News and Reviews

Exenatide in poorly controlled diabetes

Exenatide binds glucagon-like-peptide receptors and thus suppresses glucagon secretion. It is being investigated as an adjuvant to other drugs in the treatment of unstable diabetes (Ann In Med 2007; 146: 477–85). There is a report of its use in diabetics poorly controlled by a thiazolidinedione (TZD). Subsequently, 121 patients received 10 µ subcutaneous injections of exenatide twice daily along with TZD along with 112 who received TZD alone. After 16 weeks those on combined treatment had lower HbA1c and blood glucose levels with a lower body weight. A negative finding was that 40% on combination therapy were nauseated and 13% had episodes of vomiting. There were also 7% who had at least one episode of hypoglycaemia. Given the side-effects and the fact that the drug has to be given by injection, the question arises as to what advantages it has over insulin in these circumstances.

Changes in cerebral ventricular size in dementia

Deterioration in dementia is usually assessed by measuring cognitive function. There is the question as to whether there are also changes in cerebral volume. This was recently investigated by using nuclear magnetic resonance to measure changes in cerebral ventricular size in 145 subjects with normal mental function, mild mental impairment and dementia (Alzheimer’s Disease and Associated Conditions 2007; 21: 14–24). Follow up over several years established that there was an increase in the ratio of ventricular to brain size that was greatest in patients with dementia. This was accelerated in those who also had diabetes. The extent to which this interesting observation will be of use in the management of demented patients remains to be seen.

A portable device for measuring energy expenditure

Most methods for measuring energy expenditure are clumsy and of limited practicality in elderly subjects. One solution may be to use a device for ambulant subjects developed by Health Wear Bodymedics (Am J Clin Nut 2007; 85: 742–9). It fits in an arm band that contains a two-axis accelerometer, a heat flux sensor, a skin response sensor, a skin temperature sensor and a body ambient temperature sensor. Use in patients, over several days, established that it provided results as accurate as those calculated from a technique using double labelled water. If you know of anyone in your unit interested in this field, why not buy one for their birthday.

Driving ability and Parkinson’s disease

Practical evaluation of patients after a stroke or head injury has established that many recover their driving skills. Should patients with Parkinson’s disease be also assessed in this way? This was tested by referring 154 patients with the disorder to a driving assessment centre (J Neurol Neurosurg, Psych 2007; 78: 363–6). After assessment 104 (66%) were fit to drive though 46 of these had to use automatic transmission and ten required other modifications. Factors vitiating against safe driving were severe incapacity, associated medical conditions, dementia, continued deterioration of the disease, a slow brake reaction time and a poor score during a driving test. Medication and the duration of the disease had no effect. It is clear that patients with Parkinson’s disease merit careful evaluation of their driving skills. Their accident rate may well be lower than 18- to 25-year-old boy racers.

Rheumatoid arthritis and diabetes

Since rheumatoid arthritis is associated with high levels of C-reactive protein (CRP) and interleukin-6 (II-6) and there is a similar pattern in diabetes mellitus it has been suggested that there might be a link between the two conditions. On this tenuous basis a review was made of 5,302 subjects evaluated in the National Health and Nutrition Survey III (J Rheum 2007; 34: 69–73). Only 24 of 144 subjects with rheumatoid arthritis had diabetes suggesting that there was no association. There is the caveat that it is more difficult to confirm a negative than a positive. Even if there were a link, however, it is doubtful whether this would have much effect on the investigation and treatment of diabetic patients.

Prediction of transfer for long-term care after trauma

The outcome of patients after trauma is important in planning long-term resources. Information on this is to be found from the records of the United States National Trauma Base from 1999 to 2003 (J Trauma, Injury, Infection, Critical Care 2007; 62: 592–600). Data from 369,829 cases showed that the proportion of patients transferred to long-term care peaked in those kept in trauma units from between 6 and 11 days. Advanced age had a particularly strong influence on this. For reasons unknown, patients presenting with burns or penetrating injuries were less likely to end up in long term care. It is of particular interest that outcomes predicted from statistics gave results comparable with real outcomes.
Age overcomes youth

