

Masala

Bone v. heart!

The calcium controversy continues unabated. Analysis of the Women's Health Initiative (WHI) study has raised fresh concerns about calcium supplements. On a relook at the WHI-CaD study, which was a 7-year, randomized, placebo-controlled trial of calcium and vitamin D (1 g calcium and 400 IU vitamin D daily) in over 36 000 community dwelling post-menopausal women, it was found that almost half the participants were taking personal calcium supplements at randomization. Among the women not taking personal supplements at randomization, assignment to calcium supplements was associated with increased risk for cardiovascular events. Even after pooling this data with 8 other randomized trials, calcium remained a source of risk. The authors estimated that treating 1000 people with calcium supplements for 5 years would lead to 6 additional myocardial infarctions or strokes while preventing 3 fractures. The choice is tough indeed (*BMJ* 2011;**342**:d2040).

Cell phones and the brain

The dramatic increase in use of cellular telephones has always raised concerns about possible negative effects of radio-frequency signals delivered to the brain. What about acute cell phone exposure? In a study involving about 50 healthy subjects, cell phones were placed on both the left and right ears and positron emission tomography was used to measure brain glucose metabolism twice, once with the right cell phone activated (sound muted) for 50 minutes ('on' condition) and once with both cell phones deactivated ('off' condition). Brain glucose metabolism, as measured by positron emission tomography, was significantly higher in the region of the brain closest to the activated phone's antenna. The clinical significance of the finding, however, remained uncertain (*JAMA* 2011;**305**:808–13).

Intensity of glucose control

The American College of Physicians has put to rest the debate about intensity of glucose control in hospitalized patients, at least for now. We seem to have come full circle. After reviewing the literature published from 1950 to March 2009, the guidelines recommend against intensive insulin therapy in hospitalized patients with hyperglycaemia irrespective of the fact whether the persons are with or without diabetes or in the surgical intensive care unit (ICU), medical ICU and other wards. Even if insulin therapy is required for ICU patients, the college recommends targeting blood glucose levels between 140 and 200 mg/dl (*Ann Intern Med* 2011;**154**:260–7).

Surgery, cardiac enzymes and outcome

Markers of myocardial damage after coronary artery bypass may become parameters for the quality of outcome expected. A recent study found that post-bypass cardiac enzyme levels indicated mortality risk. Data from 7 studies with almost 20 000 patients for whom creatine kinase MB levels were measured within 24 hours after undergoing bypass were analysed. The ratio of the enzyme level's peak value in the patient to the upper limit of normal—called the CK-MB ratio—was used for analysis. By 30 days, higher CK-MB ratios were associated with increasing mortality risk, and the association remained significant at 1 year. The authors said that a CK-MB ratio of 4–5 indicated an expected 30-day mortality more than twice that of a ratio of 1 (*JAMA* 2011;**305**:585–91).

Go slow while imaging for low back pain

Pragmatism and clinical judgement wins over investigative work-up. Recent clinical guidelines from the American College of Physicians state that routine diagnostic imaging for low back pain does not improve outcomes and it actually increases complications and costs. The college recommends an initial trial of medical therapy rather than immediate imaging. Immediate imaging is warranted when the patient has major risk factors for cancer, or shows severe or progressive neurological deficit or has risk factors or signs of vertebral infection or the cauda equina syndrome (*Ann Intern Med* 2011;**154**:3181–9).

Yet another obesity paradox

The paradoxical phenomenon of relative longevity among obese patients with established diseases has been reported for various disease conditions. A study examined this aspect for intracranial haemorrhage (ICH). Over 1000 patients with ICH were enrolled from more than 30 centres and associations between obesity and 30-day mortality or long term risk of death were analysed. It was found that as compared with patients of normal weight, underweight patients had a higher risk of death and, conversely, overweight or obese patients showed a lower risk of post-ICH death (*Neurology* 2011;**76**:567–73).

Get rid of excess salt in diet

Recent US guidelines have suggested further reduction in dietary salt intake. Increased sodium intakes have been shown to impair vascular function, and acute effects of salt on endothelial function post-prandially are unknown. In a study, healthy, normotensive subjects received a meal with added salt and a control low-salt meal on two separate occasions in a randomized order. Endothelial function was measured while fasting and post-prandially using flow-mediated dilatation (FMD) and peripheral arterial tonometry. The results showed that a high salt meal, which reflected the typical amount of salt consumed in a commonly eaten meal, can significantly suppress brachial artery FMD within 30 minutes indicating acute adverse effects of high salt on vascular biology (*Am J Clin Nutr* 2011;**93**:500–5).

Another U-shaped association

This time it is between the intensity of internet use and adolescent health (*Pediatrics* 2011;**127**:e330–e335). In the wake of ever increasing computer and internet use a study was done to examine the relationship between different internet-use intensities and adolescent mental and somatic health. Data were drawn from the 2002 Swiss Multicenter Adolescent Survey on Health. Over 6000 adolescents were categorized into 4 groups according to their intensity of internet use: heavy internet users (>2 hours/day), regular internet users (several days per week and ≤2 hours/day), occasional users (≤1 hour/week), and non-internet users (no use in the previous month). Using regular users as a reference, high users were more likely to have higher depressive scores, increased risk of overweight and increased risk of insufficient sleep. Interestingly, non-users and occasional users also were found at increased risk of higher depressive scores and complaints of back pain. Conversely, it is thumbs up for regular internet users. It should actually be considered as a normative behaviour without major health consequences.

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