The Residents' JOURNAL

a publication of
The American Journal of Psychiatry

October 2012 Volume 7 Issue 10

## Inside



## *In This Issue*

This issue of the *Residents' Journal* highlights articles on the theme of psychosomatic medicine. In a commentary, David Hsu, M.D., describes his experiences in a dual residency program focusing on psychiatry and internal medicine. Kristopher Klem, B.A., presents a case report on prolonged QTc in a hemodialysis patient receiving antidepressant treatment for bipolar disorder. Harita Raja, M.D., discusses prenatal and postpartum depression and provides information on epidemiology, screening tools, and treatment. Lastly, Dr. Hsu contributes a book review of *Why Psychiatry Is a Branch of Medicine*.

*Editorial*

# Writer's Block

Monifa Seawell, M.D.
Editor-in-Chief

I am often contacted by trainees who want to author a manuscript but who find themselves stuck in trying to decide what to write about. I provide them with the following advice to alleviate writer's block.

## Write About What Interests You

I frequently advise trainees that when they are having difficulty determining what to write about, they should think about topics that interest them, and then write about that. The *Residents' Journal* seeks to feature manuscripts covering a diverse range of topics. Your unique interests and experiences can serve as excellent material for a manuscript.

## Look to the Residents' Journal for Ideas

Readers who are interested in authoring a manuscript can find suggestions on what to write about in several places in the Journal. In many issues, we include a Call For Papers, which highlights a specific topic.

At the end of each issue, you will find the themes of our upcoming guest sections. If there is an upcoming guest section theme that interests you and you would like to contribute a manuscript to that section, you should contact the Guest Section Editor for that issue. The Guest Section Editors can inform you about the types of manuscripts they are seeking in relation to their selected topic, as well as help guide you in authoring an article.

## Ask Us for Advice

At the *Residents' Journal*, we are committed to author development. Feel free to contact us to discuss any manuscript ideas you may have. We can assist you in narrowing broad ideas down to a focused plan. We can also assist you in determining what type of manuscript would be most appropriate for your topic(s) of interest.

If you follow this advice, I am confident that you can successfully overcome writer's block and be on your way to contributing to the *Residents' Journal*.

*Commentary*

# Psychotherapy in the Medical Clinic

David Hsu, M.D.

> "To be able to listen and to gather information from another person in this other person's own right … is an art of interpersonal exchange which few people are able to practice without special training. To be in command of this art is by no means tantamount to actually being a good psychiatrist, but is the prerequisite of all intensive psychotherapy."
>
> –Frieda Fromm-Reichmann, M.D., *Principles of Intensive Psychotherapy*

Training to be both an internist and a psychiatrist is a phenomenon that has occurred over the past two decades. Dual residency programs are resource intensive, and the compression of two specialty training programs into 5 years has its own developmental challenges. In the third year of the internal medicine/psychiatry training program, residents have the opportunity to work the entire year in the outpatient psychiatry clinic, where they learn intensive psychotherapy. Strangely, I have discovered that my background in internal medicine has affected my psychiatric practice, and vice versa.

Learning psychotherapy is challenging because it is essentially an art. There are no randomized controlled trials for the duration of silence required at the beginning of sessions, the timing of interpretations, or the pithiness of follow-up questions. Everyone has a different story to tell, and the job of the therapist is to capture and validate the uniqueness of the patient's narrative. In empathic interviewing, the physician seeks to view situations from another person's perspective, to feel what the patient feels, and to differentiate between the patient's needs and wishes. Physicians trained in this type of interviewing can use empathy skills to build therapeutic alliances that are essential in every clinical encounter.

The psychiatry clinic is no different from the medical clinic. In both clinics, patients talk about their back pain, operations, cancers, liver disease, tremors, and sleep problems, in addition to their psychosocial concerns, such as depression, anxiety, or substance abuse. Patients state that they come simply to see a doctor. My medical clinic on Friday afternoons is across campus, and recently I realized that the patient I bring into the room—in both contexts—does not change. Psychodynamic issues still resonate, and my approach of honing in on patients' deepest concerns through active listening has been effective in my practice.

Psychiatrists do not have a monopoly on the term "countertransference." Internists use it too, likely because transference dynamics are pervasive in all of medicine. When treating patients, it is universally important to be aware of one's own feelings as a doctor, and these feelings can develop when working with a patient in the short-term, as well as long-term, setting. As I look into the last year of residency, my realization of potentially working with these patients for 5 years is humbling. They have given me the opportunity to care for them in the most personal sense and to witness my own personal growth as a doctor as reflected in my relationship with them. They have been my best teachers.

