for mania in children and adolescents with bipolar disorder. J Am Acad Child Adolesc Psychiatry 2005; 44:539–547

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Dr. Barzman has received support (research, consulting fee and/or speaker fees) from AstraZeneca, Pfizer, Eli Lilly, and Jannsen. Dr. DelBello has received support (research, consulting fee, and/or speaker fees) from Abbott Laboratories, AstraZeneca, Eli Lilly, Johnson and Johnson, Shire, Pfizer, Bristol Myers Squibb, and GlaxoSmithKline.

Comments on "A Note on the Partnership Between Psychiatry and Primary Care"

TO THE EDITOR: The editorial by Frank V. deGruy III, M.D., M.S.F.M., on treatment of depression by primary care physicians was eloquent and to the point (1). Most health plans are realizing that the current reimbursement system does not adequately address the most disabling and costly illnesses and that health-plan-level disease management programs that only peripherally involve the practitioner have limited value. They/we haven't figured out how to make the switch, but thanks to voices such as Dr. de Gruy's, I feel that it is heading that way. As we move to a broader acceptance of collaborative care, I feel that we need to raise the level of psychiatrist involvement in managing/monitoring chronic medical illnesses in primary care providers' patient populations.

Reference

1. deGruy FV: A note on the partnership between psychiatry and primary care (editorial). Am J Psychiatry 2006; 163:1487–1489

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Olanzapine-Induced Hyperglycemia in Anorexia Nervosa

TO THE EDITOR: Recent studies on anorexia nervosa have suggested that the atypical antipsychotic agent olanzapine has favorable effects on agitation, repetitive thinking about becoming obese, and subsequent weight gain (1, 2). Although hyperglycemia is a serious adverse effect of olanzapine (3), the incidence varies from less than 1% to 10%, and to the best of our knowledge, there have been no previous reports of this effect in patients with anorexia nervosa. We present a case report of a patient with anorexia nervosa with olanzapine-induced hyperglycemia.

A 27-year-old Japanese woman with a 2-year history of anorexia nervosa (restricting type) and no personal or family history of diabetes mellitus or other metabolic or mental disorders was admitted to our hospital with agitation, general fatigue, and fear of obesity. Laboratory results revealed aspartate aminotransferase of 39 IU/l and alanine aminotransferase of 61 IU/l; results of other laboratory examinations (e.g., antiglutamic acid decarboxylase antibodies) were normal. During the first week of hospitalization (body mass index: 14.1 kg/m^2, mean value of daily energy intake: 1,043 kcal/day), we performed a corrected (1.75g-glucose/kg) oral glucose tolerance test, which showed impaired glucose tolerance (4.3 mmol/l at baseline, peak value of 9.2 mmol/l at 60 minutes, 8.6 mmol/l at 120 minutes) by World Health Organization criteria (4), with delayed insulin secretion (34.6 pmol/l at baseline, peak value of 198 pmol/l at 120 minutes).

Thereafter, we prescribed olanzapine 5 mg/day to reduce agitation and fear of obesity; we also started a multidisciplinary treatment program (4). The patient's agitation improved, and we performed another oral glucose tolerance test during the third week (body mass index: 14.2 kg/m^2, energy intake: 1,157 kcal/day). Results showed diabetes mellitus (4.2 mmol/l at baseline, peak value of 12.2 mmol/l at 120 minutes) with exaggerated insulin secretion (30.8 pmol/L at baseline, peak value of 1,210 pmol/L at 60 minutes). However, symptoms of diabetes (e.g., excessive thirst or urination) were absent. The patient's fear of obesity gradually decreased, and olanzapine therapy at 5 mg/day was carefully continued with monitoring of diabetic symptoms, weekly fasting blood glucose levels, and monthly oral glucose tolerance test examinations (3). The lack of symptoms of diabetes and weekly fasting blood glucose levels (range 4.2 to 4.8 mmol/l) remained stable over 10 weeks. Although the patient showed impaired glucose tolerance during the seventh week (body mass index: 15.2 kg/m^2, energy intake: 1,600 kcal/day), the oral glucose tolerance test results returned to normal at the time of her discharge (body mass index: 18.3 kg/m^2, energy intake: 1,800 kcal/day).

The underlying mechanism of olanzapine-induced hyperglycemia remains unclear (3, 5, 6). Theories regarding this mechanism include the induction of insulin resistance via 5-HT_{1A} antagonism or impaired insulin-signaling cascade, increased food intake via H_1 antagonism, impaired pancreatic beta cell function, induction of glucogenesis via a decrease in glycogen synthase (5), increase in glycogen phosphorylase, and upregulation of cocaine and amphetamine regulated transcripts (6). Exacerbating glucose tolerance with exaggerated insulin secretion was evident on the second oral glucose tolerance test despite no marked differences in fasting plasma glucose levels, body mass index, and energy intake compared with the first oral glucose tolerance test. These findings suggest that glucose intolerance might have been induced by *olanzapine* via insulin resistance (3, 5, 6). Moreover, hyperglycemia improved after weight restoration despite continuous use of olanzapine, which indicates that undernutrition itself might be a risk factor for olanzapine-induced hyperglycemia, particularly in patients with anorexia nervosa. Clinicians treating acute patients with anorexia nervosa should carefully monitor glucose metabolism, especially in patients being treated with olanzapine.

