American Diabetes Association 72nd Scientific Sessions

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Missed insulin dose and hypoglycaemia link in T2D

Findings from the GAPP2™ survey have revealed that one in four people with T2D missed or did not dose their long-acting basal insulin correctly in the previous 30 days.

The data showed that over one third of individuals had experienced a self-treated episode of hypoglycaemia.

In addition, late-breaking data at the Scientific Sessions showed that there is a correlation between dosing irregularities and hypoglycaemia. People who had missed a basal insulin dose in the previous 30 days were much more likely to report a self-treated hypoglycaemia event over the same period than those who had taken their insulin properly.

For people with diabetes it is essential to maintain optimal glycaemic control in order to help reduce long-term complications.

"A considerable proportion of people with T2D are missing or mistiming their long-acting insulin," said Lead Researcher and Health Psychologist, Dr Meryl Brod. She added, "The challenges of addressing dosing irregularities and self-treated hypoglycaemia are critical for improving patient care as they greatly impact the achievement of optimal glycaemic control."

Lyxumia® achieves target blood glucose in T2D

Data have shown that Lyxumia® (lixisenatide), a once-daily investigational glucose-like peptide-1 agonist, helps people with T2D and uncontrolled HbA_{1c} to achieve target blood glucose levels, and significantly lowers post-prandial glucose when taken in combination with basal insulin and oral antidiabetes agents.

Data uncover glucose-lowering properties of an existing pain medication

Salsalate, a medicine related to aspirin and salicylate, has been found in small preliminary trials to have glucose-lowering properties, and could be used to treat people with T2D. The researcher also reported on the drug's anti-inflammatory effects.

Salsalate is an inexpensive pain medication that has been used for many years for the treatment of rheumatoid arthritis.

The National Institutes of Health sponsored the 12-month trial, in which 286 people with T2D were given salsalate or a placebo.

Researchers found that HbA_{1c} levels were lowered by 0.24% and fasting blood glucose levels decreased by 0.6 mmol/L over a 48-week period.

Steven Shoelson, Principal Investigator of the study and Associate Director of Research at the Joslin Diabetes Center, Boston, MA, USA, commented on the findings, "The exciting thing here is that this drug is relatively inexpensive and has a long safety record for other uses, such as treating joint pain." He added, "We now have to determine whether the degree to which this drug lowers blood glucose levels is large enough to warrant using it as an addition to the diabetes drug armamentarium."

Major study findings suggest that insulin glargine does not increase cancer risk

Results from three studies investigating long-acting insulin use in the US and Europe have confirmed that the risk of developing a wide range of cancers while taking insulin glargine (Lantus®) is comparable to that with other insulins. A series of prior studies had suggested a potential correlation between insulin glargine and an increased risk of developing cancer.

The extensive European and US studies compared the cancer risk from insulin glargine with other long-acting insulins. In only one study, carried out by researchers in Kaiser Permanente, breast cancer was found to show a "suggestion" of an increased risk. Laurel Habel, the Principal Investigator at Kaiser Permanente, commented that the results "should be viewed cautiously given the relatively short duration of glargine use and the large number of associations examined."

Peter Boyle, President of the International Prevention Research Institute in Lyon, France and lead study investigator said of the large-scale data, "There was no difference in risk between glargine and other insulins found in any of the predefined primary and secondary hypotheses of this study."

Insulin degludec reduces nocturnal hypoglycaemia

Insulin degludec, an experimental insulin, has been found to significantly reduce the rate of dangerously low night-time blood glucose levels in adults with T2D, according to new data.

The ultra-long-acting basal insulin, developed by Novo Nordisk, also led to an equivalent improvement in glucose control over a period of 52 weeks compared with insulin glargine, marketed by Sanofi under the name Lantus®.

Both medicines were given once daily to people with T2D who had not previously been treated with insulin. Insulin degludec was also found to be associated with noticeably lower rates of severe hypoglycaemia compared with insulin glargine.

Bernard Zinman, lead author of the study and Director of the Diabetes Centre at Mount Sinai Hospital, New York, NY, USA, commented, "Nocturnal hypoglycaemia is a particular challenge for people living with diabetes as these episodes are often unpredictable and difficult to detect." He added, "This study demonstrated that treatment with insulin degludec significantly reduced the rate of nocturnal hypoglycaemia."

Target glucose levels with once-weekly Bydureon™

Amylin Pharmaceuticals and Alkermes announced a significantly larger proportion of people with T2D who use once-weekly exenatide (Bydureon™) achieved greater glucose control and weight loss compared with those using once- or twice-daily insulin detemir (Levemir®), developed by Novo Nordisk.

"In this study, treatment with Bydureon™ resulted in a significantly greater proportion of patients achieving target glucose levels compared with insulin detemir and was associated with weight loss and a lower risk of hypoglycaemia," said Melanie Davies, Professor of Diabetes Medicine at the University of Leicester.

Glucose reduction and weight loss with empagliflozin for up to 90 weeks

Empagliflozin achieved sustained glucose reduction and weight loss for up to 90 weeks in adults with T2D, according to data from a phase IIb open-label extension study, which was presented by Boehringer Ingelheim and Eli Lilly at a late-breaking session.

Data showed that empagliflozin taken alone or as an add-on to metformin therapy lowered HbA_{1c} levels, fasting blood sugar levels and body weight.

Empagliflozin inhibits sodium–glucose co-transporter 2 (SGLT2), blocking reabsorption of glucose in the kidney and eliminating excess glucose via the urine.

John Smith, Senior Vice President for clinical development and medical affairs, Boehringer Ingelheim, commented on the newly presented data, "These new findings support the phase III trials that are underway to confirm the safety and efficacy profile of empagliflozin."

Dapagliflozin reduces blood glucose levels when added to sitagliptin in T2D

Bristol-Myers Squibb and AstraZeneca announced new data from a 24-week phase III clinical study on the investigational compound dapagliflozin

The findings showed that in people with T2D dapagliflozin notably reduced blood glucose levels compared with a placebo at 24 weeks when either agent was added to sitagliptin.

Dapagliflozin plus sitagliptIn treatment was also associated with significant reductions in total body weight and fasting plasma glucose, with results maintained throughout the duration of a 24-week study extension.