Investigating the Relationship between Psychopharmacological Treatments and Change in Body Mass Index (BMI), in a Clinical Sample of Child and Adolescent Psychiatric Outpatients

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ABSTRACT

Introduction: The treatment of obesity in children has been of increasing concern due to the relationship between obesity and psychiatric disorders, and the pharmacological treatment for affective disorders is relatively unexplored. In children, the relationship between obesity and psychiatric illness is less well understood. In the current study, we examined the relationship between change in BMI and psychopharmacological treatment in the pediatric population.

METHOD

Participants: The study population consisted of 259 adolescents who were treated at the Child and Adolescent Psychiatric Outpatient Clinic at the Wilford Hall Medical Center, United States. Patients were included if they had a diagnosis of a mood disorder, ADHD, or both, and were treated with at least one psychotropic medication.

RESULTS

Baseline Characteristics: The mean age of all subjects was 10.97 (3.01) years and 21.8% of the sample were females. About 39.7% of the sample had family members diagnosed with psychiatric conditions. The mean and median number of days on stable regimen were 72.7 and 64.8, respectively. The mean initial BMI Z-score of 0.97 (0.46) was comparable to the BMI Z-score of -0.37 (0.53) at follow-up. The mean change in BMI Z-score was 1.34 (0.95).

Change in Anthropometric Measures over Time: There was a significant change in BMI Z-score (p < 0.05) but not a statistically significant change in BMI (p > 0.05). The mean BMI at baseline was 19.71 (SD 3.14) and the mean BMI at follow-up was 20.11 (SD 3.41). The mean change in BMI was 0.40 (SD 1.34).

LIMITATIONS

No matched controls in this naturalistic retrospective analysis using convenience sample. Unequal numbers of males and females. No record of ethnicity of individual subjects was available, so ethnicity could not be controlled for.

CONCLUSION

We computed a group of patients differentiated by various parameters (including class of medication, prior medication exposure, duration of treatment, gender, age, and family history) but found no statistically significant associations between any of these factors and change in BMI or BMI Z-score. Limitations: No matched controls in this naturalistic retrospective analysis using convenience sample. Unequal numbers of males and females. No record of ethnicity of individual subjects was available, so ethnicity could not be controlled for. Clinical Implications: Our results suggest that the link between psychotropic medications and weight gain may not be as significant as expected. While this study was retrospective and cross-sectional, we were unable to control for the confounding effect of other potential factors such as diet and exercise. Further research with larger sample sizes and prospective designs is needed to better understand the relationship between psychotropic medications and weight gain in this population.

REFERENCES