A mixed medical bag (answers on page 41)

Part one

Henry, aged 16, has been complaining of stomach pains 'on and off' for several years. The pain is always central, around the navel, and usually arises 'out of the blue' unrelated to eating, defaecation or micturition. Until the last few months, he was otherwise well, but recently he has felt tired and listless. His mother had put down his tiredness to 'growing too fast' as he had grown four inches in the previous year, but when he also began to be breathless on fairly mild exertion, she became alarmed and brought him to see us.

Of course, Henry had no pain at the surgery visit. His heart and lungs sounded normal. His abdomen was soft, without masses, although he was perhaps a little tender around the umbilicus. His heart rate at rest was 95 beats per minute and blood pressure 110/70 mmHg. A fingerprick blood sample revealed a haemoglobin of 7.9 g/dl. His blood film revealed a reticulocytosis of 10%, and his mature red cells were poorly stained. His white cell count was within the normal range: there was no eosinophilia or basophilia, and platelet count was normal. Dr Ndebe asked for a stool sample, which Henry eventually, embarrassed, provided. It was of normal colour but did test positive for occult blood. Henry had never noticed blood in his stools nor had he had black stools.

Q1 Given these facts so far which of the following statements reflect Dr Ndebe's thinking about Henry's symptoms and anaemia?

- **(a) Microscopic bleeding is unlikely to produce an anaemia as severe as this. He must look for another cause for it.**
- **(b) A parasitic bowel infestation is the probable cause, especially in Africa.**
- **(c) Peptic ulcer must be ruled out as the most likely cause.**
- **(d) These symptoms exactly fit with Meckel's diverticulum, which is the most common congenital defect in the gastrointestinal tract. He probably needs surgery.**
- **(e) Iron deficiency like this may well have a dietary cause – his mother needs to be interviewed about what he eats and how to correct possible vitamin and mineral deficiencies.**

Henry's problem was quickly solved, but how would you approach the further clinical problems described below?

Part two

Omar was a normal baby at delivery, and grew and behaved normally until he was 8 months old. He then developed symmetrical swellings of his toes and fingers in all four limbs. They were obviously painful, as they caused him much distress.

Q2 How would you proceed with his investigations?

- **(a) Examine a blood film for parasites.**
- **(b) Check his white cell count and appearance.**
- **(c) Check his haemoglobin.**
- **(d) Examine a blood film for abnormal red cells.**
- **(e) Ask his parents if there is a family history of blood disorders.**

Part three

Arthur is a 47-year-old British ex-pat living in the city, holding down a responsible job. He is concerned because he feels slightly sick most mornings, and has noticed a rash on his chest and face. The spots have a solid red centre with branches like an asterisk spreading out from it. Pressure with a pencil point on the centre causes the branches to blanch.

Q3 What are your immediate actions?

- **(a) Take an alcohol history.**
- **(b) Consider liver disease.**
- **(c) Measure his haemoglobin level.**
- **(d) Look at red cell form and size.**
- **(e) Examine his abdomen.**

Part four

Arthur's haemoglobin is 10.5 g/dl. He has a macrocytosis, his red cells varying widely in size and shape. His gamma-glutamyl transferase (GT level) is 550 units/l. He says that he drinks 'only socially' – no more than two drinks a day.

Q4 How do you proceed with him?

- **(a) Everything points to alcohol abuse, and no other cause, as his problem.**
- **(b) You must rule out pernicious anaemia or folic acid anaemia.**
- **(c) You must still rule out a gastrointestinal lesion as a cause.**
- **(d) He must abstain from alcohol and return in 2 weeks to re-check his test results.**
- **(e) In the meantime you can prescribe iron and multivitamins as the start of treatment.**