

Medibytes

Medibytes offer Fellows and Members short, informative, synopses of important or interesting papers published in specialty and other general medical journals (edited by Dr J Ferguson).

LIST OF ABBREVIATIONS Baby friendly hospital initiative (BFHI), carbon monoxide (CO) pre-registration house officer (PRHO)

PSYCHIATRY

A new method of suicide: charcoal burning

Carbon monoxide poisoning continues to be a common method of suicide, despite attempts to nullify its toxicity. A new technique for producing CO poisoning through burning charcoal on a barbecue grill within a sealed room emerged in Hong Kong in 1998. Following widespread media coverage, charcoal burning had become the third most popular method of suicide within two months, accounting for 20% of suicides in 1999. From 1997–2003, during an economic recession and with this new fashionable method, the Hong Kong suicide rate increased from 13.3 to a record high of 16.4 per 100,000.

G Masterton

From Chan KPM, Yip, PSF, Au, J et al. Charcoal-burning suicide in post-transition Hong Kong. *Br J Psychiatry* 2005; **186**:67–73.

A Grimm tale: Rapunzel syndrome

The *American Journal of Psychiatry* reports a case of Rapunzel Syndrome. This rare disorder, in which 90% of cases present in girls aged 5–20, arises from habitual hair swallowing. In this variant of gastric trichobezoar, a hair tail extends from the stomach into the intestines as far as the transverse colon. The presentation is with an abdominal complaint – either acutely with obstruction, intussusception, pancreatitis or obstructive jaundice, or chronically with epigastric pain, weight loss and an abdominal mass. Treatment involves surgical removal or endoscopic fragmentation of the hair ball, followed by psychiatric assessment and management of the trichophagia.

G Masterton

From Frey AS, McKee M, King RA et al. Hair apparent: Rapunzel syndrome. *Am J Psychiatry* 2005; **162**:242–8.

PAEDIATRICS

Why childhood jaundice may not be good for the brain

In a human teratocarcinoma-derived cell line (NT2-N neurons), unconjugated bilirubin induces early necrosis at high concentrations and delayed apoptosis at low and

moderate concentrations. Bilirubin-induced cell damage has hitherto been poorly understood. The magnitude and duration of the insult are critical to the brain cell death pathway. It is known that profound jaundice in the newborn period can cause kernicterus, resulting in choreoathetoid fits and high tone deafness. It is not known whether the apoptosis seen *in vitro* can be observed *in vivo*. Caspase-3 activation studies may demonstrate the clinical relevance of this innovative paper.

I Laing

From Hanko E, Hanson TW, Almaas R et al. Bilirubin induces apoptosis and necrosis in human NT2-N neurons. *Pediatr Res* 2005; **57**:179–84.

Hospital initiative increases breastfeeding rates

In Scotland, babies born in a hospital with UK BFHI standard award were 28% more likely to be exclusively breastfed at seven days of life when compared to those delivered in other maternity units ($p < 0.001$). This statistic took into account deprivation category, mother's age, number of births at the hospital annually and the year of birth. Scottish Maternity Units still achieve breastfeeding rates of only 50% approximately at seven days. Further work needs to be done to discover whether BFHI influences long-term breastfeeding rates and (more importantly) infant morbidity.

I Laing

From Broadfoot M, Britten J, Tappin DM et al. The Baby Friendly Hospital Initiative and breast feeding rates in Scotland. *Arch Dis Child Fetal Neonatal Ed* 2005; **90**:F114–F116.

MEDICAL EDUCATION

Do graduates make good medical students?

There is no difference between graduates and secondary school entrants to medical school with regard to subsequent academic or research performance, career position or practice location. Worldwide there is a trend towards graduate entry to medical school. This cross-sectional postal survey of Australian medical graduates found no advantage in selecting graduates over school leavers. Graduate entrants showed more intrinsic motivation to study medicine but experienced greater

stress, particularly financial, at medical school. This paper supports the continuation of admitting both graduates and school leavers to medical school.

C Macleod

From Rolfe IE, Ringland C, Pearson SA. Graduate entry to medical school? Testing some assumptions. *Med Ed* 2004; **38**:778–86.

Should nurses train junior doctors?

Whilst there is scope for formally involving experienced nurses in training junior doctors as part of the UK's Foundation Programme, any such step must be handled sensitively and preceded by more inter-professional dialogue. This qualitative study (semi structured interviews) of 40 senior Scottish nurses confirmed that nurses continue to provide much informal guidance and support to junior doctors, particularly with regard to communication and teamworking skills. However, they expressed concern that their own extended roles are de-skilling PRHOs.

C Macleod

From Vallis J, Hesketh A, Macpherson S. Pre-registration house officer training: a role for nurses in the new Foundation Programme? *Med Ed* 2004; **38**:708–706.

GENERAL MEDICINE

Computer alerts improve clinical practice

Rates of venous thromboembolism have been reduced in in-patients through the introduction of an electronic alert system that reminds physicians to administer prophylaxis. The team from Boston developed a computer program to identify patients at risk of venous thromboembolism. The program then randomly allocated patients into either an intervention group, where the physician was reminded to administer prophylaxis or a non intervention group where the physician received no reminder. In the intervention group rates of prophylaxis use were higher and rates of thromboembolism were significantly lower.

J Ferguson

From Kucher N, Koo S, Quiroz R *et al.* Electronic alerts to prevent venous thromboembolism among hospitalized patients. *NEJM* 2005; **352**:969–77.

Intrapeural thrombolysis is not effective in empyema

A UK study has found that the intrapleural administration of streptokinase for pleural infection does not improve mortality, the rate of surgery or length of hospital stay. In this double blind randomised trial, 427 patients with pleural infection received either intrapleural streptokinase (twice daily for three days) or placebo. There was no significant difference between the two groups in the proportion of patients who died or needed surgery. Severe adverse events such as chest pain and fever were more common in the streptokinase group.

J Ferguson

From Maskell NA, Davies CW, Nunn AJ *et al.* U.K. Controlled trial of intrapleural streptokinase for pleural infection. *NEJM* 2005; **352**:865–74.

SCIENCE

Spider venom helps research into stroke

Currently the only approved treatment specific for acute stroke is thrombolysis. A recent review describes a new approach in which medications are directed against an acid sensitive channel. This allows calcium to flow into the cell when brain anoxia following a stroke causes the pH in the tissue surrounding the infarcted brain to fall below 7.0. Since the channel is blocked by amiloride proof of concept studies would be possible in man. The animal work is based on tissue from animals lacking the acid sensitive channel ASIC1 and a specific blocker from the venom of the Trinidad Chevron tarantula, psalmotoxin.

JS Kelly

From Benveniste M, Dingledine R. Limiting stroke-induced damage by targeting an acid channel. *NEJM* 2005; **352**:85–6.

Ceftriaxone as a potential therapy in motor neuron disease

This summer clinical trials will begin to explore the action of Ceftriaxone in motor neuron disease. The investigators found Ceftriaxone to be neuroprotective in animal models of stroke and motor neuron degeneration. The protection is due to the activation of the gene for the glutamate transporter and the enhanced inactivation of glutamate in astrocytes.

JS Kelly

From Rothstein JD, Patel S, Regan, M *et al.* β -Lactam antibiotics offer neuroprotection by increasing glutamate transporter expression. *Nature* 2005; **433**:73–7.