*Dr. Hsu is a fifth-year resident in the Departments of Internal Medicine and Psychiatry and Behavioral Sciences, University of California Davis Medical Center, Sacramento, Calif.*

*Treatment in Psychiatry*

# Prolonged QTc in a Hemodialysis Patient on Citalopram and Olanzapine for Bipolar Disorder

Kristopher Keith Klem, B.A.

Citalopram is a selective serotonin reuptake inhibitor used in the treatment of depression. Olanzapine is an atypical antipsychotic with U.S. Food and Drug Administration approval for the treatment of bipolar disorder and schizophrenia. Corrected QT (QTc) interval prolongation has been reported with use of both medications, but few studies have examined the differential role of these medications in prolonging QTc. The present report is of a case of prolonged QTc in a 50-year-old woman with chronic kidney disease who was receiving hemodialysis as well as citalopram and olanzapine for bipolar disorder. Discontinuing both medications resulted in improved QTc, and restarting olanzapine without citalopram resulted in no increase in QTc.

## Case

In July 2012, a 50-year-old woman was experiencing her second episode of chills while undergoing hemodialysis. The first episode, a result of an infected peritoneal dialysis site, had occurred 2 weeks prior and resolved with vancomycin. During the most recent episode, hemodialysis was terminated within 20 minutes of the onset of chills, and the patient was transferred to the emergency department. The patient had a temperature of 100.6°F; her heart rate was 103 beats/minute; and her blood pressure was 110/80. Her physical examination was unremarkable except for multiple scars from prior dialysis access sites. Laboratory results were notable for a WBC of 14,300 cells/mL. The patient met criteria for systemic inflammatory response syndrome, and an empirical antibiotic was started. A 12-lead ECG showed a QTc of 644 msec and nonspecific ST abnormalities.

The patient had a long history of recalcitrant bipolar disorder, which was being treated successfully with citalopram (40 mg once daily) and olanzapine (20 mg taken at night). A mental status examination revealed an affable yet exhausted woman with a concerned affect, articulate speech, and cogent thought process. Her overall mood was apprehensive, reflected by her thought content being predominantly focused on having another infected dialysis site. Both olanzapine and citalopram were discontinued following the ECG results, and the patient was closely monitored using telemetry. One day following discontinuation of olanzapine and citalopram, the patient's QTc interval fell from 644 msec to 531 msec. The next day, the QTc interval fell again to 493 msec. It was then decided to restart olanzapine at a reduced dosage of 10 mg nightly. An ECG performed the next day revealed no change in the QTc interval. Systemic inflammatory response syndrome was resolved with antibiotic treatment. The patient was discharged and advised for follow up evaluation with her outpatient psychiatrist.

## Discussion

Many factors can prolong the QT interval. Psychiatric medications and electrolyte disturbances are common precipitants (1). Prolonged QTc is concerning because it can, although rarely, be followed by torsades de pointes, a life-threatening ventricular tachyarrhythmia. Olanzapine and citalopram prolong the QTc interval likely through blockade of rectifier potassium current (2, 3). Olanzapine can prolong QTc when administered in excessive doses, but no cases of torsades de pointes have been reported with the use of olanzapine alone (1). Citalopram has been associated with torsades de pointes in patients with abnormal electrolyte levels and end-stage renal disease (4, 5). Concomitant antipsychotic and antidepressant therapy has been shown to prolong QTc more than antipsychotic monotherapy; synergistic blockade of potassium channels is the proposed mechanism (6). Electrolyte disturbances also influence QT interval prolongation. Frequent cardiac arrhythmias in patients with chronic kidney disease have prompted studies investigating the role of hemodialysis on QT prolongation. Rapid changes in electrolyte concentrations during dialysis are thought to contribute to arrhythmias, and changes in plasma electrolyte concentration during hemodialysis have been correlated with QT prolongation (7).

Several mechanisms could account for the prolonged QTc in the above case. Medications and electrolyte disturbances were considered on the preliminary differential. Because laboratory and ECG data became available, citalopram emerged as the most likely cause. The rationale behind this hypothesis is twofold. First, serial ECGs showed successive decreases in the QTc interval following discontinuation of citalopram and olanzapine, but no increase in QTc was observed after restarting olanzapine. Second, electrolyte levels were normal immediately following hemodialysis and at the time of the first and most worrisome ECG. Hypokalemia was initially considered as an etiology because of the risk factors in the patient. Hypokalemia is not only a well-established cause of prolonged QTc, but psychiatric and dialysis patients are at high risk for hypokalemia (8). In the above case, however, the patient's potassium levels were within normal limits (3.8

mEq/L) following the dialysis session. Notably, the patient was hypokalemic (3.2 mEq/L) the day following discontinuation of citalopram and olanzapine, yet her QTc interval still improved from 644 msec to 531 msec.

