FEVER IN THE RETURNING TRAVELLER

RECOGNITION AND ASSESSMENT

Initial assessment is aimed primarily at early detection and treatment of falciparum malaria, which can be rapidly fatal.
10% of patients with falciparum malaria are afebrile at presentation

Symptoms and signs

- Temperature >37.5°C in patient presenting after recent overseas travel (e.g. malaria occurring 6 months after travel)
- Rigors or night sweats imply fever, myalgia or arthralgia do not
- Diarrhoea is non-specific and consistent with malaria, pneumonia or enteric pathogen

DETAILED TRAVEL HISTORY

- **Where?** – country and specific locations (e.g. city vs. rural)
- **Why?** – business, holiday, visiting relatives
- **Accommodation?** (e.g. 5 star hotel vs. camping, air conditioning?)
- **When?** – dates of departure and return and their relation to onset of symptoms
- viral haemorrhagic fevers can be excluded if onset of symptoms >21 days after leaving endemic area – see www.hpa.org.uk/webw/HPAweb&page&HPAwebAutoListName/Page/1190280169369
- Symptoms of falciparum malaria take at least 8 days to manifest after arrival in endemic area. Symptoms usually occur within 2 months of exposure, but may not present for up to 6 months
- **What?** – risk activities
    1. sexual history – HIV
    2. swimming in fresh water – schistosomiasis (Africa) or leptospirosis (eastern Europe, Asia and South America)
    3. tick bites – rickettsial disease (North and South America, sub-Saharan Africa, coastal Mediterranean)
    4. animal/bird contact – avian influenza
    5. sickness occurring in fellow travellers: what? when?

Pre-travel history

- Pre-travel immunizations, antimalarials and adherence to them
- Any previous medical history, specifically conditions/treatments that can induce immunosuppression

EXAMINATION

- Confirm presence of fever
- Look for:
- tick bites – rickettsial infection
- lymphadenopathy – HIV seroconversion, dengue, rickettsial and glandular fever
- confusion, drowsiness, shock or jaundice – cerebral malaria
- rash – dengue fever or typhoid

INVESTIGATIONS

- FBC, Clotting Profile.
- U&E, LFT, CRP.

- Malaria film (extra EDTA sample to haematology) if visited endemic area (Africa, Asia, central and South America, Pacific islands). May require more than one film for diagnosis (see below).
- Blood and urine cultures
- CXR
- If amoebic abscess suspected (right upper quadrant pain, abnormal LFT, persistent fever, signs at right lung base) – ultrasound scan of abdomen

Thrombocytopenia present in >75% patients with falciparum malaria, but also seen in dengue and other infections
Neutrophilia suggests bacterial infection and eosinophilia may suggest parasitic infection

MANAGEMENT

- Unless minor upper respiratory tract infection apparent, admit for assessment and exclude falciparum malaria in those who have travelled to endemic areas. Three negative films taken 12-24 hr apart are required to exclude malaria
- Contact infectious diseases team early 2299, or via call centre
- If avian influenza or haemorrhagic fever suspected at time of GP referral or on admission out of hours, contact microbiologist on call.
- if avian influenza suspected refer to guideline - http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1204100451828
- If malaria confirmed, follow British Infection Society guidelines http://www.britishinfectionsociety.org/drupal/sites/default/files/malariatreatmentBIS07.pdf
- If malaria identified but doubt about type, treat as falciparum especially if patient has returned from a falciparum endemic area
- If Gram-negative bacilli grown in blood of patient returning from a typhoid endemic area (e.g. Indian sub-continent), give ceftriaxone 2 g IV by infusion daily; do not use ciprofloxacin as many strains of *Salmonella typhi* are resistant
- Resistance patterns among pathogens vary according to locality (e.g. pneumococcal penicillin resistance in Spain)
- If patient displays features of sepsis/severe sepsis, seek immediate advice from senior colleague and ITU – see **Sepsis, severe sepsis and septic shock** guideline