

Masala

A reduced haematocrit value leads to reduced arterial oxygen content but what is the critical value of the haematocrit at which blood transfusion becomes mandatory? And can blood substitutes be used? German scientists conducted a study on 12 anaesthetized, mechanically ventilated pigs using a new blood substitute called diaspirin-crosslinked haemoglobin (DCLHb). The animals underwent extreme acute normovolaemic haemodilution (ANH) with 1:1 volume replacement with either 8% albumin solution or 10% DCLHb. Albumin treated animals developed myocardial ischaemia and died when the haematocrit value reached 6.2%. In the DCLHb group, the animals appeared to be at the threshold of cardiovascular compromise only at a haematocrit value of 1.2% (*Crit Care Med* 2001;**29**:829–38).

The treatment of malaria, especially *Plasmodium falciparum* malaria, is becoming increasingly difficult owing to widespread chloroquine resistance. Among the newer antimalarials developed are the artemisinin derivatives—artemether (Larither), arteether (E-mal) and artesunate (Falcigo). A multicentre phase 3 trial of arteether was completed in India on 267 patients of uncomplicated *P. falciparum* malaria with a 97% cure rate. The drug was administered intramuscularly in a dose of 150 mg daily for 3 consecutive days. The new drug is obviously good but costs Rs 300 for a course as opposed to Rs 10–15 for oral chloroquine and Rs 100 for injectable quinine. The World Health Organization recommends that artemisinin derivatives should be reserved for drug-resistant cases only (*J Assoc Physicians India* 2001;**49**:692–6).

Academy award winning actors and actresses live longer than other less recognized performers, reports a study from the USA (*Ann Intern Med* 2001;**134**:955–62). Over 1500 actors and actresses were analysed retrospectively and 762 Academy award winners were compared to 887 matched controls. On an average, an Academy award winner lived four more years even if the victory preceded death by about four decades. An extra win meant even more years of life. An editorial comment in the same issue wonders if everyone were famous for 15 minutes would they also live longer.

After undergoing major surgery, are you better off in an Intensive Care Unit (ICU) which has a dedicated ICU physician taking daily rounds? A study of over 350 patients who underwent oesophageal resection between 1994 and 1998 in 35 hospitals in Maryland, USA showed that lack of daily rounds by an ICU physician was associated with a 73% increase in length of hospital stay and 61% increase in total hospital cost. In addition, there was an increase in the following postoperative complications: pulmonary insufficiency, renal failure, aspiration and re-intubation (*Crit Care Med* 2001;**29**:753–8).

Rheumatoid arthritis (RA) can apparently be precipitated by trauma, reports a study from Britain. A retrospective case-control study compared 262 patients of RA with a similar number of non-rheumatology patients and specifically enquired about physical trauma in the six months preceding the onset of their disease. Trauma included fracture, surgery, road traffic accident, childbirth or abortion and injury at work. Twenty-one per cent of patients of RA reported significant trauma compared with only

6.5% of controls. The difference was statistically significant. The authors suggest that trauma may alter and/or release antigens from connective tissues leading to the development of RA (*Rheumatology* 2001;**40**:262–6).

Thrombotic thrombocytopenic purpura (TTP) and haemolytic uraemic syndrome (HUS) have in the past had a high mortality mainly due to a delay in diagnosis. Both cause haemolytic anemia, thrombocytopenia, renal failure and neurological manifestations. Researchers at the Apollo Hospital, New Delhi studied 12 patients over 4 years and treated all of them with total plasma exchange and steroids; 11 patients survived. Each patient needed a mean of 12 plasma exchanges with 2.5 L of plasma exchanged at each sitting. The one patient who died had systemic lupus erythematosus with TTP and did not respond to treatment (*Indian J Hematol Blood Transf* 2001;**19**:23–5).

Injidents may be a new word in the dictionary. The *BMJ* in an editorial (2001;**322**:1320–1) has decided to ban the word 'accident' and suggested this new term to collectively refer to incidents that produce injury. Public health authorities have long believed that most so-called accidents are predictable and therefore preventable. The *BMJ* may be the first major medical journal to ban the inappropriate use of the word but the *Journal of Accident and Emergency Medicine* has been renamed the *Emergency Medicine Journal*. Whereas natural disasters such as earthquakes, lightning and avalanches can still be described as accidents, it might make more sense to talk of motor vehicle collisions, home or playground injuries and medical errors as injidents.

Folic acid supplementation has reduced the incidence of neural tube defects and is now widely recommended in pregnancy. But are all neural tube defects due to folate deficiency? Researchers from the All India Institute of Medical Sciences and the Jawaharlal Nehru University, New Delhi studied 80 newborn babies with neural tube defects and their mothers and compared them with matched controls. Serum and scalp hair zinc levels were analysed by absorption spectrophotometry. The hair zinc levels of the affected babies and their mothers were significantly lower than those in the controls (*Indian J Pediatr* 2001;**68**:519–22). The Chef still does not know whether zinc should be recommended along with folic acid in pregnancy.

Maternally inherited diabetes and deafness is seen in some patients with type 2 diabetes and is caused by a mitochondrial DNA mutation. French scientists studied 54 patients with this syndrome and found that most have non-insulin dependent diabetes and almost all had a sensorineural hearing loss. Eighty-six per cent had a specific retinal lesion (macular dystrophy) but diabetic retinopathy was rare. Nephropathy occurred in nearly a third of the patients, suggesting that the renal lesion was a result of mitochondrial disease. This syndrome also includes myopathy in nearly half the patients, cardiomyopathy in 15% and neuropsychiatric symptoms in 18%. Diabetic patients with such a clinical presentation can be subjected to mitochondrial DNA testing (*Ann Intern Med* 2001;**134**:721–8).