tional hypodopaminergic state and upregulation of the postsynaptic D_2 receptors, of which stimulation by aripiprazole could result in exacerbation of the manic symptoms.

Although this case report adds to the literature on atypical results of atypical antipsychotics, caution needs to be used while interpreting the results, since aripiprazole is approved for the treatment of acute mania. Possible differences in response to aripiprazole in patients with bipolar affective disorder versus those with schizoaffective disorder need to be investigated. Furthermore, a drug screen was not performed to assure the patient's denial of substance abuse.

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PRASAD RAO PADALA, M.D.
STEVEN P. WENGEL, M.D.
FREDERICK PETTY, PH.D., M.D.
Omaha, Neb.

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Hyperglycemia in a 7-Year-Old Child Treated With Aripiprazole

TO THE EDITOR: Aripiprazole is a new atypical antipsychotic drug for the treatment of schizophrenia/schizoaffective disorders and bipolar disorder in adults. Recent studies suggest effectiveness of aripiprazole with minimal severe side effects in children (1). We report a case of a 7-year-old child with hyperglycemia following initiation of aripiprazole.

The patient was an overweight 7-year-old male child with the diagnosis of attention deficit/hyperactivity disorder (ADHD), combined type, mood disorders, not otherwise specified, and a positive family history of type II diabetes mellitus. From ages 4 to 6, the patient's ADHD symptoms were treated with methylphenidate. At age 6, the patient had increasing mood and behavior problems, including verbal explosiveness and physical aggression. These symptoms stabilized by increasing the dose of methylphenidate to 54 mg per day.

Nine months after the increase in methylphenidate, the child had an exacerbation of mood lability and aggression. Methylphenidate was discontinued. Aripiprazole 2.5 mg was initiated. The child's weight was 34.7 kg, and body mass index was 21.0 (98th percentile for the child's age). He was prescribed 18 mg of atomoxetine, but took atomoxetine for 1 week. Within 4 weeks of aripiprazole as the only medication, the patient developed polydipsia, polyuria, and polyphagia and was evaluated in the emergency room. At admission, vital signs were normal, his blood pressure was 117/55, his glucose was 659 mg/dl (70–105 mg/dl), and he had mild ketonuria (15 mg/dl). Weight, height, and body mass index were 34 kg, 128 cm, and 20.5 (97th percentile for age), respectively. Pertinent lab studies included sodium 127 mmol/liter (133–145 mmol/dl), chloride 91 mmol/L (96–108 mmol/dl), triglycerides 255 mg/dl (74–199 mg/dl), and hemoglobin A1c 10% (4%–6%). Insulin/islet cell antibodies were <1.0U/ml (0.0–0.9U/ml). Aripiprazole was discontinued. The child was treated with NPH and Humalin insulin. He was discharged to go home in 3 days while receiving subcutaneous insulin. After 4 weeks of insulin therapy, blood sugars normalized and insulin was discontinued. Seven months after initial presentation, the child developed insulin-dependent diabetes.

To our knowledge, this is the first report of a child developing hyperglycemia following the initiation of aripiprazole. This case is presented to highlight the following questions: 1) Was there an association between the emergence of hyperglycemia and aripiprazole administration, and 2) was the initial episode of hyperglycemia coincidental with the use of aripiprazole? This case documents the importance of obtaining a family history, physical examination, and baseline and monitoring laboratory analyses when treating with antipsychotic medications (2). Further studies are necessary to determine the relationship between metabolic abnormalities and aripiprazole treatment in children.

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DORA D. LOGUE, M.D., M.P.H.
NILDA GONZALEZ, M.D.
SONDRA D.K. HELIGMAN, M.D.
JUDITH V. MCLAUGHLIN, M.D.
HAROLYN M.E. BELCHER, M.D., M.H.S.
Baltimore, Md.

All authors report no competing interests.

Intravenous Quetiapine-Cocaine Use ("Q-Ball")

TO THE EDITOR: We have noted recent reports of quetiapine diversion and misuse among inmates in correctional settings where it is also called "quell" or "baby heroin" (1, 2). It is used orally, intranasally, and intravenously for its potent sedative and anxiolytic properties (1, 2). Inmates obtain quetiapine for illegitimate use by malingering of psychotic symptoms or obtaining it from other inmates. The high prevalence of substance use disorders in corrections and the secondary gain of serving out "easy time" with pharmacological assistance contribute to an underground economy of diverted psychoactive medications (3). Anecdotal reports from colleagues—as well as online testimonials—support the existence of quetiapine diversion and misuse in noncorrectional settings as well (4). The following case is an example of prescription medication diversion with concomitant illicit substance use seen in the local county hospital emergency room.