An example that age is no barrier to effectiveness is illustrated by the 70-year-old Earl of Surrey, who with a small force of hungry and exhausted men found himself facing the proud Renaissance prince, the 30-year-old James IV with an army of 60,000 men on top of a steep ridge and backed up with the latest technology in heavy armament (Reese P. Flodden: A Scottish Tragedy, 2003; Edinburgh: Birlin). The situation seemed impossible, but instead of retreating, he set his men off on a seven-mile march across a river and then covered a further 4 miles with the wind and rain in their faces before they climbed the least steep side of the ridge occupied by the enemy. The Scots replied with an artillery bombardment, but this was useless because the gun platforms had sunk into the mud and the projectiles went over the heads of the English. They then charged but their formations fell apart and individuals were rapidly picked off. James IV had bravely but foolishly elected to take part in the charge and also was killed. The battle was thus a famous example of the triumph of experience over enthusiasm.

Limits to a sustainable population

Most clinicians are either focused on treating individual patients, or fighting for resources for their own particular speciality. It is worthwhile to occasionally step back to look at the broader picture. An author has recently stressed the need for a smaller world population (Medicine Contact and Survival 2007; 21: 142–51). The current population of 6 billion is unsustainable because of its inevitable ecological effect in which more and more forms of life are being eliminated. There is also the prediction that in another 50 years all fossil fuel will have gone. The maximum sustainable population for the world is estimated at two billion. If we do not get our act together to sort this out the Four Horsemen of the Apocalypse will do it for us.

Exercise without weight loss in type 2 diabetes

Many individuals who embark on a course of exercise are disappointed that they fail to lose weight. This pattern emerged in patients with type II diabetes (Metabolism 2007; 56: 332–8). Eight obese individuals and the same number of lean ones performed 1 h of aerobic exercise 5 times a week for 12 weeks. Both groups experienced a reduction in waist circumference and plasma IL-6 levels, but there was no change in their total body weight or insulin sensitivity. The answer may be that exercise improves physical fitness but that a diet reduction is necessary for any additional benefit. My own experience is that I enjoy hill walking, but would enjoy it even more if I did not have to carry the equivalent of a loaded suitcase around with me.

Ageing and bladder function in nulliparous women

It is understandable that women who have gone through labour should experience bladder problems in old age, but what is the situation in those who are nulliparous? Studies were conducted in such a group aged 21–70 (Obs Gyn 2007; 109: 715–20). An increase in age was associated with a decrease in urethral pressure closure, but there were no changes in pelvic organ support or the force of vaginal closure. It is clear then that even without pregnancy there is a change in bladder function with increasing age.

Costs and benefits of bisphosphonates in patients on glucocorticoids

Patients on glucocorticoids are at risk from osteoporosis. Are bisphosphonates of any help? Data on subjects receiving glucocorticoids were collected from subjects on the UK General Practitioner Data Base (Rheumatology 2007; 46: 440–6). Costs for fractures and medication were collected from the National Institute of Clinical Excellence. These also were used to calculate the Quality of Adjusted Life Years (QALY) of subjects. Prevention of a fracture over five years in women on 5 mg of a glucocorticoid daily cost £41,000 in those under 60 and £17,000 in those aged 60–79. In men aged under 60 prevention of a fracture cost £40,000 and in those aged 60–79, £15,000. Prevention of a fracture in patients on 15 mg of a glucocorticoid daily cost £13,000 in those under 60 and £33,000 for those aged 60–79. In men it cost £35,000 in those under 60 and £33,000 in those aged 60–79. It is clear that age, gender and the dose of glucocorticoids have a major effect on the cost benefit of glucocorticoids.

Epidemiology of insomnia

It is a received wisdom that insomnia is a major problem in old age. This was tested initially and a year later in patients from five practices in Staffordshire (Sleep 2007; 30: 274–80). Out of 2,368 subjects, 37% had insomnia and 15% who did not have this initially had developed it one year later. The main causes of its onset were pain and depression. The condition had resolved itself in 31% of those who had suffered from it initially. The strongest factor associated with persistent insomnia was old age. My own approach to insomnia is to wine and dine well and then sit in a warm lecture theatre where a soporific lecturer presents slides with all the lights off.

DIOGENES

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