From the journals

Management of stroke: back to basics

There is continuing debate about the efficacy and safety of recombinant tissue plasminogen activator (rTPA) in acute stroke. Even with advanced neuroradiological imaging it is still not clear which patients may get maximal benefit. Estimates from countries with several years' experience suggest that at best rTPA will only be administered to less than 5% of all patients with ischaemic stroke. Hence alternative strategies are required for treatment of acute stroke.

At present there is no safe and effective fibrinolytic therapy that can be administered to the majority of patients with acute stroke. However, the provision of specialist stroke services and stroke units is associated with reduction in mortality and dependency. Specialist stroke care is based on simple principles such as early management of swallowing disorders, maintenance of hydration, nutrition and mobilisation. Although abnormalities in physiological variables such as post-stroke hyperglycaemia, hypoxia, hypertension and pyrexia are frequent findings immediately following stroke the evidence base is lacking for many clinical interventions at stroke units. The Glucose Insulin in Stroke Trial (GIST UK) is expected to give answers to some of the management queries. Quarterly Journal of Medicine 2003; 96: 179-81.

Medical treatment of nephrolithiasis: high intake of liquids and dietetic measures are useful

A low volume of urine is a risk factor for all types of renal calculi. High intake of liquids reduces onset of kidney stones and prevents relapses of calcium induced idiopathic stone disease. The increase in water intake to 2 to 3 litres per day should be reached gradually.

The diet in developed countries consists of excess refined carbohydrates, animal proteins and salt with a low intake of fruits and vegetables. This type of a diet leads to excess excretion of calcium, oxalate and uric acid and reduced excretion of citrate. Urinary citrate protects against calcium stones. Other nutrients such as excess of animal proteins and salt (NaCl), and a lack of potassium in the diet have been identified as inducers of hypercalciuria. Following a 5-year randomised trial in hypercalciuric adult males, it is recommended that patients with hypercalciuria should be started on a normal calcium, low protein and a low salt diet after the first episode of urinary stone. Endocrinology and Metabolism Clinics of North America 2002; 31: 1051-64.

New classification of hypertension

The primary goal of treatment of hypertension is to prevent cardiovascular disease and death. The need for drug therapy is determined on a combined assessment of the blood pressure level and the absolute risk of cardiovascular disease. Only about 70% of patients with hypertension are detected, and about 30% of them are not controlled optimally. The new classification of hypertension has introduced a “prehypertension” group for those with a blood pressure of 120-139 mm.Hg systolic and 80-89 mm.Hg diastolic. Intervention by way of life style modification is recommended to prevent hypertension in the general population.

Patients with blood pressures of 140 to 159 mm.Hg systolic and 90 to 99 mm.Hg diastolic are classified as stage 1 hypertension, and patients with over 160 mm.Hg systolic and over 100 mm.Hg diastolic are classified as stage 2. Both stage 1 and stage 2 hypertension need drug treatment together with life style modification. Patients with diabetes are at high risk and drug therapy is given even if their blood pressure is in the “prehypertension” stage. Treating systolic blood pressure and diastolic blood pressure to targets that are less than 140/90 mm.Hg is associated with a decrease in cardiovascular complications. In patients with diabetes or renal disease, blood pressure should be reduced to 130/80 mm.Hg or less. Journal of the American Medical Association 2003; 289: 2560-71.

Cardiac troponins

Troponin T and troponin I are part of the actomyosin contractile component of muscle cells. The two cardiac forms of these proteins are known as cardiac troponin T and cardiac troponin I. Cardiac troponins are slowly released from necrosing myocardium into the circulation. These proteins remain in the circulation for several days after a cardiac event, and hence the opportunity for identifying an infarction is prolonged. Immunoassays have been developed to recognise
only the cardiac forms of troponin T and troponin I, and both forms give similarly useful clinical information. Cardiac troponins have significantly reduced the diagnostic role of creatine kinase-MB isoenzyme. Australian Prescriber 2003; 26: 88-9.

Evaluating sleep and benefits of sleep hygiene

Details of a patient’s sleep pattern is necessary in the management of insomnia. Asking the patient to complete a sleep log over a few days helps to identify factors relevant to the sleep disturbance. When evaluating a patient’s sleep, it is important to determine factors such as habits and patterns of getting ready to go to bed, time of going to bed, time of going to sleep, times of waking, times to get back to sleep etc.

Sleep hygiene includes social and behavioural interventions to help patients improve their sleep. Developing a regular pattern of going to bed and getting up, avoiding clock watching and stopping activities needing intense concentration some time before bed are some of the interventions recommended. Anxiety management and relaxation techniques assist in controlling the concerns of patients that the forthcoming night may be disrupted with poor sleep. Australian Prescriber 2003; 26: 78-81.

Eye muscle surgery for abnormal head posture due to gaze palsy

Diplopia and abnormal head posture due to gaze palsy, which occurs mostly following a cerebrovascular accident or a tumour may be treated surgically. Surgery can be performed under local anaesthesia. Although ocular motility is not improved in these patients, improvement in the head posture is attractive. A trial of prisms perioperatively is useful to assess benefits of surgery. Eye 2003; 17: 549.

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Bayer’s woes (I)

Bayer’s woes arose because cerivastatin, launched as the sixth statin in the marketplace at the end of 1997, became linked with serious myopathy, severe enough to lead to rhabdomyolysis and death, especially when given with a fibrate such as gemfibrozil to lower triglycerides. Cerivastatin was launched at lower doses, and Bayer subsequently sought and gained approval for doses of 0.4 and 0.8 mg. The company voluntarily withdrew the drug in the USA on Aug 8, 2001. By then, the drug had been linked to over 100 deaths from rhabdomyolysis. In a letter in February, 2002, that reported a study of prescription monitoring and adverse-reaction reporting (N Engl J Med 2002; 346: 539-40), scientists at the US Food and Drug Administration (FDA) said that the rate of fatal rhabdomyolysis with cerivastatin was 16-80 times higher than for any other statin [31 deaths with cerivastatin vs 42 with all five other statins]. When cases of concomitant use of cerivastatin with gemfibrozil or lovastatin were excluded, the rate was still 10-50 times higher. With cerivastatin alone, six investigated deaths occurred after use of 0.4 mg and 12 with 0.8 mg.