The addition of sitagliptin improves glycemic control in patients with type 2 diabetes

A recently published study examined the effects of adding sitagliptin—an inhibitor of dipeptidyl peptidase 4—to therapy for patients with type 2 diabetes mellitus who were inadequately controlled on treatment with glimepiride alone or glimepiride in combination with metformin. A total of 441 patients (age range 18–75 years) were included in this multinational parallel-group study. Following a 2-week, single-blind placebo run-in period, patients entered a 24-week, double-blind, placebo-controlled treatment period. The study group consisted of stratum 1 (glimepiride alone, $n=212$) and stratum 2 (glimepiride plus metformin, $n=229$). Patients in each stratum were randomized to sitagliptin 100 mg once daily or placebo.

Sitagliptin significantly decreased HbA_{1c} levels from baseline relative to placebo in the overall cohort as well as in each stratum. Treatment with sitagliptin also significantly increased the proportion of patients obtaining an HbA_{1c} level of <7% in the overall study population and in stratum 2. The addition of sitagliptin significantly reduced fasting plasma glucose levels from baseline relative to placebo.

Sitagliptin was generally well tolerated, although the incidence of hypoglycemia was higher in patients taking the drug. A modest, but statistically significant weight gain was observed in patients on sitagliptin.

The authors conclude that sitagliptin is effective and well tolerated in patients with type 2 diabetes who are inadequately controlled on glimepiride or glimepiride plus metformin.

Original article Hermansen K *et al.* (2007) Efficacy and safety of the dipeptidyl peptidase-4 inhibitor, sitagliptin, in patients with type 2 diabetes mellitus inadequately controlled on glimepiride alone or on glimepiride and metformin. *Diabetes Obes Metab* **9:** 733–745

Highly sensitive thyroglobulin assay is useful in the follow-up of patients treated for DTC

Serum thyroglobulin is a highly specific marker for residual thyroid tissue and/or recurrence or metastases in patients previously treated for differentiated thyroid cancer (DTC).

Iervasi *et al.* analyzed the effects of using a highly sensitive automated thyroglobulin assay in 160 consecutive patients treated for DTC (mean age 51.2 years). Results were compared with those obtained using a routinely employed assay. Thyroglobulin was measured during suppression of endogenous TSH by levothyroxine and after stimulation with recombinant human TSH (rhTSH).

The measurable amount of thyroglobulin is 0.9 µg/l with the standard assay and 0.1 µg/l with the highly sensitive assay. The response to rhTSH was classified as 'positive' if thyroglobulin levels were >2 µg/l or as 'negative' if they remained <2 µg/l.

With the standard assay, thyroglobulin was undetectable during suppression with levothyroxine in all patients who later had a 'negative' response to rhTSH. Thyroglobulin was detectable in 17% of patients who later had a 'positive' response to rhTSH.

With the highly sensitive assay, thyroglobulin was undetectable during suppression with levothyroxine in 90% of patients who later had a 'negative' response to rhTSH. Thyroglobulin was detectable in all patients who later had a 'positive' response to rhTSH.

The authors conclude that assays with a higher functional sensitivity could be a useful diagnostic tool in the follow-up of patients treated for DTC, allowing for the detection of thyroglobulin concentrations not otherwise measurable and for earlier identification of persistent or recurrent disease.

Original article Iervasi A *et al.* (2007) Clinical relevance of highly sensitive Tg assay in monitoring patients treated for differentiated thyroid cancer. *Clin Endocrinol* **67:** 434–441

HRT increases cardiovascular risk when started many years after the menopause

In the 1980s, hormone replacement therapy (HRT) in postmenopausal women was well established, but the effect of HRT on cardiovascular disease, cancer and osteoporosis was still unclear. A series of randomized controlled trials was started and, over the next few years, several reported that HRT does not protect against cardiovascular disease, but suggested that the risk was actually increased by treatment when commenced many years after menopause.

The women's international study of long duration estrogen after menopause (WISDOM),