

GLP-1 receptor agonists and their role in diabetes management: Benefits, considerations and side effects

Dalia Somjen*

Received: 09-Aug-2023, Manuscript No. FMDM-23-118762; **Editor assigned:** 11-Aug-2023, PreQC No. FMDM-23-118762 (PQ); **Reviewed:** 21-Aug-2023, QC No. FMDM-23-118762; **Revised:** 01-Sep-2023, Manuscript No. FMDM-23-118762 (R); **Published:** 09-Sep-2023, DOI: 10.37532/1758-1907.2023.13 (5).522-523.



Description

GLP-1 receptor agonists (GLP-1 RAs), such as GLP-1 (Glucagon-Like Peptide-1), have emerged as a valuable class of medications in the management of type 2 diabetes. These drugs work by mimicking the actions of the incretin hormone GLP-1, which stimulates insulin secretion and inhibits glucagon release, thereby helping to regulate blood sugar levels. This article discusses about the role of GLP-1 receptor agonists, particularly GLP-4, in diabetes management.

GLP-1 receptor agonists, including GLP-4, are a class of medications designed to assist individuals with type 2 diabetes in managing their condition. These medications act by binding to the GLP-1 receptor, imitating the actions of the naturally occurring hormone GLP-1. By doing so, they facilitate several beneficial effects are given below.

■ Beneficial effects

Stimulating insulin production: GLP-1 RAs aid in increasing insulin secretion from pancreatic cells in response to elevated blood sugar levels, helping to reduce glucose levels after meals.

Suppressing glucagon release: These drugs inhibit the release of glucagon, a hormone that elevates blood sugar, thereby helping to regulate glucose production by the liver.

Slowing gastric emptying: GLP-1 RAs can slow down the emptying of the stomach, which contributes to better blood sugar control after

eating.

Reducing appetite and promoting weight loss: They can also have an impact on appetite regulation, leading to reduced food intake and potential weight loss.

■ GLP-4: A specific glp-1 receptor agonist

As of my last update, the mention of “GLP-4” might refer to a specific GLP-1 receptor agonist or might be a typographical error. The primary and well-known GLP-1 receptor agonists in the market as of that time included exenatide, liraglutide, dulaglutide, and semaglutide. Each of these medications had unique dosing schedules, such as daily, weekly, or even monthly injections, providing flexibility and convenience for patients.

■ Benefits of GLP-1 RAs

Blood sugar control: GLP-1 receptor agonists assist in regulating blood sugar levels, particularly after meals, by enhancing insulin secretion and inhibiting glucagon release.

Weight loss: Many individuals using GLP-1 RAs experience weight loss, making these medications advantageous for those with diabetes who need to manage their weight.

Cardiovascular benefits: Some GLP-1 RAs have shown additional cardiovascular benefits, reducing the risk of major adverse cardiovascular events in people with established cardiovascular disease.

Department of Endocrinology, Jimma University, Jimma, Ethiopia

*Author for correspondence: E-mail: dalias@hotmail.com

■ Considerations and side effects

Though generally well-tolerated, GLP-1 RAs might cause side effects such as nausea, vomiting, and diarrhea, particularly at the beginning of treatment. However, these symptoms often improve over time. Additionally, cost and the need for injections might be considered as potential drawbacks.

■ Consultation and utilization

The decision to use GLP-1 RAs, including specific medications like GLP-4, should be made in consultation with healthcare professionals. They can provide tailored advice, considering an individual's specific health conditions, preferences, and potential interactions with other medications.

GLP-1 receptor agonists, including medications like GLP-4, have demonstrated significant benefits in the management of type 2 diabetes. Their ability to regulate blood sugar levels, promote weight loss, and potentially offer cardiovascular benefits makes them a valuable addition to the armamentarium of diabetes management strategies.

Consulting healthcare providers for personalized guidance and understanding the potential benefits and side effects is crucial for individuals considering or using GLP-1 receptor agonists, ensuring an informed and well-rounded approach to diabetes management. Always seek updated medical advice and stay informed about the latest developments in diabetes care and medication options.