Attributing this case of prolonged QTc to citalopram is not without confounds. First, we are unable to account for the effect of dialysis on drug levels in the patient. One small study found that severe renal failure does not influence the pharmacokinetics of citalopram and that hemodialysis has a negligible effect on the elimination of the drug (9). Although this finding suggests that hemodialysis did not contribute to increased plasma citalopram levels in the patient in the above case, this cannot be proven. We are also unable to rule out the possibility that the QTc interval may have increased if olanzapine had been restarted at the initial 20-mg dose instead of at 10 mg. Plasma levels of olanzapine at the time of the last ECG are not known and cannot be reliably compared with plasma levels of the drug at the time the patient initially presented.

Antipsychotics and antidepressants are often combined, and regimens affecting myocardial repolarization cannot always be avoided. We recommend careful consideration of individual patient risk factors when choosing combination antipsychotic and antidepressant therapy. Patients receiving citalopram should also receive routine ECG testing and regular monitoring of electrolytes. While olanzapine has been shown to prolong QTc when administered in excessive doses, the present case suggests that conventional doses of olanzapine may have less effect on QTc prolongation when compared with citalopram. We recommend cautious use of citalopram in patients receiving hemodialysis due to the increased risk of electrolyte disturbances in these patients.

*Kristopher Klem is a third-year medical student at the University of California Davis School of Medicine, Sacramento, Calif.*

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# Prenatal and Postpartum Depression

Harita Raja, M.D.

Depression is a common disorder associated with pregnancy. It can occur in both the prenatal period and postpartum period (occurring within 4 weeks of childbirth according to DSM-IV). The present article provides a review of the types of depression in pregnancy, epidemiology, available screening tools, and various treatment options.

## Types of Depression Associated With Pregnancy

Women in the prenatal or postpartum period who report low mood may present with prenatal depression, postpartum blues, postpartum nonpsychotic major depression, or postpartum major depression with psychosis. Prenatal depression occurs in 10%–20% of pregnant women, generally with symptoms similar to those of a depressive episode, including sleep disturbance, anhedonia, and appetite changes (1). Postpartum blues is a nonpathological condition that occurs in 50%–85% of women after delivery, characterized by reactivity of mood, tearfulness, and irritability (1). This disorder is time limited and typically remits after 10 days. No pharmacologic treatment is recommended. Nonpsychotic major depression, on the other hand, is pathological and occurs in 10%–15% of women after childbirth (1). Risk factors include prenatal depression, prenatal anxiety, and a history of previous depression. Nonpsychotic major depression appears in the first 2–3 months and is similar in presentation to a major depressive episode. It can result in profound dysfunction, and treatment is dependent on the severity of symptoms (1). Postpartum depression with psychosis affects less than 1% of new mothers. It is characterized by auditory and visual hallucinations (often about harming the baby), paranoia, bizarre delusions, and suicidal/homicidal thoughts. Given the significant consequences of these actions, this diagnosis is considered a psychiatric emergency (1).

Prenatal depression, postpartum blues, postpartum nonpsychotic major depression, and postpartum major depression with psychosis are not listed as separate conditions in DSM-IV. Rather, DSM-IV instructs that the specifier "with postpartum onset" be used in reference to the onset of major depression within 4 weeks after delivery (2). There is no specifier for prenatal depressive symptoms, even though postpartum depression has often been shown to have onset prior to delivery (3).

## Epidemiology

Multiple studies have focused on the prevalence and epidemiology of prenatal and postpartum depression. A recent survey reported the prevalence of depression to be 8.4% in pregnant women and 9.3% in postpartum women (4). Another study reported a prevalence rate of 10%–15% during pregnancy, depending on gestational age, race/ethnicity, and socioeconomic factors (5). This study demonstrated that maternal depression disproportionately affects African American and Hispanic women, compared with their White counterparts. Similarly, in a study that examined women hospitalized with postpartum depression in the state of New York, the risk of hospitalization was increased in women who were "older, Black, smokers, lacking private insurance, and with multiple gestations" (6). However, whether there is a difference in the prevalence of depression in women who are pregnant relative to those who are not pregnant is still a question that remains unanswered. Thus far, evidence from multiple case-control studies does not show any difference (3).

## Significance of Depression in Pregnancy

There are a number of reasons why it is important to recognize and treat depression in women during and after pregnancy. For example, prenatal depressive symptoms are associated with an increased risk of obstetric intervention, such as epidural analgesia, operative deliveries, and neonatal unit admissions (3). Prenatal depression has also been found to be associated with poor birth outcomes, including low birth weight, possibly due to abnormalities of the hypothalamus-pituitary-adrenal axis (5). One study conducted in Korea reported that maternal-fetal attachment and fetal growth can also be negatively affected by prenatal depression (7).

