INFECTIONS IN CHILDREN RETURNING FROM ABROAD

The investigation and management of children returning from abroad with an infection depends upon their symptoms and where they have been. Remember that many children with a fever who have been abroad do not have a tropical infection, so look for UTI, URTI etc. Infections likely to be imported include:

EVERYWHERE SOUTH OR EAST OF DOVER
Traveller’s diarrhoea (causes include enteropathogenic E coli, shigella, salmonella, campylobacter, rotavirus, giardia, amoebae and cryptosporidium)

NORTH AFRICA
Hepatitis A, typhoid, schistosomiasis

SUB-SAHARAN AFRICA
Malaria, hepatitis A and B, typhoid, cholera, polio, rabies, schistosomiasis, HIV, yellow fever, African trypanosomiasis, leishmaniasis and haemorrhagic fevers (Ebola, Lassa etc)

CENTRAL AND SOUTH AMERICA
Malaria, hepatitis A and B, typhoid, arthropod-borne diseases (eg dengue, typhus, Japanese B encephalitis)

SOUTH ASIA
Malaria, typhoid, cholera, hepatitis A and B, TB, helminthic infections, arthropod-borne diseases (eg dengue, typhus, Japanese B encephalitis)

Clinical features
1) Where exactly did they travel - urban or rural?
2) When exactly did they depart and arrive in the UK (see incubation period)?
3) Ask in detail about immunisations before travel and anti malarial prophylaxis

Incubation period is important:
Short - <10 days
Dengue, paratyphoid, typhus, malaria.

Medium - 10-21 days
Malaria (falciparum 7-40 days, vivax/ovale years). typhoid (3-60 days), typhus, African trypanosomiasis, brucellosis, leptospirosis.

Long - >21 days
Malaria, typhoid, viral hepatitis, malaria, TB, amoebic liver abscess, leishmaniasis, filariasis, schistosomiasis.

Examination findings
Rash: Dengue, typhoid, typhus, brucellosis
Jaundice: Hepatitis, malaria, yellow fever, leptospirosis, relapsing fever
Lymphadenopathy: Rickettsial infections, brucellosis, dengue, HIV, visceral leishmaniasis
Hepatomegaly: Amoebiasis, malaria, typhoid, hepatitis, leptospirosis
Splenomegaly: Malaria, typhoid, brucellosis, visceral leishmaniasis, dengue
Investigations
In patients with fever, first-line investigations:
- FBC, CRP
- Thick and thin film for malarial parasites x 3. Repeat if negative and malaria suspected
- U+E, LFTs
- Blood culture
- Urine culture
- Stool culture asking on the form for OCP as well as MC&S and give travel history.
- CXR
- Dengue serology and save acute serum

The FBC is very useful. A high neutrophil count is seen in septicaemia, amoebic liver abscess, leptospirosis and relapsing fever. A low neutrophil count is seen in viral infections, typhoid, brucellosis, visceral leishmaniasis and miliary TB. Thrombocytopenia = malaria. Eosinophilia = worms (or schistosomiasis)

Second-line investigations:
- Mantoux and Elispot for TB
- Serology for HAV, HBV, typhoid and arthropod-borne diseases

SPECIFIC INFECTIONS

TYPHOID AND PARATYPHOID
Transmitted by contaminated food and water – Salmonella typhi and paratyphi.
Symptoms: Fever, malaise, headache, non-productive cough are classically followed by constipation and then diarrhoea. Young children often have diarrhoea all the time. High rate of septicaemia (typhoid) in children < 5.
Examination: hepatosplenomegaly, rarely abdominal rose spots and relative bradycardia
Complications: Intestinal perforation may occur - watch for distension or bleeding; cholecysitis, pancreatitis, myocarditis
Treatment: Ceftriaxone 80 mg/kg iv daily. Fever usually takes several days to defervesce. Can change to ciprofloxacin to finish 14 day course if defervesces and organism sensitive.

TRAVELLER'S DIARRHOEA
If the patient is >10% dehydrated admit for IV fluids. Treat with antibiotics only if the following organisms are isolated:
- Shigella, enteropathogenic E.coli – amoxycillin if sensitive
- Campylobacter – erythromycin/azithromycin
- Giardia, amoebiasis - metronidazole

HAV, HBV – see earlier chapters

ARTHROPOD-BORNE DISEASES
Transmitted by insect bites.
DENGUE
Examination: Macular papular rash on days 3-6. Then petechiae, lymphadenopathy and leucopenia
Complications: rarely haemorrhagic manifestations especially on second infection
Treatment: symptomatic

LEISHMANIASIS
May be visceral (fever, weight loss, anaemia, lymphadenopathy, hepatosplenomegaly) or cutaneous (a red nodule at the site of a sand fly bite).

TYPHUS
Characterised by high fever with rigors and malaise. There is a maculopapular rash which typically spreads to the axillae. Other arbovirus infections may present as encephalitis (eg Japanese B), or haemorrhagic fever (eg. yellow fever).