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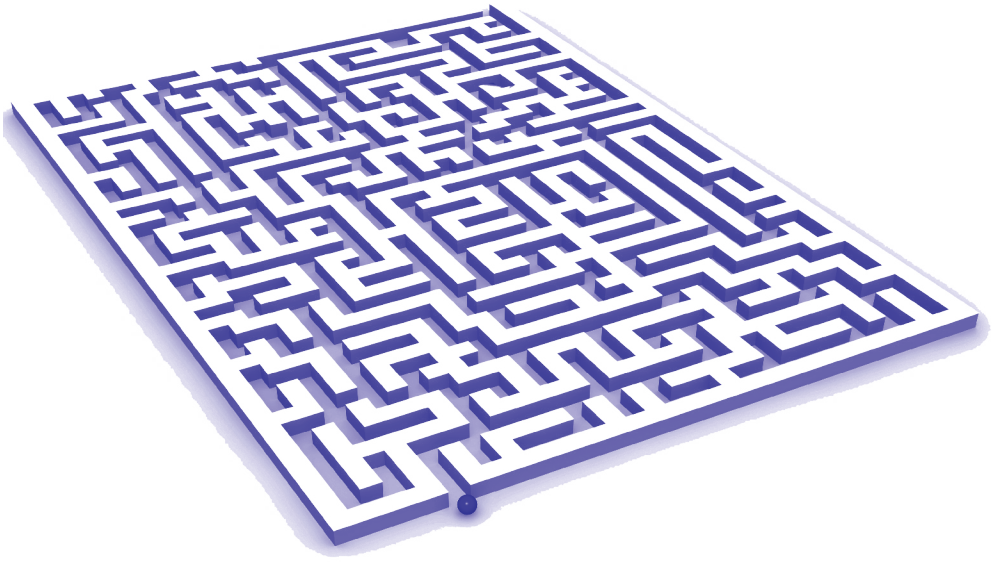

This issue of the *Residents' Journal* highlights a variety of topics. First, Sourav Sengupta, M.D., M.P.H., shares his own experience as a chief resident and outlines the transitions that accompany this responsibility. Maria Andrea Baez, M.D., and Jonathan Avery, M.D., discuss the role of the cerebellum in bipolar disorder as well as in other psychiatric disorders. Daniel Bristow, M.D., discusses the use of electronic medical records in outpatient psychiatry and the need for further study of outpatient efficiency using this technology. Gayle Pletsch, M.D., and Christopher Rodgman, M.D., describe a case of Bromo-DragonFLY-induced dystonia in a young woman with a history of bipolar disorder. Diane L. Lewis, M.D., presents a unique case report of a 61-year-old woman with a video game addiction. Lastly, Alan Hsu, M.D., contributes a perspective on the "Mind Games" competition at last year's APA annual meeting, of which he was a participant.

Perspective

Transitions to Chief Resident: A Developmental Perspective

Sourav Sengupta M.D., M.P.H.

Each of us can remember our first day as an intern. Anxious about the responsibilities we were about to take on. Curious about a new field we were to begin exploring. Determined to master new skills. Many of us were guided by a chief resident, a senior resident who had agreed to take on extra administrative and leadership responsibilities beyond his or her clinical duties. The chief resident welcomed us to our program and served as a liaison with our training director and faculty. The chief made schedules, resolved disputes, and helped us cope with the stresses of work life.

Upon entering residency, it was inconceivable that we would have enough experience, knowledge, and leadership abilities to one day become a chief. Later on, we observed the considerable administrative burden that fell to a chief, and we wondered why one would choose to be one. And yet some of us were then asked to be chief residents, and we agreed to take on this complex role. Some of us found that our experiences with our past chief residents were critical to our own development as chiefs. We may better understand this progression from intern to chief resident if we can view it as a microcosm of development (1), from the natural regression of (yet again) entering a training process to emerging from training as a more fully "formed" leader.

Trust vs. Mistrust (PGY-1)

"I sit across from my chief, arms crossed, eyes downcast. I don't know how to deal with my brother being hospitalized. I'm overwhelmed and distraught. He listens. He tells me not to worry about missing work. After I return from my trip back home, he checks in."