In the postpartum phase, maternal depressive symptoms around 3 months have been associated with increased use of acute care but decreased use of preventive services, such as infant vaccinations (3). Women who are depressed are also less likely to continue breastfeeding, which has numerous positive benefits. Moreover, and most seriously, up to 40% of mothers who are depressed have thoughts of hurting their infants at one time or another (3).

## Screening for Depression

Given the critical consequences of depression, screening of a mother's psychosocial stressors and assessment of risk factors during and after pregnancy is essential (5). Interestingly, there is insufficient evidence to support a specific recommendation regarding which tool should be used for universal screening of depression, as well as how often it should be done (8). However, the American College of Obstetricians and Gynecologists advocates screening pregnant women and recommends performing psychosocial screenings at least once each trimester (3).

There are multiple depression screening tools available, including the 9-item Patient Health Questionnaire and Beck Depression Inventory (8). One tool that has been used extensively in screening for depression in postpartum women is the Edinburgh Postnatal Depression Scale, which is a 10-item questionnaire that takes less than 5 minutes for the patient to complete. Used alone, its sensitivity is 59%–100%, and its specificity is 49%–100% (8). In conjunction with a general health questionnaire at 6 weeks after delivery, the Edinburgh Postnatal Depression Scale has been shown to have a positive predictive value of up to 78%. Another advantage of this scale is that it has been validated in various cultural groups (3).

## Treatment Options

Although there is a high prevalence of depression in the maternal population, this condition continues to be overlooked, in both identification and treatment. As stated by Patel et al. (4), the barriers to treatment are many, including "structural barriers (i.e., inability to pay, transportation, and childcare), lack of motivation for treatment and hopelessness, fear of adverse reproductive outcomes, uncertainty about appropriate provider and treatment type, lack of knowledge of illness, social stigma and fear about custody loss." Unfortunately, the lack of treatment can have negative consequences not only for the mother, but also for her baby and other family members.

In their survey of 100 pregnant and postpartum women, Patel et al. (4) found that most respondents preferred an active collaborative role in treatment decision making for depression. More than one-half of these women preferred combination treatment with medication and counseling. Some ways to better engage women in treatment are to provide education about depression and its consequences and treatment options and to improve communication.

In pregnant and postpartum depressed women requiring pharmacotherapy, there are many factors to consider. Fluoxetine has been in use for over 20 years in the prenatal population. Although studies are limited, it has been shown that fluoxetine is comparable to cognitive behavioral therapy, with both being superior to placebo after 4 weeks of treatment (3). However, side effects are present. Although systematic reviews do not demonstrate any increase in fetal malformation, there is a significant increase in the risk of miscarriage (3). Other studies have reported increased risk of preterm delivery, fetal seizure, and fetal death. In women who have a history of depression, it is imperative that continuing antidepressant or alternative treatment is highly considered, as one study reported that women who discontinued antidepressant treatment had a five times greater likelihood of relapse, generally during the first trimester (3).

Finally, a dilemma arises in postpartum women who wish to breastfeed, given the benefits of breast-feeding, but also need antidepressants. Studies have shown that exposure of infants to antidepressants, specifically nontricyclic compounds, through breast milk is low (9). First-line agents include paroxetine and sertraline; fluoxetine, citalopram, and venlafaxine exhibit higher plasma levels in infants after breast-feeding. Women who must continue an antidepressant regimen should not be advised to discontinue breast-feeding (9). There is no need for infant monitoring or breast milk analysis (9).

## Conclusions

Depression is a common disorder associated with pregnancy. The types of depression characterized by time period and symptoms can be divided into prenatal depression, postpartum blues, postpartum nonpsychotic major depression, and postpartum major depression with psychosis. It is important to distinguish among them because the treatments for each are different. Postpartum major depression with psychosis is particularly significant because it is a psychiatric emergency. There are a number of consequences, including poor birth outcomes and increased risk of medical interventions, in mothers with depression. Given the consequences of maternal depression, screening is an important component that should be a part of care for pregnant women. Various treatment options are available, both pharmacological and psychosocial, and each case should be evaluated on an individual basis.

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*Case Report*

# Factitious Acute Right Hemiplegia: Challenges of Treating Patients Without Universal Electronic Medical Records

Hector Diez-Caballero, M.D.
Shirley Sostre-Oquendo, M.D.

