ABSTRACTS

EXERCISE AND CHRONIC FATIGUE SYNDROME

Chronic fatigue syndrome (CFS) is common, and there is still no good theory as to its aetiology, no conclusive laboratory marker, and no cure. There is good evidence that graded exercise therapy and cognitive behavioural therapy can help patients with CFS, but of three randomised controlled trials that have assessed graded exercise treatment none accounted for the cyclical nature of the condition. The reports of benefit from these trials may be reflecting the outcome of treatment, the fluctuating nature of the syndrome or a combination of the two. Researchers from Australia set out to examine the effects of a graded exercise programme while trying to account for this possible confounding factor by including pacing.

Using 61 patients aged between 16 and 74, diagnosed with CFS, they examined either graded exercise with pacing, by recording perceived exertion and heart rate (HR), or relaxation/flexibility therapy performed twice daily over 12 weeks. In the graded exercise group, initial exercise duration was between 5 and 15 minutes and intensity was based on the mean HR value achieved during submaximal exercise testing. The exercise consisted of either walking, cycling or swimming and subjects exercised every second day unless they suffered a relapse. The relaxation/flexibility group listened to a relaxation tape and performed selected stretching exercises every second day for 12 weeks. All subjects were contacted by telephone every second week to review their progress and to determine their exercise or relaxation regimen for the following fortnight.

The results support those reported by other studies that a graded exercise programme resulted in a significant improvement in work capacity. This was also reflected by a significantly higher net lactate production and by a significant improvement in the ability of subjects in this group to reach their target HR. The exercise regimen in this study was not associated with any relapse and was associated with a reduction of perceived effort scores associated with the exercise test. This suggests that 12 weeks of exercise may have resulted in subjects experiencing a more normal sense of physical effort, and so a reduction in overall symptoms. Depression and mental fatigue also improved in the graded exercise group. The importance of this particular study is that the graded exercise included a form of pacing and that none of the participants relapsed during the study, suggesting that this form of graded exercise definitely improves function and minimises deconditioning.

Wallman KE, *et al. MJA* 2004; **180:** 444-448.

FIZZY WATER REDUCES WOMEN'S RISK OF HEART DISEASE

Drinking carbonated water rich in sodium apparently reduces the risk of heart disease in postmenopausal women according to a study from Spain. The study was designed to investigate the possible effects of drinking sodium-rich carbonated water on lipoprotein metabolism and endothelial dysfunction in postmenopausal women. None of the women took hormone replacement therapy, either conventional or alternative, or any other treatment known to influence bone and lipid metabolism. Women drank 1 litre of carbonated water with a low mineral content daily for 2 months, followed by 2 months of 1 litre of carbonated water rich in sodium, bicarbonate and chloride. Body mass index was calculated and blood was analysed for total cholesterol, HDL, LDL, triacylglycerol and apolipoproteins, soluble intracellular cell adhesion molecule-1, soluble vascular cell adhesion molecule-1 and glucose.

The results showed that sodium-rich carbonated water decreased total cholesterol and LDL, while HDL increased, reducing cardiovascular disease risk indexes. The authors suggest that drinking sodium-rich carbonated water can potentially be beneficial in preventing heart disease and the metabolic syndrome.

Schoppen S, *et al. J Nutr* 2004; **134:** 1058-1063.

TREATING RESTLESS LEGS

It appears that pergolide is effective in treating those unfortunates with restless leg syndrome (RLS). In the PEARLS (pergolide European Australian restless leg syndrome) study researchers randomised 100 patients with idiopathic restless leg syndrome (RLS) to pergolide, 0.25 - 0.75 mg, in the evening, or placebo for 6 weeks. After this, patients with response on the patient global impression (PGI) scale continued on double-blind pergolide or placebo and non-

responders received open-label pergolide up to 1.5 mg/day for 12 months. Quality of sleep and periodic limb movement during sleep were monitored and the severity of RLS was assessed.

Results showed that pergolide decreased the severity of RLS and increased the quality of sleep. However, nausea and headache were more frequent in the group treated with pergolide than in controls. But, the authors concluded that pergolide substantially improved periodic limb movement measures and subjective sleep disturbance associated with RLS.

Trenkwalder C, *et al. Neurology* 2004; **62:** 1391-1397.

ZINC AIDS RECOVERY IN CHILDHOOD PNEUMONIA

Pneumonia is a leading cause of morbidity and mortality in young children. Reversing the early signs of severe pneumonia, namely intercostal recession, hypoxia, and tachypnoea, is known to improve outcome. The authors of this paper hypothesised that zinc, an acute phase reactant, would shorten the duration of severe pneumonia and time in hospital.

In a double-blind placebo-controlled clinical trial in Matlab Hospital, Bangladesh, they randomised 270 children aged 2 - 23 months to receive elemental zinc (20 mg/day) or placebo, plus the hospital's standard antimicrobial management, until discharge. The outcome was time to resolution of severe pneumonia as measured above, and discharge from hospital. Discharge was allowed when respiratory rate was 40 per minute or less for 24 consecutive hours while patients were maintained only on oral antibiotics.

The authors found that the group receiving zinc had severe pneumonia for a shorter time and a shorter overall stay in hospital. All effects were greater when children with wheezing were omitted from the analysis. They concluded that adjuvant treatment with 20 mg/day accelerates recovery from severe pneumonia in children, and could help reduce antimicrobial resistance by decreasing multiple antibiotic exposures, and lessen complications and deaths where second-line drugs are unavailable.

Brooks WA, *et al. Lancet* 2004; **363:** 1683-1688.

Bridget Farham

SINGLE SUTURE

DON'T KILL THE *H. PYLORI*

Patients who have *Helicobacter pylori* in their gut do not seem to get acid reflux, but if they are given drugs that eradicate the bacteria, they experience severe rebound acid secretion. The phenomenon of rebound acid secretion is also seen in patients who stop taking the proton pump inhibitor omeprazole and who by definition do not have *H. pylori* present in their gut. So, there appears to be a fine balance between the risk of ulcers and that of acid reflux.

Gastroenterology 2004; **126:** 980-988.

SINGLE SUTURE

GLOBAL BURDEN OF DISEASE UNDER-REPORTED

The global burden of disease is not well represented in randomised controlled trials, according to a recent publication in Canada. Of 286 trials examined, less than half addressed any of the 35 leading causes of mortality and disability, and only 1 in 6 was thought to be highly relevant to global health. The most studied conditions were HIV infection and vascular disease.

Canadian Medical Association Journal 2004; **170:** 1673-1677.