Low-dose HRT reduces cardiovascular risk in women with diabetes

Observational studies suggested that hormone-replacement therapy (HRT) has a cardio-protective effect in postmenopausal women with type 2 diabetes, but the results of randomized, controlled trials indicated that conventional HRT might, in fact, increase cardiovascular risk. Researchers in the UK, therefore, evaluated the effect of low-dose HRT on cardiovascular risk factors and glucose metabolism in 28 women (mean age 62 years) with type 2 diabetes.

Participants were randomly allocated to receive once-daily tablets that contained either HRT (1 mg 17β estradiol and 0.5 mg norethisterone) or placebo. At 3 months, a substantial decrease from baseline was observed in fasting plasma glucose level (–9.4% versus +2.3%, respectively) and in total cholesterol (–13.7% versus +1.0%, respectively) in HRT-treated women compared with placebo-treated women. No significant difference was observed between the groups in relation to endogenous glucose production, hyperinsulinemic suppression of glucose production, glucose clearance rate, or levels of glycated hemoglobin, C-reactive protein, or triglycerides.

The authors conclude that continuous, low-dose HRT has beneficial effects on fasting glucose and cholesterol levels in postmenopausal women with type 2 diabetes, without the adverse effects (increased glucose clearance, triglycerides and C-reactive protein levels) seen with conventional HRT. The conclusions of the study are limited by the small sample size, however. Given the potential benefits and the possible risks associated with conventional HRT, the authors believe that the results of this study warrant a large-scale trial of low-dose HRT, in women with and without diabetes.

Original article Kernohan AFB *et al.* (2006) Effects of low-dose continuous combined hormone replacement therapy on glucose homeostasis and markers of cardiovascular risk in women with type 2 diabetes. *Clin Endocrinol* [doi:10.1111/j.1365-2265.2006.02679.x]

Rimonabant therapy for obesity results in modest weight loss

Rimonabant is the only drug currently under investigation as an antiobesity medication that has been tested in phase III clinical trials. Rimonabant is a selective cannabinoid receptor 1 antagonist that is thought to reduce hunger and food consumption through its effects on the endocannabinoid system. The Cochrane collaboration has reviewed four randomized, controlled trials that assessed the effects of 1 year of rimonabant treatment in 6,625 overweight and obese adults.

Meta-analysis of the studies showed that treatment with 20 mg daily rimonabant resulted in a 4.9 kg greater weight loss and a 3.8 cm smaller waist circumference, compared with placebo treatment. Other favorable effects included a reduction in blood pressure, a decline in plasma triglyceride level and an increase in HDL cholesterol. Treatment with 20 mg rimonabant, however, also increased the risk and severity of adverse effects, for example neurologic and gastrointestinal symptoms. Rimonabant 5 mg reduced body weight by 1.3 kg and waist circumference by 1.2 cm (compared with placebo), but did not cause any significant changes in patients' blood pressure and lipid profiles.

The authors conclude that 20 mg daily rimonabant therapy can result in a modest but potentially beneficial weight loss. The observed results should be interpreted with some caution, however, since the evaluated studies presented some deficiencies in methodologic quality. Studies with longer follow-up and more rigorous methodology must be performed, to test the efficacy and safety of rimonabant as antiobesity drug.

Original article Curioni C and André C (2006) Rimonabant for overweight or obesity. *The Cochrane Database of Systematic Reviews*, Issue 4, Art. No CD006162.pub2

Growth hormone plus testosterone reduces body fat in elderly men

Aging in men is associated with an increase in body fat, particularly in the abdomen. Similar effects on body composition are seen in individuals with hypogonadism or growth-hormone deficiency, and these effects can be reversed by treatment with testosterone or growth hormone, respectively. Giannoulis *et al.,* therefore, investigated the effect of growth hormone and testosterone treatment on body fat and lipid metabolism in a population of healthy men aged 65–80 years.