

## **An Occasional Medical Newsletter from The Blood Care Foundation**

Dear Member,

May I wish you a rather belated Happy New Year for 1999 as I start this 14<sup>th</sup> newsletter.

### **HIV.**

A recent study has shown that HIV not only kills existing T cells, but also prevents the immune system from producing new healthy cells. (*Nature Medicine*. January 1999)

### **Fibre Provider.**

All that good work that Sir Dennis Burkitt did in Africa, when collecting and weighing the faeces of the local inhabitants, seems to have gone to nought. The largest study of the role of fibre diets ever mounted shows no protective effect from colonic cancer by a high fibre diet. (*New Engl.J.Med.* 1999;**340**:169-76.)

### **Opiates and Immunosuppression.**

Apoptosis (cell death) in lymphocytes is triggered when the Fas receptor on the cell surface binds with its agonist (a protein called FasL). In a recent publication, Shi and colleagues report that opiates increase the expression of Fas. This causes an increase in the number of lymphocytes dying and so cause a state of immunosuppression. It is already known that in certain conditions, such as HIV infection, T lymphocytes have an increased expression of Fas. Shi speculates that this may be the reason that drug addicts, who are HIV positive, have a more rapid progression to AIDS than other HIV positive groups. (*Nature*. 1999;**397**:218.)

### **Sugar is Good for You?**

We have known for many years that sugar has an analgesic effect in small babies, but have not known how this effect takes place. A group of paediatricians in Leeds have shown that oral sucrose has an effect whilst the same dose given by naso-gastric tube does not. They speculate that the sweet taste triggers the release of endogenous opiates. (*Arch.Dis. Child*. 1999;**80**:257-61.)

### **Simple Remedies**

In a randomised controlled trial in Ethiopia, children in households, which had been given iron cooking pots, showed substantial improvements in haemoglobin levels and growth, when compared with children from households where aluminium pots were used. The authors claim that \$5,000 would buy enough pots for 10,000 people, a price that compares favourably with attempting to improve growth and combat anaemia by traditional supplemental schedules. (*Lancet*. 1999;**353**:712-6.) In a double blind randomised intervention trial conducted in Birmingham, it was shown that replacing modified cows' milk with iron supplemented formula milk in infants up to 18 months has a beneficial effect. Such an intervention prevents iron deficiency anaemia and improves psychomotor development. (*BMJ*. 1999;**318**:693-8.)

## **Gut Decontamination**

A recent article concludes that gut decontamination cuts death rates in critically ill surgical but not in medical patients. (*Arch.Surg.* 1999;**134**:170-6.)

## **Serious Hazards of Transfusion**

The Serious Hazards in Transfusion (SHOT) Committee annual report for 1997/8 reveals that at least 197 adverse events occurred in the UK during this period. Of these 110 were caused by patients being given the wrong blood or blood product. As a result the SHOT Committee are calling for unique bar coded identification systems to be introduced. However, this should be put into context, as the number of errors is minute when compared with the figure of over 3.5 million transfusions, which are given in UK each year. (*SHOT Report 1997 – 1998.*)

## **Triple Drug Treatment for AIDS**

The Swiss HIV Cohort study, which involves over 4,000 patients who have received triple therapy for HIV since 1995, has found that such treatment has lowered the death rate to 1.3% per year. (*Lancet.* 1999;**353**:863.)

## **Vancomycin Resistant Staphylococcus**

Strains of Vancomycin resistant *Staphylococcus aureus* have now been reported from 4 countries, France, Hong Kong, Japan and the United States. It is believed that these strains have developed an alternate vancomycin-binding pathway, which diverts the drug away from the usual binding site. All of these strains are also methicillin resistant and a spokesperson from the US Centers for Disease Control and Prevention in Atlanta, Georgia said that they “threaten to return us to the era before antibiotics”. (*New Engl.J.Med.* 1999;**340**:493-501;517-23;556-7. *BMJ.* 1999;**318**:626.)

## **New malaria Vaccine**

A research team from the US Centers for Disease Control and Prevention in Atlanta, Georgia, led by Dr Altaf Lal, has developed a new vaccine against *Plasmodium falciparum* malaria. Unlike previous vaccines, this is designed to attack the parasite at different stages of its life cycle, being constructed from a combination of 21 different *P falciparum* peptides. (*Proc.Nat.Acad.Sci.* 1999;**96**:1615-20.)

## **New Strategy to Eradicate Dengue**

A 3-year research programme has just been brought to a successful conclusion. Dengue fever has been eradicated from one province in Vietnam and in others the incidence of has been reduced by 75%. This has been achieved by introducing the mesocyclops crustacean that devours the larvae of the *Aedes aegypti* mosquito, which is the vector for dengue. (*BMJ* 1999;**318**:555.)

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