oliver's cheeks are covered with white patches that vary in size, some of which have coalesced. You accept them as a definitive sign of his illness. What do you know about it? Which of the following statements are correct?

- (a) In 2010 it had been eliminated from the Americas: North, South, and Central.
- (b) Deaths from this disease worldwide fell from millions each year to 164 000 in 2008, most of them in sub-Saharan Africa.
- (c) From 2009 to 2010 cases and deaths have dropped significantly in Africa.
- (d) The World Health Organization has predicted that it will be eradicated by 2015 if the progress against it is maintained.
- (e) If 70% of children in any community are vaccinated against it, it will die out.

In the 2 days after his first visit to the clinic, Oliver's symptoms worsened: he felt more ill, his fever and cough persisted, his throat became much more sore, his conjunctivitis intensified. However, he remained alert and fully responsive to his care.

Part three

Q3 Which of the following treatments would be likely to help him?

- (a) Vitamin A. (b) Interferon. (c) Ribavirin.
- (d) A broad spectrum antibiotic. (e) Antimalarials.

On the third day, an erythematous, maculopapular rash appeared. It started on his face and behind his ears, then spread downwards across his torso and limbs. It coincided with Oliver feeling much better, and from then onwards he improved. The rash persisted for 5 days, then disappeared. Everyone was relieved that Oliver had got away with his illness so lightly.

Part four

Q4 Which of the following statements are true about this disease?

- (a) Forty per cent of sufferers from it develop complications.
- (b) Fatalities are commonest in babies and very young children.
- (c) In older people it is usually a very mild illness.
- (d) Most deaths are caused by meningitis.
- (e) Long-term complications include blindness.

Part five

Q5 There is a worldwide drive to eradicate this disease by vaccination. What are the facts about the efficacy of the modern vaccines?

- (a) It should be given as early as feasible to protect very young children.
- (b) One dose is enough.
- (c) Given at the age of 9 months the vaccination offers 85% protection against the illness; this rises to 95% when given at 12 months.
- (d) Given correctly the vaccine-derived immunity lasts several decades.
- (e) As this disease has no host other than humans, it could be eradicated completely by an effective worldwide vaccination system.