A 54-year-old woman presented with fever, joint pain and a diffuse macular rash on her trunk. Her symptoms started four days previously, while on a flight back from a holiday in the Caribbean, when she noted fever and loss of appetite, followed by joint pain. The rash occurred within the preceding 24 hours. Musculoskeletal examination revealed synovitis of the proximal small joints in both hands, as well as bilateral tenderness on squeezing across the metatarsophalangeal joints.

What is the most likely diagnosis?

(a) chikungunya fever
(b) dengue fever
(c) malaria
(d) pseudogout
(e) rheumatoid arthritis
Plasmodium falciparum malaria is not a cause.

Plasmodium vivax can cause a low-grade fever for several months and may be missed on blood film.

Visceral leishmaniasis should be suspected if a skin ulcer is present in a traveller to South America.

7 Which of the following statements is true regarding the inherited systemic autoinflammatory diseases?

(a) associated with a family history of similar symptoms in >50% of cases
(b) often associated with predisposition to minor infections
(c) usually associated with symptom onset in childhood
(d) usually diagnosed by the characteristics of their rash
(e) usually excluded by a normal FBC and CRP

8 A 16-year-old girl presented to her GP with a history of ten episodes of severe central abdominal pain over the last two years, all associated with menstruation. She described two days of feeling feverish and being bed bound with abdominal pain. She had a normal appendix removed at the age of 8. She was of Greek Cypriot ancestry and had no relevant family history.

Which of the following statements are correct?

(a) a diagnosis of FMF would be supported by finding mutations in MEFV
(b) her family should be counselled that her siblings and any future children have a 50% chance of inheriting the disease
(c) most likely diagnosis is TRAPS
(d) she should be administered prednisolone to terminate each episode of abdominal pain
(e) she should be prescribed long-term colchicine treatment but counselled that this may be teratogenic

9 A 72-year-old woman with renal cell carcinoma presented with fever. After appropriate investigation, a short course of naproxen caused the fever to promptly subside.

This suggests the cause of her fever was attributable to which of the following?

(a) drug reaction
(b) the underlying malignancy
(c) infection
(d) thrombosis
(e) transfusion reaction

10 An 18-year-old man presented with persistent fevers, cytopenias and hepatosplenomegaly. FBC showed pancytopenia. The patient had hepatitis and ferritin was markedly raised at 38,000.

What diagnosis should be considered?

(a) Castleman’s disease
(b) haemophagocytic lymphohistiocytosis (HLH)
(c) Hodgkin’s lymphoma
(d) infection
(e) metastatic renal cell carcinoma