Opinion

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Semaglutide and tirzepatide: A step towards the aetiological treatment of obesity

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Introduction

Obesity is a highly prevalent disease in virtually all populations worldwide.[1] Treatment aimed at achieving long-term weight loss is rarely successful. For decades, various programmes aimed at changing the eating habits and activity levels of obese or overweight patients have been used, with frustrating results for both patients and healthcare professionals. In addition to dietary changes, various types of drugs have also been used for years to reduce appetite or increase calorie expenditure, but unfortunately these have not yielded satisfactory results either, often due to unbearable side effects. Subsequently, various devices such as gastric balloons and even bariatric surgery in its various forms have been used, but these do not offer benefits for all patients either. This is because all these methods or procedures treat the consequences rather than the causes of the disease, with behavioural anomalies in relation to food being the main cause. To date, the primary approach to the aetiological treatment of obese individuals has been cognitive behavioural psychotherapy.[2,3]

In recent years, new drugs have been developed that act on the secreting entero-endocrine system, with promising results in terms of weight loss, appetite reduction and influencing eating behaviour.[4] More recently, other drugs such as Semaglutide and Tirzepatide have been approved by major regulatory agencies for the treatment of overweight or obese individuals. Their use has rapidly increased worldwide. It is believed that the effect of Semaglutide and Tirzepatide on appetite reduction and eating behaviour regulation is due to their effect on receptors in the subcortical region of the brain that regulate food intake.[5,6] This fact is particularly significant, as it helps patients achieve long-term changes in their eating habits in particular, thus ushering in a new era in the management of overweight and obese patients.

A recent multicentre, randomised, parallel-group study in the United States and Puerto Rico compared the efficacy and safety of Semaglutide vs. Tirzepatide in the treatment of adults of both sexes with obesity without diabetes mellitus over 72 weeks.[7] The authors observed that the least-squares mean percent change in body weight at 72 weeks was -20.1% and -13.7% for Tirzepatide and Semaglutide, respectively. With regard to safety, the percentage of patients who had to discontinue treatment due to digestive disorders was 2.7% and 5.6% for Tirzepatide and Semaglutide, respectively, while injection site reactions were more common in patients treated with Tirzepatide (8.6%) than in those treated with Semaglutide (0.3%).

The greater weight loss in patients treated with Tirzepatide compared to those treated with Semaglutide, in a relatively short period of time, in the context of a chronic disease such as obesity, is of little clinical relevance because it takes a long time to achieve permanent changes in habits, with the hope of maintaining the weight loss in the long term without having to continue treatment for the rest of one's life, except, in some patients with sleep apnoea, who may obtain greater relief from rapid weight loss. On the contrary, rapid weight loss is often associated with the appearance of unsightly skin folds, which in many cases require surgical treatment. Unfortunately, the study did not analyse the variation in the different elements of body composition, which would have provided information on muscle mass loss.[8]

With regard to the safety profile of the drugs, Tirzepatide appears to be more favourable, although discomfort at the injection site is more common with this drug, which is relevant given the long duration of this type of treatment.

In conclusion, the new drugs Semaglutide and Tirzepatide approved for the treatment of overweight and obese people are a significant advance because they act on the cause of these anomalies, which are behavioural changes in relation to food. These drugs would help obese people to change their habits in the long term.

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Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this study.

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