Factitious disorder is defined as the intentional fabrication of symptoms with the motivation of assuming a "sick role" (1). The disorder can be challenging and costly to diagnose. Many patients are not diagnosed until after submitting to redundant and sometimes invasive work-ups and procedures (2). The current medical records system makes it difficult to track these patients, resulting in limited epidemiological data. It is estimated that factitious disorder accounts for approximately 0.8%–1.0% of psychiatry consults, with most reported cases involving patients who are Caucasian, middle-aged, unemployed, unmarried, and without significant social or family attachments (3). Even though two-thirds of patients with factitious disorder are men, those with a predominance of physical symptoms tend to be women (female:male ratio, 3:1) (3). These patients are usually 20–40 years old and have a nursing or health care background (3). Substance abuse, mood disorders, and personality disorders are frequent comorbidities (3). Multiple etiological factors have been suggested, but the need for nurturance appears to be a critical component (4). Many patients with the disorder have histories of early childhood physical or sexual abuse, disturbed parental relationships, and emotional deprivation (5). Psychoanalytic experience suggests that factitious phenomena may be understood as variants of posttraumatic stress disorder (PTSD) (6). We introduce a patient who presented to the emergency department with neurological symptoms and received treatment with tissue plasminogen activator before being diagnosed with factitious disorder.

## Case

"Miss S" was a 23-year-old Caucasian, unemployed, single woman who presented to the emergency department through emergency medical services with a chief complaint of right-sided paralysis, sensory loss, slurred speech, and abdominal pain. The patient reported having suddenly developed these symptoms while in a department store, prompting employees to call an ambulance. She reported a medical history of variegate porphyria and multiple transient ischemic attacks and a psychiatric history of PTSD secondary to sexual abuse by her father. She refused to provide any contact information for family members, stating that she was hiding from them, and she also refused to provide contact information for her primary care physician, stating that he was an "old friend of her father's."

In the emergency department, physical examination was notable for tachycardia, an existing implantable venous access system (portacath) in the left anterior chest, and a scar on the right anterior chest, which the patient reported to be the location of a previous portacath. A neurological examination demonstrated right hemiplegia and sensory loss, prompting the brain attack team to recommend tissue plasminogen activator. The patient seemed somewhat more concerned about being given intravenous pain medications for her abdominal pain and less concerned about her hemiplegia. Given this imbalance, the brain attack team wanted to ensure that her presentation was not psychiatric in nature before giving her the tissue plasminogen activator, and thus they consulted psychiatry to assess her for decision-making capacity. Psychiatry determined that the patient had the capacity to accept tissue plasminogen activator. After a head CT scan revealed no intracranial bleeding, tissue plasminogen activator was administered within the 3-hour window period, and the patient was transferred to the medical intensive care unit.

The next day, an MRI ruled out stroke. During physical therapy, the therapist observed the patient using her right arm for support, but she did not confront the patient with this information. During psychiatric follow-up assessment in the medical intensive care unit, the patient was very emotive, discussing at length her history of sexual abuse and adding that she had been a victim of Münchausen syndrome by proxy, reporting that her mother would intentionally withhold her porphyria medication.

Once stable, Ms. S was transferred to the general medical floors, where she became febrile. Blood cultures were positive for *Enterobacter cloacae*, raising the suspicion that the patient might have been self-inoculating feces through her portacath. Because additional signs of sepsis appeared, portacath removal was recommended, but the patient refused, stating that it was necessary for the treatment of her porphyria. A full porphyria work-up was ordered, leading the patient to reveal that she had recently undergone an extensive work-up at a local hospital. She consented to disclosure of the hospital records, which showed that she was discharged on the same day of presentation to our emergency department. During that hospitalization, porphyria had been ruled out, and she had been diagnosed with factitious disorder. In addition, the hospital records showed two other recent hospitalizations. Given this information, a court order for portacath removal against the patient's will was obtained. Treatment of sepsis was effective, and the work-up for porphyria returned negative results.

During the patient's hospitalization, she received almost daily psychiatric follow-

up assessment, including supportive psychotherapy as well as escitalopram for mood symptoms that she attributed to PTSD. Efforts were made to gently confront her with the repeated use of her right extremities observed by staff members.

Although she resisted the idea that her hemiplegia might have a psychological component, she agreed to voluntary psychiatric hospitalization once medically stable, at which time group and occupational therapy were added to the treatment plan. Her hemiplegia began to improve, which she attributed to physical therapy. After 2 weeks of psychiatric hospitalization, she was able to walk with a cane and denied experiencing symptoms of depression or active symptoms of PTSD. She was discharged in stable condition but failed to present for outpatient follow-up assessment.

## Discussion

In the above case, a young woman presented to the emergency department with neurological symptoms consistent with stroke. No collateral information was available, and the presence of a portacath gave credibility to her self-reported history. The treatment team had only 3 hours within which to make the decision to treat the patient with tissue plasminogen activator, which they opted to do. Her prolonged hospital course resulted in both tremendous financial cost and significant risk of morbidity. In addition, it interfered with psychiatric treatment geared toward increasing her level of functioning within the community and decreasing her drive to seek frequent rehospitalization (7).

