News and Reviews

Small heads and lower educational attainment

On of the spurious reasons for denying votes to women was that they had smaller brains so that they had less understanding of politics. It is of interest that the issue of brain size has been raised again in relation to dementia (Alzheimer's Disease 2008; 22: 249–54). A survey of a group of nuns in the School Sisters of Notre Dame indicated that those with a reduced head size were less likely to have achieved a bachelor’s degree. Those with a small head size and reduced educational attainment were more likely to have an alpha-lipoprotein allele, a factor associated with dementia and criteria associated with the condition. This apart, it was encouraging to see the enthusiasm which a religious order showed in participating at the frontiers of biological science. You do not have to be an atheist to have an interest in science.

Genetic factors in longevity

A group of researchers in China have developed a system for comparing genetic factors with longevity (Am J Med 2008; 168: 890–96). It emerged that evaluation of a small group of centenarians was sufficient to detect common alleles with a powerful effect on longevity. Review of a larger sample in the same age group also detected alleles with a less powerful effect. Detection was more likely where the gene had a dominant rather than a recessive effect. When patients aged 90 were studied, it was more difficult to identify relevant alleles. My concern is that I might not make it to 100 to find out my life expectancy.

Death from a power cut

Although measures have been taken to reduce the risk of electricity cuts in vulnerable individuals, these still occur. Review of seven cases in the United States established a heterogeneous group (Am J Forensic Path 2008; 29: 231–4). Three were in their 70s and 80s but another four were aged 13, 25, 28 and 53 years. In one case, a mother and son were asphyxiated during a snowstorm when they tried to repair a generator running their electricity. A man of 53 with apnoea died when a thunderstorm switched off his ventilator. Another aged 28 was burnt when he had a power cut and set himself on fire while using candles. Only the three older subjects died as a result of hypothermia. It would appear that we take too narrow a view when we attribute deaths associated with power cuts to old people suffering from the cold.

From gut to bone

Primary osteomyelitis is characteristically a disease of young people, but there is a recent report of the condition occurring in a 66-year-old woman (Am J Med 2008; 121: 767–9). Her initial clinical signs were those of tachycardia and tenderness over the lumbar vertebrae. Magnetic resonance imaging identified the collapse of the fourth lumbar vertebra. The organism isolated from the site was identified as Salmonella. It is probable that its source had been the gastro-intestinal tract. She was treated with cholecystectomy, another possible source and given appropriate antibiotics.

Peridontitis

Since most papers on dentistry deal with young and middle-aged people, it is encouraging to see one dealing with older individuals (Public Health 2008; Supplement: S95–S105). It dealt with the prevalence of peridontitis in whites, Mexican Americans and blacks aged 50 years and above. It was more common in blacks and particularly common in blacks with high incomes. Quite what these rather perplexing results mean remains to be seen.

Bisphosphonates and osteoarthritis

One of the more common causes of pain and disability in old age is osteoarthritis. There is a recent report that bisphosphonates could relieve osteoarthritis by remodelling subchondral bone and exerting an anti-inflammatory effect (Ann Rheum Dis 2008; 67: 1358–59). Some clinical trials have been less positive. One controlled trial of 2,493 subjects failed to establish a significant effect between the drug and a placebo (Arth Res Ther 2005; 7: 1625–33). In a sub-group analysis of the large Fracture Intervention Trial of alendronate, there was a reduction in the progression of vertebral osteophytes (Ann Rheum Dis 2008; 67: 1427–30). This was not matched by a modification of clinical features. My preference would be to continue with analgesics, unless further trials produce compelling evidence as to the benefits of bisphosphonates in osteoarthritis.

Dislocation in patients with a hip replacement

A particularly serious sequel to hip replacement is a dislocation of the prosthesis. A multi-surgeon analysis of 1,727
arthroplasties and 395 hip revisions revealed that dislocation occurred in 4.1% of arthroplasties from the rear, in 3.4% of Hastings arthroplasties and 2.4% of Omega procedures (Ann R Coll Surg Engl 2008; 90: 658–62). Most dislocations occurred within 2 months of surgery. This information would be useful in patients making up their minds as to whether hip replacement was worth the risk of potential side effects.

Neuropsychiatric symptoms in patients with mild cognitive impairment

A proportion of older people have mild cognitive impairment that may or may not progress to dementia. Even before this happens they may develop a range of neuropsychiatric problems (Arch Gen Psych 2008; 65: 1193–8). One study compared 319 such people with 1,646 with ‘normal’ cognition. The former had higher levels of apathy, anxiety, inhibition and depression. A few had delusions which were extremely rare in the other group. Despite these differences in the two groups, it is uncertain whether identification of these signs helps in the diagnosis of early dementia and the progression of the condition.

Does too much sun make you blind?

It would appear that too much sun not only causes sunburn, it can also affect your vision. Following fundoscopy, 4,753 subjects were questioned about sunlight exposure (Arch Ophthalmol 2006; 126: 1396–403). There was a correlation between blue light exposure and age-related macular degeneration particularly in subjects in the lowest quartiles of intakes of antioxidants such as ascorbic acid, vitamin E and zinc. The suggestion was that we should wear sunglasses more often and increase or intake of antioxidants. It might also be worth living in Scotland where the sun seems to have disappeared over the last year.

Does exercise help patients with osteoarthritis of the hip?

Some doctors are ambivalent about the value of physiotherapy because of the paucity of well-conducted trials. The lie to this was given by meta-analysis of nine trials of exercise in osteoarthritis of the hip (Arth Rheum 2008; 59: 1221–7). This established that there was benefit in eight of them. In the ninth trial, patients had been instructed by a videotape rather than a physiotherapist. Apart from confirming the value of exercise, the analysis established that, if properly designed, trials of physiotherapy could give valid information.

Circadian photoreceptors

Age-related changes to the size of the pupil and the passage of light through the lens can affect general health (Ophthalmology 2008; 92: 1439–44). This happens because the quality of light conducted through specialised retinal receptors influences a number of centres in the brain that modify circadian rhythms. It is asserted that manifestations of their dysfunction include insomnia, depression and even an increased mortality. This might be modified by changing the spectrum of light reaching the eyes and attending to the design of intraocular lenses.