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MYOS

2ND NATIONAL OBESITY SCIENTIFIC CONFERENCE

ABSTRACT BOOK



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Optimising Metabolic Outcomes Using GLP-1 Receptor Agonist Therapy in Severe Obesity and Poorly Controlled Diabetes Mellitus

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Introduction:
Glucagon-like peptide-1 (GLP-1)–based therapies have emerged as an important therapeutic modality in the management of obesity and type 2 diabetes mellitus. Optimisation of GLP-1 therapy has been shown to result in substantial reductions in HbA1c, improved lipid profiles, and meaningful reductions in body weight.

Methods:
We present a case of a 64-year-old male with severe obesity (body mass index of 46 kg/m²), long-standing poorly controlled diabetes, hypertension, dyslipidaemia, chronic kidney disease and obstructive sleep apnoea. At presentation, he required high-dose insulin therapy, with a total daily insulin requirement of 1 unit/kg/day, yet glycaemic control remained suboptimal with an HbA1c of 10%. Given the significant metabolic burden and insulin resistance, adjunctive therapy with subcutaneous semaglutide was initiated and gradually titrated to a maintenance dose of 1 mg weekly. At the time of initiation, the patient weighed 145 kg and demonstrated significant central obesity, with a waist circumference of 151 cm.

Results:
After two months of therapy, the patient demonstrated a marked improvement in glycaemic control, with HbA1c reduced to 7.6%. Correspondingly, the total daily insulin dose was reduced to 0.6 units/kg/day. The patient also reported significant appetite suppression, facilitating adherence to a low-calorie, low-carbohydrate dietary regimen. Anthropometric assessment showed a reduction in body weight from 145 kg to 138 kg, accompanied by a substantial decrease in waist circumference from 151 cm to 132 cm.

Conclusion:
This case demonstrates that adjunctive GLP-1 receptor agonist therapy in severely obese, insulin-treated patients with diabetes can result in substantial glycaemic improvement and reduced insulin dependence. Integrating GLP-1 receptor agonists into obesity-directed management strategies may confer important metabolic benefits in high-risk individuals with multiple comorbid conditions.