References

1. Mondraty N, Birmingham CL, Touyz S, Sundakov V, Chapman L, Beumont P: Randomized controlled trial of olanzapine in the treatment of cognitions in anorexia nervosa. Australas Psychiatry 2005; 13:72–75
2. Barbarich NC, McConaha CW, Gaskill J, La Via M, Frank GK, Achenbach S, Plotnicov KH, Kaye WH: An open trial of olanzapine in anorexia nervosa. J Clin Psychiatry 2004; 65:1480–1482
3. American Diabetes Association, American Psychiatric Association, American Association of Clinical Endocrinologists, North American Association for the Study of Obesity: Consensus De-

velopment Conference on Antipsychotic Drugs and Obesity and Diabetes. J Clin Psychiatry 2004; 65:267–272
4. Yasuhara D, Naruo T, Nagai N, Muranaga T, Nakahara T, Tanaka M, Kojima S, Sagiyama K, Masuda A, Inui A: Glucose tolerance predicts short-term refeeding outcome in females with anorexia nervosa. Psychosom Med 2005; 67:669–676
5. Engl J, Laimer M, Niederwanger A, Kranebitter M, Starzinger M, Pedrini MT, Fleischhacker WW, Patsch JR, Ebenbichler CF: Olanzapine impairs glycogen synthesis and insulin signaling in L6 skeletal muscle cells. Mol Psychiatry 2006; 11:524–525
6. Fatemi SH, Reutiman TJ, Folsom TD, Bell C, Nos L, Fried P, Pearce DA, Singh S, Siderovski DP, Willard FS, Fukuda M: Chronic olanzapine treatment causes differential expression of genes in frontal cortex of rats as revealed by DNA microarray technique. Neuropsychopharmacology 2006; 31:1888–1899

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Supported by a research grant from the Japanese Ministry of Health, Labor, and Welfare.

The authors report no competing interests.

Reprints are not available; however, Letters to the Editor can be downloaded at http://ajp.psychiatryonline.org.

Corrections

In the book review by Robert Stern, M.D., Ph.D., on *Treating and Preventing Adolescent Mental Health Disorders: What We Know and What We Don't Know, A Research Agenda for Improving the Mental Health of Our Youth* (Am J Psychiatry 2007; 164:177–178), the end of the last sentence of the second to last paragraph should read:

> …to investigate and summarize what public policy, legal, and diverse other issues need to be addressed, and how to address them urgently, to make available the extensive theoretical knowledge and clinical expertise we already have for the treatment of current developmental, emotional, and behaviroal problems of all American youths.

In the December article titled "Controlled Trial of Naturalistic Dawn Simulation and Negative Air Ionization for Seasonal Affective Disorder" by Terman and Terman (Am J Psychiatry 2006; 163:2126–2133), there was an error made throughout. The error ranges around proportions are 95% confidence intervals, not SDs.

The letter "Reduced Intracortical Myelination in Schizophrenia" (Am J Psychiatry 2005; 162:1229–1230), which discussed an article by Lynn D. Selemon, Ph.D., and colleagues, should have run with Dr. Selemon's reply. The response is now included online as a supplement to the original letter by Drs. Bartzokis and Altshuler.

In the article "A Randomized Controlled Clinical Trial of Psychoanalytic Psychotherapy for Panic Disorder" (Am J Psychiatry 2007; 164:265–272), the clinical trial registration is incorrect. The trial can be found by going to www.clinicaltrials.gov, selecting focused search, and entering the following number: NCT00128388. Also, in the Results section of this article, a copyediting error resulted in an incorrect p value being reported. The fourth sentence in the section "Comparative Efficacy" should read as follows: "…panic-focused psychodynamic psychotherapy had a significantly higher response rate than applied relaxation training (73% versus 39%; p=0.016)."

A problem in the Journal's editorial offices caused an error of omission to occur in the reporting of competing interests for the February editorial "Defining the Boundaries of Childhood Bipolar Disorder" (Am J Psychiatry 2007; 164:185–188). The disclosure statement should have run as follows:

Dr. Martin reports no competing interests. Dr. Ghaemi currently receives research grants from GlaxoSmithKline and Pfizer; in the past year, he has been on the speakers' bureaus of Abbott Laboratories, AstraZeneca, and GlaxoSmithKline; and in previous years has served on the advisory boards of Abbott Laboratories, GlaxoSmithKline, Janssen, and Pfizer. Neither he nor his family hold equity positions in pharmaceutical corporations. Dr. Freedman has reviewed this editorial and found no evidence of influence from these relationships.

Dr. Ghaemi had submitted his disclosure prior to publication, as required by Journal editorial policy.