The present case advocates the need to continue the national debate regarding the establishment of a universal electronic medical records system. Such a system might help to identify and track patients with factitious disorder more cost effectively (7). Rapid access to data gathered during prior hospitalizations might decrease treatment costs, prevent repetitive studies and unnecessary treatments or procedures, and ensure that delivery of the necessary psychiatric treatment is not delayed.

When the subject of a universal electronic medical records system has come up in national discourse, numerous technological, financial, and privacy issues have been raised (8). An individual suspected of factitious behavior must be accorded the same rights as other patients, including privacy, confidentiality, and informed consent, and patients should never be "blacklisted" (9). The potential significant costs, however, should also be taken into consideration. Policy strategies may be necessary in order to spur the development of a universal electronic medical records system designed to serve the patient's best interest while protecting his or her right to privacy and autonomy (10).

*At the time this article was accepted for publication, Dr. Diez-Caballero was a fourth-year resident in the Department of Psychiatry, University of Medicine and Dentistry of New Jersey, Newark, N.J. Dr. Sostre-Oquendo is a third-year resident in the Department of Psychiatry, University of Medicine and Dentistry of New Jersey, Newark, N.J.*

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*Case Report*

# Management of Psychosis With Comorbid Prolactinoma

Neevon Esmaili, M.D.
Daniel Newman, M.D.
Dawn Ueda, M.D.

## Case

"Mr. B" was a 26-year-old Hispanic man who exhibited an acute change in behavior 2–3 days prior to presentation. The patient had no personal or family psychiatric history. As described by his uncle, he had been damaging his bedroom, constantly rearranging furniture, and disrobing, and he was tearful and had incoherent speech. Prior to the onset of this behavior, he had a normal social life, was independent, and maintained employment. The patient had no known medical history at the time of presentation, but he did have a history of methamphetamine and marijuana use.

On mental status examination, he was found to be agitated, throwing his shoes repeatedly on the ground. He stated that he was "Jesus" and that he was being raped by women. His mood was described as "anxious," and his affect was labile and tearful. His speech was increased in volume, and an increased rate of loosening of associations was observed. The patient endorsed suicidal and homicidal ideations, as well as auditory hallucinations. His score on the Mini-Mental State Examination was 12. His insight and judgment were both impaired.

After a CT scan, a prolactinoma was discovered on MRI. The patient's prolactin level was 2074 ng/mL. The endocrine service recommended starting bromocriptine (initially 1 mg p.o. q.i.d. and increased to 5 mg p.o. b.i.d.), and neurosurgery recommended that medical management be attempted prior to surgical intervention.

The patient was continued on bromocriptine per endocrinology. He was additionally prescribed aripiprazole (20 mg p.o. qday), clonazepam (1 mg p.o. b.i.d.), hydroxyzine (50 mg p.o. every night as needed for insomnia), folic acid, thiamine, and a multivitamin. Some clinical improvement in delusions was noted, but the patient remained disorganized, making several attempts to elope. His prolactin levels eventually lowered to 88.5 ng/mL.

The patient was discharged on this medication regimen when he was restraint-free and no longer suicidal or homicidal and endorsing hyperreligious delusions. He was lost to follow-up evaluation when his family moved him to Mexico following discharge.

## Discussion

The recommended treatment for prolactinomas in patients with psychosis is controversial. Some studies have suggested a neurosurgical approach only if complete resection can be guaranteed (1), while others have recommended neurosurgery, regardless of the theorized degree of resection, as the first option (2). Ali et al. (1) described a patient with psychosis and a prolactinoma for whom transsphenoidal surgical resection was employed as first-line management (1). The patient was concurrently receiving testosterone injections. The patients' serum prolactin level was stable at 314 ng/mL, and psychosis was well managed with risperidone injections 3 years postresection.

First-line medication management of prolactinomas involves using dopamine agonists, such as bromocriptine, which work to decrease tumor size and serum prolactin levels (1). Bromocriptine, the first-line agent with an established history and safety record (3), is a dopamine $D_2$ and $D_3$ agonist that activates postsynaptic dopamine receptors in the tuberoinfundibular and nigrostriatal pathways. Unfortunately, neuroleptics can counter bromocriptine by targeting the same tuberoinfundibular tract to antagonize the dopamine $D_2$ receptors and therefore increase the serum prolactin level (3). Some previous reports have suggested that bromocriptine induces psychosis (4). Additionally, cabergoline, another $D_2$-receptor agonist, was reported to exacerbate psychosis in patients with schizophrenia (1).

According to the literature, aripiprazole is the optimal antipsychotic agent for a patient suffering from both psychosis and a prolactinoma because aripiprazole has been proven to decrease prolactin, most likely through its mixed activity of dopamine receptor antagonism and agonism (5, 4). In a meta-analysis, Hoffer et al. (4) suggested that aripiprazole monotherapy could evade the worsening of psychosis that commonly arises with $D_2$-receptor agonists, such as bromocriptine, necessary for healing the rare patient concomitantly suffering from psychosis and a functional prolactinoma. The only antipsychotics that have shown to be prolactin sparing are the atypical antipsychotics aripiprazole and clozapine (6).

