American Diabetes Association 73rd Scientific Sessions

21–25 June 2013, Chicago, IL, USA

Phase III data revealed for dulaglutide once-weekly

Eli Lilly and Company has announced new data from three Phase III Assessment of Weekly Administration of LY2189265 in Diabetes (AWARD) control trials, which show that the investigational once-weekly glucagon-like peptide 1 (GLP-1) receptor agonist dulaglutide was more effective in lowering HbA_{1C} levels for people with T2D than its comparators, including placebo, exenatide, metformin and sitagliptin

Participants receiving dulaglutide (1.5 mg) also displayed a sustained weight loss throughout the duration of all three trials. Mild, moderate and transient nausea were the most frequently reported side-effects of dulaglutide, with no events of severe hypoglycaemia observed. "These results are a promising step forward in our effort to provide a new, once-weekly GLP-1 treatment option, giving patients another choice to help manage their diabetes," said Sherry Martin, senior medical director, Lilly Diabetes.

Obesity and T2D: CVD risk unaffected by intensive lifestyle intervention

Results from the Action For Health in Diabetes (LOOK AHEAD) study show that an intensive lifestyle intervention did not reduce the risk of cardiovascular disease (CVD) in obese people with T2D when compared to diabetes support and education.

However, analyses of data from the two-armed randomised control trial of over 5000 participants, did reveal other benefits that were associated with the weight-loss focussed intervention. These included a decreased risk of microvascular complications and depression, an improved physical quality of life, lower medical costs and a reduced need for hospitalisation, outpatient care and medications.

New DCCT/EDIC results unveil the benefits of intensive therapy in T1D

Thirty years after the Diabetes Control and Complications Trial/ Epidemiology Diabetes Interventions and Complications (DCCT/EDIC) study began in 1983, investigators reported new evidence suggesting that long-term, intensive glycaemic control is associated with near-normal blood glucose levels and a subsequent reduction in the risk of developing various diabetes-related complications.

On the study's 30-year anniversary, new data from the DCCT/EDIC unveiled a correlation between tight glucose control achieved with insulin pump therapy, regular insulin injections and frequent fingerstick testing with a decrease in the incidence of nerve, kidney and eye complications of up to 75%.

The risk of impaired kidney function was lowered by 50%, cardiovascular events (including heart disease and stroke) were reduced by approximately 60% and the risk of vision-threatening eye disease was decreased by 50%. Investigators also reported a smaller risk of diabetes-related hand and shoulder stiffening in the study cohort.

Dr David Nathan, director of the Massachusetts General Hospital Diabetes Center, Boston and study co-chair, said: "The DCCT/EDIC has given new hope to people with type 1 diabetes."

Encouraging preliminary data for dapagliflozin use in T1D

New data from AstraZeneca and Bristol-Myers Squibb reveal that mean daily blood glucose levels were reduced in adults with T1D (n=70) after 7 days of treatment with dapaglifozin and background insulin compared to insulin and placebo. Throughout day 7, a downwards trend in mean 7-point blood glucose was observed in all treatment groups.

Further results from the 2-week, Phase IIa pilot study show that the total daily insulin dose required by participants receiving dapagliflozin decreased at day 7. Hypoglycaemia was commonly reported in all groups, but was more frequently observed with dapaglifozin. There were no events of withdrawal from the study due to inadequate glycaemic control and incidents of genital or urinary tract infections were low.

Dr Robert Henry, director, Center for Metabolic Research VA San Diego Healthcare System and primary study investigator, said: "Many people with type 1 diabetes may benefit from other treatment options in addition to insulin." He continued: "These preliminary data with dapagliflozin added on to insulin are encouraging and support the need for further studies."

One in five people with diabetes report feelings of discrimination

According to new research from Novo Nordisk's Diabetes Attitudes, Wishes and Needs 2 (DAWN2™) study, one in five people with diabetes feel discriminated against, and find little support within their wider community.

Researchers collected opinions from over 15 000 people, including individuals with diabetes and those caring for people with the condition. The global study found that one in five family members also believe that their relatives experience discrimination because of their diabetes, and one in three healthcare professionals were concerned about diabetes-related discrimination.

Further results suggest this perceived discrimination is associated with emotional distress. Considerable variation in perceived discrimination was reported between countries, highlighting pathways for improvement and model examples to follow.

Positive results for empagliflozin and linagliptin

A series of Phase III clinical trials performed by Boehringer Ingelheim and Eli Lilly and Company have revealed positive data for the experimental sodium-glucose co-transporter 2 (SGLT2) inhibitor, empagliflozin. Significant reductions in blood glucose and body weight were observed in adults with T2D when empagliflozin was added to either basal insulin or metformin with or without a sulphonylurea.

Boehringer Ingelheim and Eli Lilly and Company have also announced new data demonstrating statistically significant reductions in HbA_{1c} after 12 weeks of linagliptin treatment in adults with T2D and severe renal impairment.

Artificial pancreas: "Smart" device can reduce nocturnal hypoglycaemia

An insulin pump which can be programmed to temporarily stop insulin administration if blood glucose levels fall below a predefined value (typically 70 mg/dL) has been shown to decrease the incidence and duration of nocturnal hypoglycaemia in people with T1D.

The study analysed data from 247 participants, who were randomised to receive the artificial pancreas system either with or without its threshold suspend function for a total of 3 months.

By halting insulin administration for 2 hours following the detection of threshold blood glucose levels, the incidence of nocturnal hypoglycaemia was reduced by 32%, with the duration and severity of these events decreased by 38%.

This threshold suspend function has been incorporated into the MiniMed 530 G system manufactured by Medtronic, and is currently being reviewed by the US Food and Drug Administration.

Sanofi announce Phase III data for lixisenatide once-daily

Sanofi US released data showing that their once-daily prandial glucagon-like peptide 1 (GLP-1) receptor agonist, lixisenatide, decreased daytime exposure to postprandial glucose (PPG) and consequently lowered HbA_{1c} in people with T2D when used as an addition to standard care, including basal insulin and oral anti-diabetic agents (OADs).

Pooled analysis of three Phase III randomised control trials displayed a significantly greater reduction in PPG exposure when lixisenatide was added to standard care, compared to standard care plus placebo ($P<0.0001$).