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Letter to the editor

Importance of heterogeneity in bariatric surgery candidates - Comment on: Psychiatric Medication Use and Weight Outcomes One Year After Bariatric Surgery Hawkins et al., Psychosomatics Volume 61, Issue 1, 2020; Pages 56-63

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Conflicts of interest
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Abstract

With growing obesity rates, an increasing number of bariatric procedures are performed every year. A large number of these patients are treated with psychotropic drugs such as antidepressants, antipsychotics or benzodiazepines. Although not every psychotropic drug affects the body weight, weight gain and weight loss are often described as a side effect of some of these medications. Recently, the article entitled “Psychiatric Medication Use and Weight Outcomes One Year After Bariatric Surgery” was published by Hawkins et al. which demonstrated no negative impact of psychotropic drugs on weight loss after a gastric bypass procedure. However, earlier in 2019 and opposite to these results, our group already reported a significant effect of some classes of antidepressants on weight outcomes after bariatric surgery. In this letter to the editor, we comment on the differences between both studies and how heterogeneity between patients and sample size limitations could have attributed to the apparently conflicting results. Furthermore, we propose an international, multi-center collaboration to investigate the effectiveness, safety, and impact of psychotropic drugs after bariatric surgery.
Dear Editor,

The impact of psychiatric disorders on outcomes in candidates for bariatric surgery are often underestimated and rather neglected (1). Nevertheless, the link between psychiatric health and surgical outcomes has increasingly been demonstrated following a variety of surgical procedures (2). Therefore, we read the article by Hawkins et al. entitled “Psychiatric Medication Use and Weight Outcomes One Year After Bariatric Surgery” with great interest (3). In this article, the authors investigated the influence of psychotropic medication use on weight loss after Roux-en-Y gastric bypass surgery. No significant effects of psychotropic medication on weight loss were observed, except for an increased weight loss in patients treated with serotonin-norepinephrine reuptake inhibitors (SNRIs) in the secondary analysis.

Notably, in April 2019 we already published our observations concerning the effects of antidepressants and psychotropic drugs on outcomes up to 24 months after bariatric surgery (4). In this study, which included 751 patients, we observed a significant effect (-5.52 percent excess BMI loss; %EBMIL) of antidepressants, which was largely caused by tricyclic antidepressants (-11.01 %EBMIL; TCAs) and SNRIs (-12.47 %EBMIL). Clearly, our results are conflicting with those reported by Hawkins et al. (3). Guided by our own experiences with this topic, we would like to further comment on the issues inherent to studying outcomes in bariatric surgery, especially when determining the influence of psychotropic medications, and how these should be taken into consideration when interpreting such results.

Bariatric surgery candidates are very diverse and frequently have different reasons and motivations for seeking surgical assistance. Some patients, for example, suffer from obesity-related comorbidities, while others undergo the procedure to prevent medical complications. Many patients also hope to improve their mental health and self-esteem. Moreover, the etiology of obesity also significantly differs between patients. Add the large number of variables after the procedure, such as dietary...
compliance, physical activity, medication use, etc. to the picture and studying this heterogeneous population becomes a worrisome challenge. This is not different when investigating the outcomes in patients treated with psychotropic medications, who frequently receive combination therapy together with other classes of drugs such as antipsychotics, have variable therapy compliance, and postoperatively often require therapy modifications such as therapy cessation.

Taking the important heterogeneity in this population into account, in our view, a multivariate approach should be adopted when examining the effects of psychotropic drugs on bariatric surgery outcomes. Moreover, we presumed that the effects of psychotropic drugs on weight loss would likely be class-dependent. This assumption and the large number of potential confounding factors necessitated our study to be extended for several years until we were confident in the validity, sample size, and power of our findings. Our results indeed showed that adjustment for covariates significantly altered the effect size (4). Additionally, an important class-effect between the different psychotropic drugs was present, with selective serotonin reuptake inhibitors having no effect (-0.46 %EBMIL), while SNRIs and TCAs reduced weight loss by over 10 %EBMIL as stated above.

While Hawkins et al. did not report a sample size calculation, their study cohort was limited to 190 patients, of which only 61 were treated with combinations of psychotropic drugs, including antidepressants, benzodiazepines, and antipsychotics (3). As mentioned in the article, therapy was regularly altered during the first year after surgery. This further alters sample sizes in every group. Thus, a type II error may have occurred and hampers any robust conclusion. Moreover, the majority of analyses were based on univariate comparisons due to data being unavailable for multivariate analysis in 92 patients. For the remaining patients, a multivariate analysis was performed, yet the composition of the patient cohort used for this analysis was not reported. Without adjustment for a sufficient number of factors, with only 98 patients included in the analysis, a bias is definitely possible.

In our opinion, the growing number of patients with obesity, the significant psychiatric burden, and the increasing number of bariatric procedures performed every year, urgently demands further
research on the effectiveness, influence, and safety of pharmacotherapy for psychiatric illness after bariatric surgery. However, as discussed, the large heterogeneity between patients and the variety in treatment options requires a large-scale approach. Therefore, with this letter, we hope to propose and convince about the necessity to establish an international multi-center collaboration to study the link between psychotropic medication and bariatric surgery outcomes.

References


