

STEMMING STROKE EFFECTS

A small pilot trial conducted in Taiwan has suggested that stem cell therapy may have a place in the future treatment of ischaemic stroke.¹ Shyu and colleagues allocated at random 10 patients who presented within 7 days of acute cerebral infarction localised within the middle cerebral artery territory to receive either 5 days of subcutaneous injections of granulocyte colony-stimulating factor (G-CSF) or usual care. Six months later, the seven patients who received G-CSF showed a greater improvement in neurological functioning. Four patients who started treatment within 1 day after onset of cerebral ischaemia showed the greatest improvement.

G-CSF is known to mobilise endogenous stem cells from the bone marrow into the peripheral blood, from where they can “home in” on the brain and have a protective or even restorative effect;² in animal studies, G-CSF has also been shown to have anti-inflammatory and neuroprotective properties.

1. *CMAJ* 2006; 174: 927-933
2. *CMAJ* 2006; 174: 954-955

ATOMIC THYROID

Survivors of the atomic bombings in Hiroshima and Nagasaki are still experiencing the effects of radiation, say Japanese researchers.¹ From 2000 to 2003 — at least 55 years after these events — Imaizumi and colleagues surveyed over 4000 survivors for thyroid diseases, finding that 44.8% had such a disorder. Further, a linear dose–response relationship existed between thyroid radiation dose, based on distance from the hypocentre of a bombing, and the prevalence of thyroid nodules, both malignant and benign.

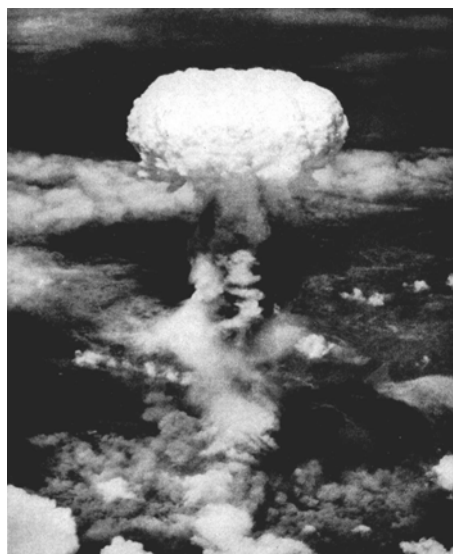
The dose effects were significantly higher in those survivors exposed when young; a commentator suggested that this finding probably related to proliferative activity of the thyroid gland during growth subsequent to the radiation exposure.²

1. *JAMA* 2006; 295: 1011-1022
2. *JAMA* 2006; 295: 1060-1062

TEXTING TEENAGERS

Australian researchers say that mobile phone text messaging — that is, short message service (SMS) use — is little exploited in clinical research. They found it both a feasible and an acceptable way of gathering primary care research data from adolescents and young adults. In their general practice-based study, 87 of 96 (91%) young participants (aged 16–24 years) had a mobile phone; further, all but two agreed to provide their phone number for research purposes. Nearly three in four participants (73%) who were sent a text message as part of the study actually replied.

Aust Fam Physician 2006; 35: 175-176

**IS YOUR TIME UP?**

US researchers have developed an index which can predict whether a community-dwelling person over 50 years of age is likely to survive for another 4 years. Lee and colleagues developed and validated their index using data from nearly 20 000 people, nearly 2500 of whom had died within a 4-year period. The researchers considered 41 predictor variables in all, with the final model only needing 12 simple predictors, which all rely on patient report rather than medical record review or laboratory testing. As the total point score rises, so does the chance of dying.

JAMA 2006; 295: 801-808

CLOTTING IN THE AIR

Women using oral contraception and people with a factor V Leiden mutation who are about to take a flight should be offered deep venous thrombosis (DVT) prophylaxis with compressive stockings or single-dose low-molecular-weight heparin.¹ So advises Stricker, a Swiss expert, commenting on a Dutch study which compared coagulation activation in 71 healthy volunteers before, during and after three different situations: a specially chartered 8-hour flight, an 8-hour movie marathon and 8 hours of normal daily activities.² Coagulation activation was markedly raised only after the flight, particularly (but not only) in women using oral contraception and those with a factor V Leiden mutation. The researchers suggested that hypobaric hypoxia rather than immobilisation could account for coagulation activation during air travel.

1. *Lancet* 2006; 367: 792-794
2. *Lancet* 2006; 367: 832-838

ARE WE MISSING THE POINT?

When it comes to intramuscular injections, standard blue and green needles may no longer be long enough to reach the gluteal muscles in some patients, according to a UK researcher. In 100 consecutive adult patients referred for computed tomography (CT) scan of the pelvis, Nisbet used automated CT callipers to measure the minimum distance between the skin surface and the nearest edge of muscle at gluteal intramuscular injection sites. The posterior gluteal site fared worst, with the smaller blue needle failing to reach muscle in 72% of patients; the anterior gluteal site did better, but even so, the larger green needle did not reach muscle in 12% of patients. In general, the intramuscular site was likely to be deeper in women.

Presumably, we have increasing obesity to thank for this observation. Nisbet suggested that the gluteal route be avoided for the intramuscular injection of most drugs. If alternative routes are not possible, a longer needle should be considered.

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