The literature is unclear whether ziprasidone and olanzapine are prolactin sparing or mildly elevating of prolactin levels. The highest increases in prolactin levels were seen with henothiazines (e.g., fluphenazine, trifluoperazine, perphenazine, mesoridazine, thioridazine, and chlorpromazine), butyrophenones (e.g., haloperidol), thioxanthenes (e.g., thiothixene), and risperidone (6).

Bromocriptine can prolong the corrected QT (QTc) interval (7). Haloperidol (oral), olanzapine, risperidone, clozapine, and aripiprazole have been reported to have little to no risk of QTc interval prolongation (8). In contrast, thioridazine, mesoridazine, droperidol, pimozide, and haloperidol (administered intravenously

in large doses) have been reported to have the highest risks (8).

## Conclusions

Eliminating psychosis with dopamine blocking antipsychotic agents while medically treating a macroprolactinoma and the symptoms of hyperprolactinemia with dopamine agonists can be antagonistic interventions. It is important to be aware that medical management with dopamine agonists may exacerbate the psychotic disorder and complicate neuroleptic treatment (1, 4). Avoiding risperidone (9) and the use of prolactin sparing/reducing dopamine agonists, such as aripiprazole and possibly clozapine, is the intervention of choice (4, 10).

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*The authors thank Lily Yip, Pharm.D., and Michele Pato, M.D., University of Southern California, Los Angeles.*

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*Book Review*

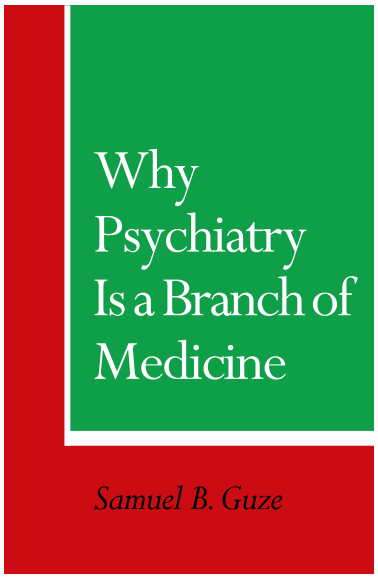
# *Why Psychiatry Is a Branch of Medicine*

*by Samuel B. Guze. New York, Oxford University Press, 1992, 147 pp., $29.00.*

David Hsu, M.D.

This classic text, published 20 years ago and authored by the eminent medical psychiatrist Dr. Samuel Guze, reminds us that psychiatry is still a medical pursuit. Written at the end of his life after a long and fruitful career, Guze incorporates his background as an internist advocating for the field of biological psychiatry, which was then burgeoning. Guze was one of the original psychiatrists at Washington University who established the diagnostic system that transformed DSM into its modern form, through its 3rd edition. With DSM-5 rapidly approaching, this book remains highly relevant in predicting the advent of neuropsychiatry and the biological mechanisms of psychopathology.

Was psychiatry ever *not* a branch of medicine? And why did Guze feel compelled to write such a book? During his time, new selective serotonin reuptake inhibitors and atypical antipsychotics were just coming to the market, prompting a biological revolution in the entire field of psychiatry. Neuroscience was moving quickly, and psychiatry seemed to be starkly divided between psychoanalysts and biological psychiatrists, similar to our modern-day scenario. Guze predicted many of the philosophical dilemmas of today relating to the ethics of psychiatry, the relationship between mind and brain, and our expectations for neuroscience in unraveling the mechanisms of disease. He even defines what he feels is "disease" and




compares this to established "diseases" in general medicine, namely epilepsy, hypertension, and coronary artery disease. Guze asks rhetorically whether epilepsy was a disease before the EEG was created, demonstrating that psychiatry recognizes the presence of mental disorders without yet understanding the specific neurological pathway.

The most striking section of the book pertains to the discussion on the anti-psychiatry movement. Specifically, Guze summarizes the views of Thomas Szasz and how Szasz believed that patients should be allowed to commit suicide without interference from physicians. In my mind, this characterizes the extreme view of psychiatry *not* being a branch of medicine. If patients were allowed to kill themselves, then the medical code of ethics that psychiatrists abide by would then be moot. Guze states that "psychiatrists who accept the medical model and take the studies of suicide seriously must confront the ethical dilemma of deciding whether to force patients into the hospital and into certain treatments" (p. 110).

