Non-diabetic use of liraglutide

Sir,

Obesity is a serious health problem worldwide. It increases the risk of diabetes, ischemic heart disease, specific cancers, etc.

We know several trials involving lifestyle changes and medications, which have shown that weight loss is not easily accomplished or maintained. Meta-analyses of clinical trials on non-pharmacological strategies for weight reduction have reported 1–6 kg losses that have been difficult to maintain. Various sibutramine and orlistat trials reported average weight reductions of 3–5 kg, but had high dropout rates that were possibly due to adverse events, suggesting that the interventions could be less effective in clinical practice. Meta-analyses have found that bariatric surgery reduces long-term mortality in obese patients, but the safety risks and costs of this intervention limit the use for large patient populations.[1]

In the present scenario, to fight against the obesity epidemic, we require a drug with less side effects and more metabolic advantages. The newer injectable incretins promise good glycemic control in diabetic patients, along with various other benefits.[2] In response to the review article by Gupta, “Pleiotropic effects of incretins,” I would like to share my experience with liraglutide.

Twentyfive patients from the Obesity Clinic of our hospital, with a laboratory diagnosis of metabolic syndrome, willing to take liraglutide, were started on daily subcutaneous injection of 0.6 mg initially for a week and later on the dose was increased to 1.2 mg per day. Other than few minor side effects like headache and nausea which lasted for a few days after initiation, none of the patients had any other complaints.

Baseline weight of patients was 110 kg (±12.5 kg) and the waist circumference was 114 cm (±8.1 cm). M:F ratio was 9:16, age of the patients was 40 years (±10.2 years), and 60% of the patients had family history of diabetes and hypertension. The other parameters were: fasting blood sugar (FBS) 101 mg/dl (±8 mg/dl), blood pressure 134/90 mm of Hg (±15.4/6.3), and total cholesterol 205 mg/dl (±14.3 mg/dl).

After 12 weeks of liraglutide therapy, weight loss was 8 kg (±2.4 kg), waist circumference reduction 3.1 cm (±1.2 cm), FBS 94 mg/dl (±5 mg/dl), total cholesterol 194 mg/dl (±5 mg/dl), and blood pressure was 128/86 mm of Hg (±12.2/5.1).
In only one female patient, there was no weight reduction, although other parameters improved.

Obesity-related diseases have an impact on the individual, and managing their complications puts an extra strain on his pocket. Accordingly, identification of effective interventions for weight reduction is crucial. All our patients had improved metabolic parameters along with weight loss, which may decrease the future risk of various complications.

In conclusion, liraglutide leads to significant weight loss in obese and overweight patients. Along with weight loss, additional beneficial effects on blood pressure and total cholesterol might be achieved due to the pleiotropic effects of liraglutide. Further well-planned studies are needed to elucidate the effects of glucagon like peptide 1 receptor agonists in the treatment of obese individuals without diabetes.

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**Website:**
www.ijem.in

**DOI:**
10.4103/2230-8210.100698