



An Occasional Medical Newsletter Number 62 From the Blood Care Foundation

Dear Member,

There have been two special issues of Travel Medicine and Infectious Disease which are compulsory reading for anybody concerned with staff that travels overseas. The first is on wilderness medicine and will be of particular interest to those organisations which organise adventure training expeditions for schools and other groups. Amongst the topics covered are the medical preparations for an expedition, high altitude medicine, the treatment of burns in remote areas and the organisation of a wilderness event. The other edition is devoted to the essentials of Travel Medicine and includes reviews on a wide range of topics from the organisation of a travel clinic, accidents and repatriation and the pregnant traveller to diving medicine, malaria and HIV. (*J.T.MAID.* 2005;3(4) and 2006;4(3&4))

Susceptibility to vCJD.

In my last letter I mentioned the work done in Papua New Guinea, which strongly suggested we had underestimated the incubation period for variant Creutzfeld-Jakob disease (vCJD). There is now evidence that people, other than those homozygous for methionine at codon 129 in the prion protein gene (*PRNP*), may be susceptible to vCJD. Ironside and colleagues analysed the DNA from the two appendix tissues which had tested positive on anonymous testing for disease associated prion protein. Both cases were homozygous for valine at codon 129 of *PRNP*. This means that people who were thought to be relatively immune could, in fact, be infected but the incubation period could be prolonged and in the meantime could be acting as asymptomatic carriers. (*Brit.Med.J.* 2006;332:1164-5 and 1186-8)

Hypothermia.

At a time when we are all worrying about global warming, it is too easy to forget about accidental hypothermia. An excellent review covers the causes, predisposing conditions, prevention, diagnosis and management of cases. Whilst this is mainly a problem amongst the aged and those groups which have become socially isolated, it is one that any of us might encounter during a cold spell or if we are posted to a country which has an arctic type climate. The essential points are firstly to think of the problem because the initial symptoms can easily be confused with alcoholic intoxication or dementia. Next, establish the diagnosis by measuring the core temperature, stabilise the patient by employing the basic principles of resuscitation, perform an ECG and then rewarm the patient either passively or actively. The use of alcohol should be avoided. (*Brit.Med.J.* 2006;332:706-9)

Cancer in Flight Attendants.

For many years there have been worries that members of aircrew may be more likely to develop cancer because of their increased exposure to ionising radiation. A recent meta-analysis of 8 studies of the incidence of malignancy in flight attendants showed a 2 fold increase in the incidence of breast cancer and a 50% increase in the risk of developing malignant melanoma. There was no increased risk for any other cancers. Whilst increased exposure to ionising radiation may well be a contributory factor,

confounders, such as non-occupational exposure to ultraviolet radiation from sun bathing, cannot be discounted. (*J.Trav.Med.* 2006;**13(3)**:127-32)

Malaria Prophylaxis and Acute Hepatitis.

A previously healthy 31-year old man returned from Southern Africa. He had been taking atovaquone 250mg and proguanil 100mg daily for 25 days as a malarial prophylactic. 2 weeks after his return to Switzerland, he complained of abdominal pain and ocular jaundice. He was admitted to hospital where a diagnosis of acute hepatitis was made. This is the first reported case of acute hepatitis resulting from atovaquone and proguanil being used as a prophylaxis for malaria. (*J.Trav.Med.* 2005;**12(5)**:289-90)

Risk Assessment for Malarial Prophylaxis.

The above case highlights a dilemma which is well reasoned in an excellent review by Lars Rombo. Using the information from the Swedish Institute for Infectious Disease, he shows that in many cases, as long as the traveller is reminded of the need to report any fevers occurring within 3 months of returning from a malaria area, it is safer not to take any malarial prophylaxis. They give an example where someone visits an area where the malaria risk is 1 in 10,000, and the fatality rate of dying from *P.falciparum* is 1%, then you would have to give prophylaxis to 1 million travellers to prevent one death. If the prophylactic drug were mefloquine or chloroquine, then, on average 50 of these travellers would suffer from a major drug-induced psychosis and some of these might well commit suicide. The message is to carefully assess the benefits of malarial avoidance against the adverse effects caused by the prescribed drug before advising prophylaxis. (*J.Travel.Med.* 2005;**12(4)**:217-21)

Transmission of vCJD.

It is now virtually certain that vCJD can be transmitted by blood. We do not have a screening test and it is highly unlikely that the abnormal prion protein will be amenable to inactivation, but there is hope on the horizon. Gregori and colleagues at the University of Maryland and ProMetic BioSciences in Cambridge, England have reported a successful experimental method of removal of abnormal prions from blood. Using specific absorptive ligand resins, they have been able to remove over 99% of hamster brain-derived scrapie infectivity from spiked units of white-cell reduced human red cells. They are now extending their work to see whether endogenous vCJD can be removed from human blood. (*Transfusion.* 2006;**46(7)**:1152-61)

Therapeutic Radioisotopes and Travel.

A cautionary tale is described by Gangopadhyay and colleagues concerning a patient who was treated with radio-iodine for thyrotoxicosis. Six weeks later he was detained at Orlando airport whilst travelling in the USA as he had triggered a radiation alarm. He was released after a long period of investigation and much embarrassment. The nuclear medicine department had not given him any warning that his treatment could cause travel problems. There are many investigations and therapeutic procedures, such as thallium scans, bone scans and the use of radio-phosphorus, which, in addition to radio-iodine, can cause airport alarms to be triggered. The authorities now advise that patients who have received radio-isotopes should be issued with a certificate and warned that for up to 12 weeks they may trigger airport alarms. (*Brit.Med.J.* 2006;**333**:293-4)

Michael JG Thomas MA, MB, FRCP (Edin), DTM&H
Clinical Director