GLOSSARY

INCRETIN HORMONES

Gut-derived peptides that potentiate nutrient-stimulated insulin secretion

The authors conclude that patients with MI should receive lifestyle advice on how to reduce the risk of developing type 2 diabetes and that these patients should be considered for annual screening for diabetes or glucose intolerance.

Marie Lofthouse

Original article Pajunen P *et al.* (2005) Five-year risk of developing clinical diabetes after first myocardial infarction; the FINAMI study. *Diabet Med* 22: 1334–1337

Improvement in NAFLD after laparoscopic weight-loss surgery

The incidence of nonalcoholic fatty liver disease (NAFLD) is rising steadily; this might be caused by its association with severe obesity and metabolic syndrome. In a recent study, Mattar *et al.* examined the outcomes of laparoscopic weight-loss procedures in severely obese patients with NAFLD.

Overall, 70 patients were included in this study. Patients included in the study had undergone laparoscopic weight-loss surgery at the University of Pittsburgh, US between March 1999 and August 2004, had a diagnosis of NAFLD, and had agreed to undergo serial liver biopsies.

Postoperatively, patients experienced a loss of excess mean body weight of $59\% \pm 22\%$. Major improvements were also noted in the biochemical markers of metabolic syndrome, fasting blood glucose and hemoglobin A_{1c}. Furthermore, there were marked improvements in liver steatosis (from 88% to 8%), inflammation (from 23% to 2%) and fibrosis (from 31% to 13%). Inflammation and fibrosis also resolved in 37% and 20% of patients, respectively.

The authors highlight the importance of obesity and, in turn, metabolic syndrome, in the NAFLD disease process. The authors conclude that surgical weight-loss procedures significantly improve NAFLD in obese patients, as a significant proportion experienced reversal of liver disease; furthermore, there were no deaths and few complications. Further studies are needed, however, to define the interactions between obesity, metabolic syndrome, and NAFLD.

Marie Lofthouse

Original article Mattar SG *et al.* (2005) Surgically-induced weight loss significantly improves nonalcoholic fatty liver disease and the metabolic syndrome. *Ann Surg* 242: 610–620

Vildagliptin successful in treating type 2 diabetes

The INCRETIN HORMONES glucagon-like peptide 1 and glucose-dependent insulinotropic peptide are degraded by the enzyme dipeptidyl peptidase 4 (DPP4); DPP4 inhibitors have been developed to prolong the activity of these hormones and assist in treating type 2 diabetes. Ristic *et al.* have tested the efficacy, safety and tolerability of vildagliptin, a long-acting DPP4 inhibitor, in this randomized, double-blind, parallel-group, dose-finding study.

After 4 weeks on placebo, 279 patients from 91 centers (US and Russia) were allocated to receive once-daily doses of 25 mg, 50 mg or 100 mg vildagliptin, or twice-daily doses of placebo or 25 mg vildagliptin. Efficacy was determined by reduction in glycosylated hemoglobin levels, a measure of long-term glycemia. Other variables measured included mean levels of 4 h-postprandial glucose and insulin, and β -cell function.

Although all groups, including placebo, showed a reduction in glycosylated hemoglobin levels over the 12 weeks, intention-to-treat analysis showed this was significant only in patients administered once-daily 50 mg or 100 mg vildagliptin. The once-daily 50 mg dose was also associated with a significant reduction in mean 4 h-postprandial glucose level, and the once-daily 100 mg dose with a significant increase in mean 4 h-postprandial insulin as well as an increase in β -cell function. All doses appeared to be safe and well-tolerated.

A once-daily 50 mg or 100 mg dose of vildagliptin for 12 weeks has shown benefit for individuals with type 2 diabetes; further studies are underway to determine whether longer-term treatment will maintain glycemic control.

Rebecca Doherty

Original article Ristic S *et al.* (2005) Improved glycaemic control with dipeptidyl peptidase-4 inhibition in patients with type 2 diabetes: vildagliptin (LAF237) dose response. *Diabetes Obes Metab* 7: 692–698

Cholesterol levels in the US continue to decline

During the 1990s, analysis of data from the National Health and Nutrition Examination Surveys demonstrated a consistent decline in mean total cholesterol levels in US adults between 1960 and 1994 and a decrease in mean