ABC of Healthy Travel

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INFECTIONS ON RETURN FROM ABROAD—II

Jaundice

The two commonest infective causes of jaundice in the returning traveller are viral hepatitis and malaria. Haemolysis due to *falciparum malaria* must be excluded first because of the need for urgent treatment. Both hepatitis A and B are normally afebrile illnesses once jaundice has appeared and can therefore be distinguished clinically from malaria.

The severity of an acute hepatitis A or B infection is related to age, with children usually getting milder illnesses. Despite the high carriage rates of hepatitis B surface antigen in some tropical countries, hepatitis B usually affects only those travellers who abuse intravenous drugs, make casual sexual contacts, get tattooed, or are occupationally exposed to blood. The diagnosis of hepatitis is confirmed by raised liver enzyme levels, and the infecting agent is determined by the presence of hepatitis A IgM antibodies or hepatitis B surface antigen. Occasionally a non-B hepatitis occurs in a carrier of hepatitis B surface antigen, and other investigations will be necessary if this is suspected. Testing for hepatitis B core IgM antibody can help to distinguish patients with acute infection from carriers.

Respiratory symptoms

Diphtheria or Lassa fever?

Respiratory symptoms are common in travellers and occurred in 10-15% of cases of reported illness in a recent study of holidaymakers abroad. Increased exposure to unfamiliar infectious agents and excessive alcohol consumption may be contributory factors. Most respiratory illnesses are mild, but special attention should be given to throat infections.

Throat infections—A “toxic” patient with an adherent membrane on the palate and fauces may have diphtheria. A sore throat in a febrile patient recently returned from west Africa warrants specialist help because of the possibility of Lassa fever.

Legionnaires' disease.

Pneumonia—Legionnaires' disease usually presents with pneumonia but it is a multisystem disease that often includes gastrointestinal and neurological features. Confusion, hallucinations, dysarthria, and other cerebellar signs are pointers to the diagnosis. A raised creatine kinase concentration in a patient with pneumonia is very suggestive of legionella infection and empirical treatment is necessary because the diagnosis is only later confirmed by serology.

Neurological symptoms

Headaches were second only to diarrhoea in a recent survey of common symptoms experienced by travellers. Stress, heat, alcohol, and infections are likely to be contributing factors. Confusion, hallucinations, and coma are signs of serious disease, and *malaria* or *typhoid fever* may be the cause. Similar symptoms with pneumonia should suggest *legionnaires' disease*.

Unexplained fever, vague mental changes, and isolated cranial nerve palsies are common presentations of *tuberculous meningitis*. *Trypanosomiasis* may present similarly when it reaches its cerebral stage.

Poliomyelitis and other enteroviral infections must be remembered as causes of aseptic meningitis. Arbovirus encephalitis may have been contracted by those exposed to mosquitos or ticks (including European tick-borne encephalitis).

Rabies may cause unusual neurological symptoms. By this stage treatment is very unlikely to be effective, but the diploid cell vaccine can be used successfully if given soon after exposure and before symptoms appear. If someone has been bitten by an animal in an infected area an international telephone call to try to confirm whether the animal remains alive 10 days after the bite can be reassuring. This may also prevent the vaccine being used unnecessarily since in practice it is usually given when the health of the biting animal is in doubt.

Skin disorders

Herpes simplex.

Erythema nodosum.

Herpes simplex may be reactivated by exposure to sunlight.

Chronic skin disorders include persistent sores or septic spots after mosquito bites, fungal infections, and infestation with scabies.

Sometimes a maggot emerges from a sore or abscess after a visit by the tumbu fly. The skin granuloma of cutaneous leishmaniasis is transmitted to man by the bite of an infected sandfly. It can appear within days or be delayed for a year or more.

In a patient with fever, rashes uncommon in Britain include the maculopapular rash of typhus, the "rose spots" on the trunk in enteric fever, and the lymphangitis of filariasis. Tuberculosis must be excluded in those with erythema nodosum. Transient urticarial and erythematous rashes occur with both filariasis and chronic strongyloidiasis.

It is wise to arrange a biopsy of any unexplained skin lesion which may have been contracted in tropical areas, especially if there is hypopigmentation or anaesthesia. These lesions may be due to leprosy and can arise many years after exposure.

Screening on return

When someone is aware of the health hazards of overseas travel they may understandably request a medical "check-up" on return, particularly if they have been to tropical areas.

If history and examination reveal no abnormal symptoms or signs, important illness is rarely discovered through further investigations. Certain tests may, however, be helpful if there has been definite exposure to diseases with long term consequences such as amoebiasis or schistosomiasis. There are difficulties in interpreting "screening tests" partly because negative investigations such as a blood film examination for malaria or a stool examination for amoebae do not mean that the person is not infected with these agents. Positive serological results also have to be interpreted cautiously, with the dates of exposure, actual illness, and courses of treatment all being taken into account.

Some firms and organisations which regularly have employees overseas have their own medical facilities; others refer to specialists for advice.

The immigrant or refugee

When there are language difficulties don't shout. Find an interpreter

People from countries with limited medical facilities may have seen previously healthy relatives die rapidly with symptoms such as cough or diarrhoea. They may therefore be unduly anxious over what may seem to the doctor to be minor complaints. The help of a sympathetic interpreter is important in evaluating these symptoms and in preventing medicines being taken incorrectly.

Illnesses in their incubation phase as well as established disease may be imported by these groups, as they may be by any traveller from overseas.

Evidence of *pulmonary tuberculosis* can be looked for on a chest radiograph but other forms are not so accessible to screening. Abdominal, bone, urinary, lymph node, and meningeal tuberculous disease may be insidious in onset, difficult to confirm, and require a high index of suspicion.

Bowel parasites may have been accepted as normal.

Hepatitis B surface antigen carriage is common in some parts of the world such as the Far East. There is an increased incidence of cirrhosis and hepatoma in chronic carriers.

Malaria poses special problems for immigrants or temporary visitors. Immunity present on arrival may have declined by the time they return home for a holiday and they may therefore suffer a symptomatic infection (see article on malaria prophylaxis).

Fungal infections of the skin such as *tinea versicolor* are often found.

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The photograph of a United Nations refugee camp was supplied by Camera Press (Julien Quideau).

Typical incubation periods of some imported infections

	Days
Cholera	1-3
Diphtheria	1-3
Salmonella	1-2
Shigella	4-8
Campylobacter	2-11
Legionnaires' disease	2-10
Typhus	4-14
Typhoid	10-14
Poliomyelitis	10-15
Q fever	18-21
Lassa fever	3-21
Falciparum malaria	10-28
	Weeks
Syphilis	3-5
Tetanus	7-12+
Rabies	4-30+
Hepatitis A	3-5
Hepatitis B	6-25
Vivax malaria	2-50+
Kala azar	12-30+

Notifiable infectious diseases (1982)

Note the likelihood that a serious imported infection will be notifiable

Acute encephalitis*	Ophthalmia neonatorum
Acute meningitis*	Paratyphoid fever
Anthrax	Poliomyelitis
Cholera	Plague
Continued fever†	Puerperal fever†
Diphtheria	Rabies
Erysipelas†	Relapsing fever
Food poisoning	Rubella†
Infective jaundice	Scarlet fever
Viral hepatitis	Smallpox
Lassa fever	Tetanus*
Leprosy	Tuberculosis
Leptospirosis	Typhoid fever
Malaria	Typhus
Marburg disease	Viral haemorrhagic fever
Measles	Whooping cough
Meningococcal infection†	Yellow fever

*Notifiable only in England and Wales

†Notifiable only in Scotland