

Is Bariatric Surgery an Antidepressant?

To the Editor: A recent meta-analysis¹ showed that obese people have a 55% increased risk for depression, and conversely, depressed people, especially with atypical features (hyperphagia, opsomania, hypersomnia, etc), have a 58% risk of becoming obese. Connection is then bidirectional, and there is now growing evidence for the role of obesity in treatment-resistant depression as well.² Stigmatization of the morbidly obese (history of bullying is not uncommon) has been thought to precipitate or exacerbate major depressive disorder (MDD), and therefore, a significant weight loss has been demonstrated to substantially reduce the severity of depression.³

Apart from psychological and behavioral factors linking obesity to depression, other biological factors seem at play.⁴ Obesity represents a chronic low-grade inflammatory state in adipose tissue and gut microbiota with activation of proinflammatory cytokines (interleukin [IL]-1 β , IL-6, interferon- γ , and tumor necrosis factor- α) leading to neurotransmitter aberration. Activation of the hypothalamic-pituitary-adrenal axis remains central to both conditions as increments in oxidative/nitrosative stress. Activation of indoleamine 2,3-dioxygenase and kynurenine pathway with quinolinic acid accumulation and glutamate excitotoxicity as the final common pathway have all been involved in this intricate yet complex relationship. It goes without saying the negative contribution of psychopharmacotherapy to metabolic syndrome⁵ (eg, mirtazapine for MDD or quetiapine for bipolar depression). Moreover, psychiatric comorbidities, notably depression and binge eating, are commonplace among patients undergoing bariatric surgery compared to the general population.⁶

Guidelines generally consider severe depression, psychoses, suicidality, severely disturbed personalities, and active substance use disorders as contraindications to bariatric surgery, and hence, preoperative psychiatric assessment is mandatory.⁷ Of related interest, there has always been a concern that presurgical binge eating might be associated with suboptimal weight loss outcomes after bariatric surgery. Numerous studies have been conducted, but the majority do not support a relationship. For this reason, binge eating is no longer considered to be a contraindication for bariatric surgery. However, these patients in particular should be closely monitored after surgery for possible reemergence of aberrant eating behaviors postoperatively.⁸

That said, the effect of bariatric surgery on mood disorders is uncertain. Conceivably, improvement in depression has been reported in some studies following weight loss with improved self-esteem and body image.^{9,10} Physical aspects of quality of life have improved considerably but surprisingly not anxiety or depression or social or sexual components.^{11,12} Paradoxically, the number of suicides and self-harm increased in other research. In a recent study,¹³ the adjusted hazard ratio for attempted suicide after gastric bypass was 3 times higher than the general nonobese population. Also, a retrospective population-based cohort study¹⁴ reported that alcohol abuse was doubled after gastric bypass.

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