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Editorial

A New Hope for Treating Obesity Pandemic

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A new class of drugs is transforming obesity treatment in an unprecedented manner. Scientists are amazed by their potency in the treatment of obesity. Glucagon-like peptide 1 (GLP-1) analogs are a class of medications used to treat type 2 diabetes mellitus. These analogs mimic the action of GLP-1, a hormone released by the intestine in response to food intake. GLP-1 analogs have been extensively studied, and scientists have made several important discoveries about their effects and potential therapeutic applications.

GLP-1 analogs have shown significant efficacy in improving glycemic control in patients with type 2 diabetes. They stimulate insulin secretion from pancreatic beta cells, suppress glucagon secretion (which reduces hepatic glucose production), and slow down gastric emptying, leading to reduced postprandial glucose levels. Apart from their controlling glycemic index, GLP-1 analogs are shown to offer cardio-protective, reno-protective, and neuroprotective benefits. However, their most surprising and potent effects have been observed in the context of weight loss.

Two drugs from this class, semaglutide, and tripeptide, have shown efficacy in recent clinical trials. Tirzepatide was effective in significantly reducing body weight in about half of the participants in a recent clinical trial. In another trial, semaglutide was able to reduce 20% of the body weight of about one-third of the participants. However, not everyone is benefiting from these medications. There are still significant challenges in determining who will benefit from these medications and to what extent. These challenges are currently being addressed.

It has been observed that the new drugs work best in people who become hungry in between meals. People with obesity can be classified into four categories; those who need to eat more to reach fullness; those who reach fullness with a regular-sized meal but feel hungry again soon (hungry gut); those who eat to cope with emotions; and those with a relatively slow metabolism. It is not known why people with a 'hungry gut' respond most effectively to the new drugs, but one hypothesis suggests that these patients have low levels of GLP-1 hormones,

and that's why they have obesity. When they get a replacement in the form of GLP-1 analogs, they do extremely well. Another study with a GLP-1-mimicking drug called liraglutide found that patients with low GLP-1 levels reduced twice as much weight compared to the general population after using the drug for one year.

Both semaglutide and tripeptide are given once weekly, thus increasing treatment compliance. Because of their weekly regimen, the drugs will also help people with erratic schedules and work shifts. Some of the other medications have to be taken at a certain time of day, which can be difficult for those with irregular sleep schedules.

Another important question is to find out for how long the weight loss benefits of these drugs remain. One study concluded that semaglutide's weight-reducing effects last as long as the patients remain on medication. This means that these drugs will be given chronically to obese patients. Whether 'chronic' means 'life-long' in this context is still to be determined. Perhaps an even more important question that clinicians face is determining how much weight loss is too much, especially when muscle loss is also involved. More research is needed to find a balance where these drugs are used not only for weight reduction but to treat a person for health, prevent disease, and improve quality of life.

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