Chief residents have numerous responsibilities that are meant to engender trust within their fellow residents. Chiefs are responsible for making schedules, organizing educational activities, and helping to develop administrative policies affecting residents. They have to balance consulting and collaborating with their residents on important decisions with the administrative realities of organizing day-to-day educational and clinical work. These activities take time and energy. On average, chiefs in psychiatry spend 10 hours per week on administrative duties. Many have protected time and receive an additional stipend to engage in these activities (2).

A chief resident can find him- or herself in limbo. Most chiefs in psychiatry are in their last year of residency (3). They can be seen as separate from their peers and junior residents. They can be seen as part of the training administration within the residency. How can they navigate between these two worlds? A chief resident must develop dual roles as a "legislative" leader within the resident body and a "representative" leader in liaison with the training administration (4). The training administration must feel that their chief resident is reliable, organized, and can effectively communicate between residents and the administration. Residents must feel that they can trust their chief to listen, to counsel, to comfort, and to help them solve challenging interpersonal and professional problems.

Autonomy vs. Shame and Doubt (PGY-2)

"My attending isn't providing the supervision I need. Why can't the residency do something about this?, I ask. My chief gently urges me to advocate for myself. It ultimately is my responsibility to get what I need out of my training."

Residents have to navigate numerous interpersonal and professional issues during the course of their training. Chief residents can play a crucial role in providing supervision and mentorship for junior residents when they are confronted with challenging situations. A majority of chief residents in psychiatry find supervising junior residents to be a key responsibility. Fewer engage in supervision of peer residents, and some find this to be more challenging (2).

Supervising junior residents, who are often engaged in the more arduous inpatient rotations, can be challenging. It is critical to acknowledge that aspects of training can be strenuous and overwhelming. However, a chief resident can help residents take on increasing responsibility for their training experience by helping them focus on possible solutions. Supervision must balance the best elements of supportive psychotherapy with a solutions-focused approach. Chiefs must acknowledge when difficult situations arise but are uniquely positioned to ask, "Now, what do you want to do about it?"

Industry vs. Inferiority (PGY-3)

"I'm doing a child fellow year out of order. I feel out of my league. My chief reassures me that I can do this. She checks in frequently and urges me to make decisions that build my professional identity and productivity."

Residency can feel like a series of short "stints." Two months on an inpatient dual-diagnosis service. A few months of consultation-liaison psychiatry. A half-day outpatient clinic for 6 months. Residents are inherently engaged in developing competence and professional identity while exploring potential careers throughout this process. Chief residents facilitate this process by encouraging residents to explore areas of interest. However, chiefs are also uniquely positioned to encourage residents to mind the broader arc of their careers. What kinds of experiences should residents be in-

volved in that will help them engage in the type of career they will enjoy?

Chief residents maintain a clear connection with junior residents' training experience and can provide an "intermediate" perspective on career development. With the help of faculty and training administration, chiefs are in a unique position to help residents tolerate the inherent "inferiority" of being a novice and work toward developmentally appropriate productivity.

Identity vs. Role Confusion (PGY-4)

"My chief is my friend. We suffer through some initial awkwardness while scheduling rotations. I learn to check my ego and recognize that she's doing a great job and that it is okay to just be part of her team."

Chief residents can feel overwhelmed with the burden of balancing administrative duties with ongoing clinical and personal responsibilities. Mirroring their juniors' and peers' struggle to build their identity as psychiatrists, chiefs can suffer their own "identity crises" in defining their roles. Programs have addressed this issue by creating written descriptions of roles and responsibilities and by ensuring that chiefs serve for at least 12 months (3, 4). Having more clearly defined roles and at least a year to serve allows chiefs to reach out to junior residents that may be well suited for chief resident roles in the future.

A growing number of programs have created multiple chief positions. In a national survey of training directors, the mean number of chief residents was two (3). Some programs divide responsibilities based on rotations. Others have developed more specialized chief resident positions. For example, one institution has developed a chief resident for psychotherapy position, responsible for recruiting psychotherapy patients, mentoring residents in psychotherapy, and teaching and developing curriculum around psychotherapy (5). Other programs have a chief resident for education, focused on organizing didactics for medical students, peers, and nonpsychiatry residents (6, 7). Chiefs and those preparing to be chiefs can utilize these or other paths of specialization to better define their professional and leadership identities.

