

LHRH agonist versus LHRH agonist plus chemotherapy. A total of 14 trials, which included almost 12,000 women, met the inclusion criteria. Goserelin was the most commonly prescribed LHRH agonist. Women who received an LHRH agonist plus tamoxifen had a reduced risk of disease recurrence and improved survival compared with those who received either agent alone. Patients' outcomes were also improved when an LHRH agonist (with or without tamoxifen) was added to chemotherapy. Furthermore, fewer adverse effects occurred with adjuvant LHRH agonist therapy than with chemotherapy.

The results reported by Sharma *et al.* suggest that adjuvant LHRH agonist therapy could enhance the response of hormone-sensitive, early-stage breast cancer to standard treatment regimens; however, the studies included in the systematic review were of insufficient duration to enable a reliable assessment of the long-term effects of this approach.

Original article Sharma R *et al.* LHRH agonists for adjuvant therapy of early breast cancer in premenopausal women. *Cochrane Database of Systematic Reviews* 2008, Issue 4. Art. No.: CD004562. doi:10.1002/14651858.CD004562.pub3

Glycemic control reduces oxidative stress in morbidly obese, diabetic individuals

Oxidative stress increases oxidation of LDL and, thereby, influences the pathogenesis of diabetes mellitus. Garrido-Sánchez *et al.* conducted a study to determine whether the improvements in carbohydrate metabolism brought about by bariatric surgery affect levels of oxidized LDL (oxLDL) and antibodies against oxLDL.

Of the 73 morbidly obese patients enrolled in this study, 21 had a fasting glucose level suggestive of type 2 diabetes mellitus (≥ 7.0 mmol/l). At baseline, oxLDL levels were significantly higher and levels of IgM antibodies against oxLDL significantly lower in the 21 morbidly obese patients with diabetes mellitus than in 11 healthy, nonobese individuals with normal or mildly impaired fasting glucose ($P < 0.05$).

Levels of both IgM and IgG antibodies against oxLDL had significantly increased from baseline values by 7 months after bariatric surgery in the morbidly obese patients with diabetes

mellitus ($P < 0.05$ for both comparisons), which was reflected in a significant drop in oxLDL levels ($P < 0.05$). Improved carbohydrate metabolism (as demonstrated by intravenous glucose tolerance test results) was the main factor associated with the changes in the levels of antibodies against oxLDL and oxLDL in this group of patients.

The authors suggest that improved glycaemic control after bariatric surgery might have a beneficial effect on the response to oxidative stress in morbidly obese patients with diabetes mellitus.

Original article Garrido-Sánchez L *et al.* (2008) Improved carbohydrate metabolism after bariatric surgery raises antioxidantized LDL antibody levels in morbidly obese patients. *Diabetes Care* 31: 2258–2264

Dopamine agonists: a new pharmacological treatment for Cushing disease

Surgery is currently the first-line treatment for Cushing disease; however, studies of dopamine agonists have demonstrated effective control of cortisol secretion in patients with Cushing disease. Pivonello and colleagues investigated the efficacy of one such agonist, cabergoline, in short-term (3 months) and long-term (12–24 months) treatment of Cushing disease.

The effects of treatment with cabergoline on tumor size, cortisol secretion, and the occurrence of adverse effects were observed in 20 patients (age range 24–60 years, 15 females) with Cushing disease in whom surgery was unsuccessful. Cabergoline was initially administered at a dose of 1 mg per week, which was increased by 1 mg each month until urinary cortisol levels normalized, or the maximal dose (7 mg per week) was reached.

After 3 months of treatment, cortisol secretion had declined in 15 patients, 7 of whom achieved normalization. Of these, 5 patients subsequently experienced relapse and 2 developed drug intolerance after continued treatment. Control of cortisol secretion was maintained in 10 patients after 12 months, and in 8 after 24 months (median cabergoline doses of 6.0 mg/week and 3.5 mg/week, respectively). Cabergoline treatment also improved glucose intolerance and hypertension, and caused no major adverse effects.