*Why Psychiatry Is a Branch of Medicine* highlights the influence that general medicine has played in the field of psychiatry. All too often, the psychiatrist in psychosomatic medicine service will present a patient in the SOAP (subjective, objective, assessment, and plan) format, with a differential diagnosis and plan for treatment, as if to stamp out psychiatric disease. This is far from the realm of a psychoanalytic interview in which unconscious drives will slowly reveal themselves. As a psychiatrist who is also an internist, I found this book to be refreshing and insightful. I recommend this book to anyone who works in the medical hospital and has an interest in philosophy.

*Dr. Hsu is a fifth-year resident in the Departments of Internal Medicine and Psychiatry and Behavioral Sciences, University of California Davis Medical Center, Sacramento, Calif.*

# TEST YOUR KNOWLEDGE

In preparation for the PRITE and ABPN Board examinations, test your knowledge with the following questions.
(answers will appear in the next issue)

*In preparation for the PRITE and ABPN Board examinations, test your knowledge with the following questions (answers will appear in the next issue).*

**Question #1**
A 24-year-old man is admitted to the psychiatric inpatient unit with bizarre behavior based on a delusional belief that everyone he sees is in fact the same person but in a variety of disguises. This particular presentation has been classically described as which one of the following?

A. Cotard's delusion
B. Fregoli syndrome
C. Capgras syndrome
D. Münchausen syndrome

**Question #2**
Buspirone may be used to help alleviate anxiety symptoms. What is the mechanism of action by which buspirone is believed to exert its anxiolytic effect?

A. GABA-$_A$ agonist
B. 5-HT$_3$-receptor antagonist
C. Serotonin transporter reuptake inhibitor
D. 5-HT$_{1A}$-receptor partial agonist

## ANSWERS TO SEPTEMBER QUESTIONS

**Question #1.**

Answer: **D Aspirin**

Thiazide diuretics, ethacrynic acid, spironolactone, and triamterene can increase lithium levels owing to decreased lithium clearance by the kidneys. Other medications that can increase lithium levels include angiotensin-converting-enzyme inhibitors, angiotensin receptor II blockers, and almost all nonsteroidal anti-inflammatory drugs. Aspirin and sulindac typically do not increase lithium levels (1–3).

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**Question #2**

Answer: **E Autoimmune encephalitis**

Anti-*N*-methyl-D-aspartic acid (NMDA) receptor encephalitis is an autoimmune limbic encephalitis first characterized in 2007. It is more common in young adults and often associated with ovarian teratoma in women. The stereotypical clinical course involves a prodromal illness with nonspecific flu-like symptoms, followed by acute psychosis. Patients are commonly admitted to psychiatric units during the acute psychotic phase. Over weeks, symptoms progress to include decreasing consciousness, seizures, autonomic instability, and dyskinesias. Nonspecific abnormalities in MRI, EEG, and CSF are common. Symptoms may progress to coma, status epilepticus, and death. Diagnosis is by detection of antibodies to NMDA in the CSF. Anti-NMDA-receptor encephalitis is potentially reversible with immunotherapy, often including plasma exchange and tumor removal in paraneoplastic cases (1–3).

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We are currently seeking residents who are interested in submitting Board-style questions to appear in the Test Your Knowledge feature. Selected residents will receive acknowledgment in the issue in which their questions are featured.
Submissions should include the following:
1. Two to three Board review-style questions with four to five answer choices.
2. Answers should be complete and include detailed explanations with references from pertinent peer-reviewed journals, textbooks, or reference manuals.
***Please direct all inquiries and submissions to Dr. Vahabzadeh: arshya.vahabzadeh@emory.edu.**

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2. **Treatment in Psychiatry:** This article type begins with a brief, common clinical vignette and involves a description of the evaluation and management of a clinical scenario that house officers frequently encounter. This article type should also include 2-4 multiple choice questions based on the article's content. Limited to 1,500 words, 15 references, and one figure.
3. **Clinical Case Conference:** A presentation and discussion of an unusual clinical event. Limited to 1,250 words, 10 references, and one figure.
4. **Original Research:** Reports of novel observations and research. Limited to 1,250 words, 10 references, and two figures.
5. **Review Article:** A clinically relevant review focused on educating the resident physician. Limited to 1,500 words, 20 references, and one figure.
6. **Letters to the Editor:** Limited to 250 words (including 3 references) and three authors. Comments on articles published in *The Residents' Journal* will be considered for publication if received within 1 month of publication of the original article.
7. **Book Review:** Limited to 500 words and 3 references.

Abstracts: Articles should not include an abstract.

# Upcoming Issue Themes

*Please note that we will consider articles outside of the theme.*

**December 2012**

Section Theme: Open
E-mail Editor: Monifa Seawell, M.D.
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**January 2013**

Section Theme: Complementary and Alternative Medicine in Psychiatry
Guest Section Editor: Nishi Bhopal, M.D.
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