Generativity vs. Stagnation (PGY-5)

"I am a chief. I sit across from an intern, nearly in tears after a tough night. I listen. We problem solve. I check in from time to time. Every week, every month, she gets better; she grows. We grow together."

Chief residents are chosen for many reasons. They are relied upon for their skills in leadership, communication, organization, and compassion. They must have integrity, be dependable, and demonstrate initiative (2). And yet it can be a daunting challenge looking ahead to an upcoming chief year, tasked with shaping the experience of peers and juniors. At the time this article was written, I was 2 months into a chief resident for education position. A few strategies have been immensely helpful to me. Chiefs can build a "relational base" with their junior residents. It is useful to meet with each incoming intern to get a sense of his or her career and personal interests and "fit" for different opportunities within the residency. This involves upfront time investment but provides unique opportunities for mentorship that can be enjoyable and fruitful for both junior residents and chief residents. A chief resident must expect challenging situations to arise, including those involving unprofessional or impaired residents. It is helpful to frame these experiences as opportunities to learn and to practice administrative leadership. And lastly, there are numerous administrative responsibilities for every chief resident. Any efforts to automate and batch tasks can free up time and energy. Examples include shared online calendars, online meeting scheduling services, automated reminders to perform specific tasks, and regularly scheduled communications highlighting important activities in the residency.

Being a chief resident is a great honor and responsibility. Chiefs are tasked with supporting residents as they develop into excellent psychiatrists, team leaders, skilled teachers, and researchers. Residents develop the knowledge and skills to succeed as chiefs over the course of their training, often as a result of positive experiences with their own chief residents. To successfully transition into this complex role, chiefs must incorporate their psychosocial development throughout residency into this new leadership role. Chiefs are then better prepared to utilize this developmental perspective to help guide residents through the different stages of their training.

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The Role of the Cerebellum in Bipolar Disorder and Other Psychiatric Illnesses

Maria Andrea Baez, M.D.
Jonathan Avery, M.D.

While researchers have been studying the cerebellum for centuries, it is often an overlooked structure in the study of the pathophysiology of psychiatric disorders. It is well known that the cerebellum plays an important role in motor activity, including muscle tone, coordination, and equilibrium (1–2). It is becoming increasingly clear that the cerebellum is also involved in various nonmotor processes and may be involved in the pathophysiology of various neuropsychiatric conditions, such as bipolar disorder (2).

The Cerebellum and Nonmotor Functions

An increasing amount of studies are highlighting the role of the cerebellum in cognition, emotion, language, and autonomic processes. However, these nonmotor functions of the cerebellum were discovered incidentally and still need further study. For example, when the stimulation of the cerebellar cortex was used for the control of seizures, researchers noticed that most patients displayed disturbances in mood, and some showed anger and aggression (3). In children with cerebellar tumors involving the vermis, Pollack et al. (4) described mutism, dysarthria, bizarre personality changes, and emotional lability. Schmahmann and Sherman (5) characterized a syndrome known as the cerebellar cognitive affective syndrome in patients with cerebellar disorders. This syndrome is notable for impairments in executive function and cognition, language difficulties, and personality changes.

Researchers are beginning to better understand how the cerebellum communicates with other parts of the brain and results in these nonmotor functions. Cerebellar projections reach multiple areas like the premotor, prefrontal, and posterior parietal cortex and pass through the ventrolateral thalamus on the way (6, 7). These cortical areas communicate with each other and with limbic structures and then send projections back to the cerebellum via the pons (7, 9). This results in a closed cerebrum-cerebellar loop, which is thought to be responsible for many of the aforementioned nonmotor processes (7, 9). Additionally, the limbic system has been shown to have direct connections with the cerebellum (10–13). These connections have been supported by electrophysiological studies, which demonstrated behavioral responses and autonomic arousal when portions of the cerebellum fastigial nucleus and vermal cortex were stimulated (12, 13).

The Cerebellum and Bipolar Disorder

Bipolar disorder is a complex, neurodevelopmental disorder that is typically associated with abnormalities in the frontotemporal, frontolimbic, and frontostriatal networks and structures (14). Research on the role of the cerebellum in this disorder is increasing, but neuroimaging data are limited. Most of the studies have focused on the vermis, since vermal neurons in particular connect to many limbic brain regions, which can influence mood (15). Anatomical MRI studies in adults have generally reported a decreased volume of the V2 and V3 areas of the vermis of the cerebellum in multiple-episode bipolar patients (15, 16). These findings were confirmed by Brambilla et al. (17), who also found smaller total cerebellum and vermal volumes in bipolar patients with a family history of bipolar disorder (17). An MRI study of adolescents and young adults showed no difference in the size of the cerebellum of individuals with bipolar disorder relative to that of comparison subjects, although a smaller V2 area of the vermis in the bipolar patients fell short of statistical significance (18).

