

An Old Ally to Address the ‘Triple Threat’



The patient was a 32-year-old female with obesity complicated by type 2 diabetes mellitus and hyperlipidemia. Diabetes mellitus was first diagnosed at the age of 26. At the time of diagnosis, insulin autoantibodies were negative and endogenous insulin production was adequate. However, glycemic control remained persistently poor (HbA1c 9.4%–11.9%) despite large doses of basal and prandial insulin (total insulin dose of 1.7 units/kg/day). Of significance, the patient had multiple psychiatric comorbidities, including psychotic depression, anxiety neuroses with somatization and borderline personality disorder. She also had a previous history of panic attacks, pseudoseizures, and deliberate self-harm. The patient was on close follow-up with Psychiatry and was on multiple psychotropic medications: olanzapine, sodium valproate, fluvoxamine, mirtazapine, depot flupenthixol injections, clonazepam, and zopiclone.

The patient was referred for weight loss and optimization of glycemic control. At the time of initial assessment in 2019, weight was 92 kg and body mass index was 33.4 kg/m². The patient was compliant to all medications, and investigations excluded Cushing syndrome and hypothyroidism. She was started on a regular exercise regime. A thorough dietetics assessment revealed that although there was excessive carbohydrate intake, there was no binge eating or suggestion of an underlying eating disorder. On the basis of its dual merits of weight loss and improvement in glycemic control, the patient was started on liraglutide.

However, the patient's weight remained at 90–92 kg despite being on the maximal dose of liraglutide 3 mg daily. Improvement in glycemic control (HbA1c 8.1%) was noted. Orlistat and meal replacements were added—Once again, results were disappointing. Corroboration with family members confirmed that although the patient was compliant to her medications, she admittedly continued to eat “too much” and continued to lead a sedentary lifestyle.

The patient remained keen for additional pharmacological options for weight loss. Following discussion with her psychiatrist, low-dose phentermine and topiramate were added. There was no deterioration of her mood; however, there was no change in weight either. The patient was referred for consideration of bariatric surgery, being aware that this was a major decision in which the benefits and risks needed to be carefully considered.

We are living in difficult times. The “clash of the two pandemics” of obesity and COVID-19 threaten to lead to an exponential increase in the rates of obesity and its multiple associated complications.¹

Concurrently, there is an important bi-directional relationship between obesity and psychological disorders.^{2,3} Up to 60% of patients with obesity have a psychiatric illness such as depression, anxiety, or eating disorders.⁴ Fat mass and obesity-associated genotype have been found to be associated with mental disorders and an increased likelihood of symptoms of depression and anxiety.⁵ People with obesity have an increased risk of chronic medical disorders and often suffer from stigmatization, body image issues, and low self-esteem, all of which increase the risk of depression.⁴ In turn, psychological disorders may be associated with poor health behavior, which may increase the risk of obesity, including dietary indiscretion and physical inactivity.⁴ Depression is associated with dysregulation of the hypothalamic-pituitary-adrenal axis, which is also implicated in the pathogenesis of obesity.⁶ Weight gain is a common adverse effect of psychotropic medications. Olanzapine, which my patient was on, is associated with the most weight gain among various anti-psychotic drugs.⁷

To compound the problem, the COVID-19 pandemic has itself been declared by the World Health Organization to be a “mental health crisis.” It is important to bear in mind that these exist on a spectrum ranging from significant worsening of psychiatric symptoms in those with pre-existing mental illness, to increased emotional distress that may not constitute a formal psychiatric diagnosis.⁸

Clearly, there exists an important relationship between the “triple threat” of obesity, COVID-19, and psychological disorders, all of which reinforce each other in an inexorable vicious cycle. As physicians, what can we do about this burgeoning global problem?

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Management of obesity in the face of co-existing psychological disorders is fraught with numerous obstacles. Because motivation is an essential requisite for lifestyle modifications to achieve weight loss (as seen in my patient), sustaining these changes is often challenging. With weight loss pharmacotherapy, caution needs to be exercised when prescribing phentermine and topiramate, especially with concomitant use of a selective serotonin reuptake inhibitor (as in this case), which could increase the risk of serotonin syndrome.

In the current times of the raging COVID-19 pandemic when elective procedures, including bariatric surgeries, are frequently being cancelled or postponed, it may seem unexpected to bring this treatment to the forefront. The beneficial effects of bariatric surgery on medical outcomes are undisputed. However, the psychological outcomes of bariatric surgery are still largely shrouded in mystery. Should patients with known psychological disorders undergo bariatric surgery? If so, is there any difference between the various disorders, and what are the anticipated outcomes post-surgery? Many programs still require patients to undergo mental health evaluation prior to surgery. For a long time, the prevailing view was that poorly controlled depression or other major psychiatric disorders are contraindications for surgery. The major concern is the possible deterioration of psychological health given the reported increase in suicide rates.⁹ Patients with depressive and anxiety disorders at baseline have also been shown to lose significantly less weight after surgery.¹⁰

Despite these concerns, when considering the treatment options in patients with obesity and psychological disorders, bariatric surgery should certainly not be dismissed. Given that much of the psychopathology in people with obesity stems directly or indirectly from their weight, surgery could lead to improvement in psychological health.¹⁰ To illustrate this point further, studies have shown a significant decrease in the prevalence of depressive disorders, an improvement in body image, and even a decrease in binge eating after surgery—the postulated mechanism behind the latter observation being a change in cognitive and hedonic responses to food.¹⁰ However, the current literature is still limited by lack of long-term follow-up and a paucity of

qualitative research. Thus, further research in this area is much needed.

More than ever in this post COVID-19 world, we physicians have our work cut out for us to urgently address this “triple threat,” of which we might in fact be seeing only the tip of the iceberg. Bariatric surgery is very much a viable treatment option in patients with obesity and psychological disorders. Thus, there could be no better time to bring back this old ally. That said, careful patient selection and consideration of the benefits and risks before surgery, as well as regular monitoring and close psychological support post-surgery, are essential.

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