Medical Information Response

Glucagon-Like Peptide-1 Receptor Agonists (GLP-1 RAs) and Type 1 Diabetes

Below, please find a summary regarding Novo Nordisk GLP-1 RAs and type 1 diabetes. Since the manufacturer is the best source of information on its marketed products, please contact the respective manufacturers for a response regarding other GLP-1 RAs. It is important to note that direct comparison between GLP-1 RA trial results should not be made due to differences in individual trial designs, treatment regimens, patient population, and key inclusion/exclusion criteria.

Prescribing Information

Victoza® (liraglutide) injection, Ozempic® (semaglutide) injection, and Rybelsus® (semaglutide) tablets are not indicated for use in type 1 diabetes mellitus.[1-3]

- Victoza® is indicated as an adjunct to diet and exercise to improve glycemic control in patients 10 years and older with type 2 diabetes, and to reduce the risk of major adverse cardiovascular (CV) events (CV death, non-fatal myocardial infarction, or non-fatal stroke) in adults with type 2 diabetes mellitus and established CV disease.[1]
- Ozempic® is indicated as an adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes and to reduce the risk of major adverse CV events (CV death, non-fatal myocardial infarction or non-fatal stroke) in adults with type 2 diabetes and established CV disease.[2]
- Rybelsus® is indicated as an adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes.[3]

Clinical Trial Experience

Victoza®

Victoza® has been studied in patients with type 1 diabetes in two phase 3, placebo-controlled, double-blind trials (ADJUNCT ONE and ADJUNCT TWO) and one randomized, crossover trial.[4-6] In addition, several investigator-sponsored studies evaluating use of Victoza® in patients with type 1 diabetes have been conducted or are ongoing.[7-27]

- ADJUNCT ONE was a 52-week, treat-to-target, multinational, randomized, placebo-controlled, double-blind, parallel-group, phase 3 trial, which investigated the safety and efficacy of adding Victoza® to insulin in adult patients with inadequately controlled type 1 diabetes. Patients were randomly assigned to receive either Victoza® (0.6 mg [n=350], 1.2 mg [n=346], or 1.8 mg [n=346]) or placebo (n=347) as add-on to insulin. Glycosylated hemoglobin (A1C) levels were reduced in all treatment groups with significant reductions noted with Victoza® 1.2 mg and 1.8 mg compared to placebo, and reductions in total insulin dose and body weight were reported with Victoza® 1.2 mg and 1.8 mg. Rate of symptomatic hypoglycemic episodes was significantly higher with Victoza® 1.2 mg and 1.8 mg compared with placebo, and hyperglycemia with ketosis increased significantly for Victoza® 1.8 mg compared with placebo. Gastrointestinal (GI) adverse events were reported in a higher proportion of patients receiving Victoza® 1.2 mg and 1.8 mg compared with placebo.[4]

- ADJUNCT TWO was a 26-week, insulin-capped, multinational, placebo-controlled, double-blind, parallel-group, phase 3 trial, in which adult patients with inadequately controlled type 1 diabetes were randomized to receive Victoza® (0.6 mg [n=211], 1.2 mg [n=209], or 1.8 mg [n=206]) or placebo (n=206). All Victoza® treatment groups had significant reductions in A1C, body weight and total insulin dose. Compared to placebo, rate of symptomatic hypoglycemic episodes was significantly higher with Victoza® 1.2 mg, and hyperglycemia with ketosis increased significantly with Victoza® 1.8 mg. A higher proportion of patients receiving Victoza® 1.2 mg or 1.8 mg reported GI-related adverse events.[5]
- The effects of Victoza® and placebo, both as adjunct to insulin, were compared in 45 adult patients with type 1 diabetes (mean duration of 16.7 years). Patients were randomized to 3 doses of Victoza® or placebo for 4 weeks followed by a 2-3 week washout period and a cross-over to the other treatment for an additional 4 weeks. No change in A1C was noted after 4 weeks of treatment with Victoza® compared to placebo, while a significant reduction in daily insulin dose with Victoza® 1.2 and 1.8 mg as well as decrease in body weight for all Victoza® doses was observed. No episodes of severe hypoglycemia and no differences in hypoglycemic episodes between the groups were reported, while a higher number of GI adverse events were reported in the Victoza® groups with nausea being the most frequently reported event.[6]
- Overall, investigator-sponsored studies demonstrated a reduction in A1C and body weight with a reduction or no change in insulin dose and without an increase in hypoglycemia. Several ongoing investigator-initiated studies evaluating use of Victoza® in type 1 diabetes are ongoing. For additional information on these studies, please visit clinicaltrials.gov.[7-27]

Further information regarding use of Victoza® in type 1 diabetes, including the study design and results of the studies discussed above, can be viewed by clicking the following link.

Ozempic®

The efficacy and safety of whether the addition of Farxiga® (dapagliflozin) tablets, AstraZeneca, to semaglutide once-weekly injection and insulin (triple therapy) improves glycemic control in patients with type 1 diabetes compared with treatment of semaglutide once-weekly injection and insulin (dual therapy) or insulin only (standard) is currently being evaluated in an ongoing study. Additional details can be found on www.clinicaltrials.gov (NCT03899402).

Rybelsus®

At this time, Novo Nordisk has not conducted studies to evaluate the use of Rybelsus® in patients with type 1 diabetes.

If you would like to receive a copy of any of the published references cited in the response, please contact Novo Nordisk Medical Information at (800) 727-6500 or NNMedicalInformation@novonordisk.com.

References

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