



**An Occasional Medical Newsletter**  
**Number 64**  
**From the Blood Care Foundation**

Dear Member,

The argument as to whether patients who require treatment for shock should be transfused with crystalloids or colloids has raged since before I was a medical student. Intravenous albumin has been widely used since the early years of the Second World War, but the scales seemed to have tipped against its use, as opposed to saline, in 1998 when a meta-analysis was published in the BMJ suggesting that resuscitation with albumin rather than saline increased the risk of death by 6%. In 2004 the saline versus albumin fluid evaluation (SAFE) study was initiated. This compared the use of 4% albumin with saline in 7,000 patients in intensive care. There was no difference in the mortality rate in the 2 groups at 28 days. Recently the results of the study have been re-evaluated to attempt to determine whether any sub-group might benefit from the administration of albumin. They looked at a group of patients who presented with serum albumin concentrations of less than 25g/l. They found that transfusion of albumin, rather than saline, in this group had a small, but not statistically significant, beneficial effect. It would, therefore, seem that the routine use of albumin as opposed to saline, which is much cheaper and does not transmit transfusion transmissible diseases, should be discouraged and so the Foundation will continue to stock a crystalloid solution in our transfusion packs. However, there appears to be evidence to support a randomised controlled trial to evaluate the possible benefit of albumin as opposed to saline in patients with hypoalbuminaemia and an increased risk of complications such as multiple organ failure or major sepsis. (*Brit.Med.J.* 2006;**333**:1029-30 and 1044-6)

**Kala Azar.**

Visceral leishmaniasis, or as it is more commonly known Kala Azar, affects about half a million people each year, mostly in the rural areas of East Africa, South Asia and Brazil. The disease is caused by a protozoa transmitted to man from the animal reservoir in sand fly bites. The earlier the disease is diagnosed the more effective and speedy is the treatment. Until recently diagnosis was made on the microscopical examination of spleen aspirates or by an expensive blood test. Now a recombinant dipstick test has been developed for the rK39 antigen of *Leishmania chagasi*. A trial has shown that this test is as good as the previous tests but only takes 20 minutes. (*Brit.Med.J.* 2006;**333**:723-6)

**Treatment of Malaria in Sub-Saharan Africa.**

Falciparum malaria has always been a major killer, especially among children, in sub-Saharan Africa. For many years this disease could be adequately treated with chloroquine which is a cheap and relatively safe drug. However, its indiscriminate use led to the development of resistant strains of *Plasmodium falciparum*, so in 1993 Malawi became the first country in Africa to abandon chloroquine, in favour of sulfadoxine-pyrimethamine for the treatment of malaria. Recent work has shown that the chloroquine sensitive protozoan has returned and has become the predominant strain. A trial in 210 infected children showed that chloroquine cured 99% of the children given that drug, whereas only 21% were cured by sulfadoxine-pyrimethamine. Chloroquine cleared the parasite in a mean of 2.6 days. However the authors caution

against bringing back chloroquine as a drug of choice in Malawi until resistant strains have been eliminated from the whole region. (*N.Engl.J.Med.* 2006;**355**:1959-66)

### **Syphilis in China.**

Syphilis, which by the early '90s had been virtually eradicated in China, has made a dramatic comeback. Since 1993 the incidence has increased 25 fold and the number of cases of congenital syphilis has risen even more worryingly. China's prosperous south-eastern seaboard is the worst affected with an incidence in Shanghai of 55.3 cases per 100,000. The fact that syphilis can be transmitted by blood transfusion is a cause for anxiety. (*Lancet.* 2007;**369**:132-8)

### **Hepatitis C.**

Chronic hepatitis C affects over 170 million people world-wide and most developing countries do not have adequate screening procedures for detecting infected units of blood. In fact, less than 40% of donated blood is tested. Hepatitis C is a dangerous disease with about 20% of patients progressing to cirrhosis. Chronic hepatitis C is now the leading indication for liver transplantation in the developed world. (*Brit.Med.J.* 2006;**332**:1013-7)

### **Antibiotics and Teeth Stains.**

For many years the use of tetracyclines in young children has been limited as there have been worries that this group of antibiotics caused permanent staining of the teeth. An Israeli team, who had been using tetracyclines in a paediatric asthma clinic noticed that they had not observed any staining and so conducted a trial in 61 children, in which the treatment group received at least two courses of doxycycline. A dentist was unable to detect any staining on the children's teeth. (*Clin.Ped.* 2007;**46**:121-6)

### **HIV Prevention.**

Scientists may have found an alternative to a vaccine for preventing the spread of HIV. A protein, langerin, has been found to act as a natural barrier to HIV and it prevents transmission by capturing the virus and marking it to be broken down. Langerhans cells, which express langerin. Are the first cells in the human body to encounter the virus, which they scavenge thus preventing dissemination. The group, who discovered this protein, state that any new strategy for combating HIV must enhance, preserve, or, at the very least, not interfere with the action of langerin. (*Nature Medicine.* 2007;doi: 10.1038/nm1541)

### **Household Hygiene.**

The worktop in your kitchen could well be dirtier than your lavatory seat according to the Hygiene Council's 2007 survey. The average kitchen surface has about 10 times more bacteria than the lavatory seat. And only 3% of British people think the home is a more likely source of infection than public places, and only a third wash their hands properly after handling pets, before handling food, and after using the lavatory ([www.hygienecouncil.com](http://www.hygienecouncil.com)).

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