A 33-year-old married Caucasian male with a history of polysubstance dependence (cocaine, heroin, alcohol, benzodiazepines) reported to the local county hospital emergency room requesting assistance with drug detoxification

and rehabilitation. The patient endorsed daily use of intravenous cocaine mixed with 400 mg–800 mg of quetiapine. Quetiapine was surreptitiously diverted from his wife's prescription. He reported crushing the quetiapine tablets and mixing the resulting powder with cocaine and water. He subsequently heated the mixture and drew the supernatant through a cotton swab into a syringe to administer intravenously. When asked why he engaged in this drug mixture, he stated that it achieved desired "hallucinogenic" effects.

Combining prescription medications and/or illicit drugs is a common practice to synergistically heighten the intoxication from the substances while potentially reducing undesirable side effects. The combination of intravenous heroin and cocaine (also known as "speedball") is a well-known strategy to both maximize the cocaine "rush," while mitigating its "crash" (5). It may be hypothesized that quetiapine was substituted for heroin in our case (to form a "Q-ball") because the sedative/anxiolytic effects of quetiapine may mitigate the dysphoria associated with cocaine withdrawal and to possibly provide a "hallucinogenic" effect.

The case presented highlights the unknown effects (such as a "hallucinogenic" experience) of combining substances with different pharmacological properties and subsequently circumventing first-pass metabolism through intravenous administration. Individuals who use oral medications intravenously have the potential to develop significant pulmonary complications secondary to the deposition of medication binders in lung parenchyma. Furthermore, the cardiovascular and arrhythmogenic properties of cocaine may be amplified in combination with quetiapine (which has a risk of QTc prolongation). Physicians should remain cognizant of potential medication diversion and misuse in noncorrectional settings.

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BRIAN M. WATERS, M.D.
KAUSTUBH G. JOSHI, M.D.
San Antonio, Tex.

The authors report no competing interests.

Quetiapine Addiction?

TO THE EDITOR: Quetiapine is not a controlled substance and is not considered addictive. Yet there are several reports describing abuse among inmates in jails and prisons (1, 2).

The pharmaceutical formulary for the Ohio correctional system contains three second-generation antipsychotics, but quetiapine is not one of them. It may be prescribed with special authorization for patients with serious mental disorders who have not responded to formulary agents. However, inmates entering prison on quetiapine for other conditions, such as sleep and anxiety disorders, must have it tapered and discontinued.

The authors have treated a number of inmates who have engaged in drug-seeking and sometimes illegal behavior to obtain this medication. The following case is illustrative:

A 39-year-old incarcerated male with hepatitis C and a history of opiate abuse was treated for generalized anxiety disorder. When seen by the prison psychiatrist, he was receiving quetiapine 800 mg and clonidine 0.9 mg at bedtime.

The psychiatrist was concerned about the risks of prescribing an antipsychotic medication for a patient with hepatitis without a serious mental disorder. The patient refused to discuss other treatment alternatives stating, "I need my Seroquel." Efforts to enlist his cooperation for a quetiapine taper were unsuccessful. He abruptly left a treatment team meeting and informed staff that he would purchase quetiapine illegally from other inmates and had done this before.

We have treated other prisoners who have threatened legal action and even suicide when presented with discontinuation of quetiapine. We have not seen similar drug-seeking behavior with other second-generation antipsychotics of comparable efficacy. Emil R. Pinta, M.D. has worked as a prison consultant for 35 years and can only recall similar behavior to obtain controlled substances.

Hussain et al. suggest that quetiapine abuse may be more prevalent among prisoners because commonly abused drugs are less readily available (2). Another reason may be that quetiapine treats anxiety and sleeplessness associated with substance use withdrawal—with prisoners having high rates for these disorders (3). However, an internet search yielded a number of self-reports by individuals who believe they have become addicted to this agent (4). There is a popular rap song in which "seroquel" is included in a long list of addictive substances (5). In street jargon, quetiapine is known as "quell" and "Susie-Q."

Our experience indicates the need for additional studies to explore the addiction-potential of quetiapine. Quetiapine is an effective medication for treatment of schizophrenia, bipolar disorder, and related illnesses. We believe clinicians should be extremely cautious when prescribing this medication for nonserious mental disorders and for individuals with histories of substance abuse.

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