



## An Occasional Medical Newsletter Number 63 From the Blood Care Foundation

**Dear Member,**

In spite of all our worries with regard to HIV, terrorist attacks and variant CJD, malaria remains the prime killer in the world, especially among younger children. In addition, it is a major cause of poverty, as those suffering from chronic malaria also suffer from chronic anaemia, which in turn reduces their ability to work and increases their likelihood of developing other infections. The search for a vaccine has been unsuccessful for many decades, but this may partly be that we do not fully understand the method by which the parasite infects the red blood cells. The infected mosquito injects malarial sporozoites into a human whilst taking a blood meal. These travel to the liver where they infect liver cells and convert into merozoites which in turn infect the red blood cells. However, how the hepatic merozoites reach the blood vessels in the liver and escape the host immune system before invading erythrocytes remains unknown. Angelika Sturm and colleagues from the Bernhard Nocht Institute for Tropical Medicine, in Hamburg, may well have discovered a vital link in this chain. The merozoites kill the liver cells, which, in turn, detach from the healthy liver cells. These parasite-filled vesicles bud into the lumen of the liver sinusoids. At the same time the malarial parasites inhibit the secretion of phosphatidylserine onto the outer leaflet of host plasma membranes, which act as 'eat me' signals to phagocytes. The full text of this paper can be viewed in a pre-publication form at: [www.sciencexpress.org/3August 2006/Page 1/10.1126/science.1129720](http://www.sciencexpress.org/3August 2006/Page 1/10.1126/science.1129720)

### **Fertility and Stem Cell Transplants.**

Recently the long-term survival of patients receiving a haemopoietic stem cell transplant has improved dramatically. One worry has been the whether the accompanying gonadal failure was irreversible. Rovó and colleagues have reported that men under the age of 25, who do not develop chronic graft v host disease, have a good chance of having a partial recovery of their testicular sperm production. (*Blood*. 2006;**108**:1100-5)

### **Blood Safety in Pakistan.**

A recent survey screened 966 regular blood donors in Pakistan. Over 17% were found to have been infected with hepatitis B and 5 of these were found to be infectious whilst not being detected by the usual routine blood screening tests. The authors conclude that one unit of blood in every 200 could well be capable of transmitting hepatitis B although it had been passed as safe by the usual tests. This demonstrates the importance of knowing the incidence of transfusion transmissible diseases in the local donor pool. The incidence of hepatitis B is over 10,000 times more common in the Indian subcontinent than it is in those areas from where BCF draws its blood supplies. (*Transfusion*. 2007;**(47(1):74-9**)

### **Malaria.**

New recommendations for malaria prophylaxis for some parts of the world have recently been published at [www.hpa.org.uk/publications/2006/Malaria/guidelines.htm](http://www.hpa.org.uk/publications/2006/Malaria/guidelines.htm). Some areas, including Rajasthan and Goa in India, no longer require chemoprophylaxis, although all the usual measures for protecting against mosquito bites should continue to be used. These should include the use of skin repellents and mosquito nets and wearing long sleeved clothing and leg covering after dusk.

### **Genetic Disease in the Middle East.**

Those of us who may be called upon to practice medicine or have responsibility for local staff in the Middle East should read the recent articles in the BMJ with regard to the reasons why genetic disease is far more prevalent in these countries than in Europe or the Americas. Several factors contribute to this high prevalence. Some conditions, such as sickle cell

anaemia, offer an advantage because the heterozygote carrier state gives some protection against cerebral malaria in young children. However, by far the most important, and those that can be corrected, are consanguinity, large family size and the banning of preventive genetic programmes due to legal and cultural issues. Consanguinity is common in many countries, where up to two thirds of marriages are between cousins, marked increasing the risk of recessive genetic problems. Large families, even when couples tend to marry young, means that many children are born at advanced maternal age increasing the risk of chromosomal disorders such as Down's syndrome. In some countries, such as Tunisia, Lebanon and Morocco education and public debate has led to revision of legislation allowing prenatal screening and appropriate treatment. There are still many countries where this is not taking place and it is incumbent upon us all to be aware of these problems when treating or advising patients or staff from the Middle East. (*Brit Med J.* 2006;**333**:819 & 831-4)

### **HIV in Southern Africa.**

In a recent speech to the General Assembly of the United Nations, the General Secretary pointed out that the number of people infected with HIV is continuing to rise. Over 40 million people are infected; 8,000 die and 12,000 become infected every day. In Southern Africa, for every person who commences treatment there are six others for whom no treatment is available. According to Médecins Sans Frontières, this is mainly due to there being too few health workers to deliver drugs to those who need them. ([www.msf.org](http://www.msf.org) and doi: 10.1136/bmj.39226.442650.DB)

### **Malaria in Sub-Saharan Africa.**

Insecticide treated mosquito nets have a major impact in reducing the mortality from malaria in young children and pregnant women. WHO has set a target for 80% of these groups to be sleeping under treated nets by 2010. However, currently less than 7% of households have such nets and efforts are being made to increase these numbers. This will not be a cheap operation as, although nets cost only \$4.55 each, with the numbers involved it is estimated that \$220 million per year will be required to meet the goal. (*JAMA.* 2007;**297**:2241-50)

### **Hospital Admission and Deep Vein Thrombosis.**

Following the recent Health Select Committee report, the United Kingdom's National Institute for Health and Clinical Excellence (NICE) has published guidelines on the prevention of venous thromboembolism (VT) in patients undergoing surgery. However, an accompanying commentary reveals some startling facts. The majority of people developing a VT in hospital are medical rather than surgical, mortality due to VT is 10 times greater than that due to MRSA and overall, the number of deaths from VT in the UK overall is 5 times greater than the combined total of deaths from road traffic accidents, breast cancer and AIDS. A recent estimate, using extrapolation from European data, suggests that there are about 60,000 deaths a year from VT in the UK of which about 25,000 are preventable. Patients who are especially at risk are medical patients who are admitted for 4 days or longer and have reduced mobility and patients undergoing major orthopaedic surgery.

Monday, 06 August 2007

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