Other studies have focused on cerebellar gray matter. While a tensor-based study in adults revealed an increase in cerebellar gray matter loss in bipolar patients (19), another voxel-based study reported an increase in cerebellar gray matter in patients with bipolar disorder (20). There is some thought that cerebellar gray matter loss may be a neurodegenerative effect, although the consequences of such loss still requires further exploration (19).

Many of these studies are small, and the results are far from definitive. Furthermore, medications (such as lithium) and substance use have been shown to affect the cerebellum as well, which complicates some of the findings (16). Clearly, more studies are needed, and an increased variety of neuroimaging modalities and methods is required to reach definitive conclusions about the role of the cerebellum in bipolar disorder.

The Cerebellum and Other Neuropsychiatric Disorders

In addition to bipolar disorder, the role of the cerebellum in a host of other neuropsychiatric conditions is being explored. Changes in the cerebellum have been documented in individuals with memory and language deficits, attention deficit hyperactivity disorder, autism spectrum disorders, depression, schizophrenia, and various pain disorders (2, 15). A large amount of work has examined the role of the cerebellum in schizophrenia in particular, and some have even argued that cerebellar neurological soft signs can help discriminate between patients with schizophrenia and comparison subjects (2).

Conclusions

Understanding the function and role of the cerebellum is important in psychiatric disorders. More studies are investigating the role of this structure in affect and cognition in healthy individuals and in individuals with bipolar disorder and other neuropsychiatric conditions. Future research targeting cerebellum networks will very likely generate new ways to think about and treat our patients.

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We look forward to sharing our pages with psychiatry's newest members and getting them involved in a project that will help educate fellow members about individuals who have truly made a difference in the lives of patients and trainees.

The Unknown Efficiency Benefits of Electronic Medical Records in Outpatient Psychiatry Documentation

Daniel Bristow, M.D.

Writing notes after patient encounters is a standard duty in the typical workday of an outpatient psychiatrist. The shift from paper charts to electronic medical records (EMRs) has changed the way psychiatrists (and physicians in general) document. Instead of handwriting, more health care providers are typing, and the prevalence of EMRs is increasing rapidly. U.S. health care providers are expected to spend more than $6 billion per year on EMRs by 2015, triple the amount spent in 2009 (1). In an era in which digital technology advances overnight, it is easy to assume that an electronic system of writing notes is better. But do EMRs make documenting more efficient in an outpatient psychiatry clinic? Patient satisfaction rates have not been found to differ with regard to the use of EMRs relative to paper charting in the psychiatry clinic (2), but a search in PubMed and Ovid MEDLINE (including PsycInfo and Cochrane Database) reveals no research specifically investigating whether EMRs improve the efficiency of psychiatrists' documentation in the outpatient setting.

EMRs have often been studied in inpatient nonpsychiatric settings, and the efficiency benefits for health care providers who use EMRs have been mixed (3). A review by Poissant et al. (4) found that the use of EMRs through bedside computer terminals decreased documentation time for nurses by nearly 25% but actually slowed physician documentation by 17.5%. The studies reviewed focused on medical environments different from the typical outpatient psychiatry clinic, which calls the generalizability of this research into question.

Studies of documenting with EMRs in psychiatry are sparse and do not focus on outpatient efficiency. One small study in an inpatient consult-/liaison-psychiatry service revealed that computer software using keystroke shortcuts can decrease time spent writing psychiatric evaluations (5). However, the same study suggested that without the shortcut software, physicians can spend more time typing notes than handwriting them. At what point does typing a patient note reach the point of diminishing returns? This is just one of the important questions about documenting with EMRs that needs to be investigated. Aside from the time spent writing or the length of the note, the quality of the documentation in its ability to communicate clinically useful information to other providers also remains unexplored in outpatient psychiatry.

Now is the time to more thoroughly study EMRs in psychiatry clinics on a large scale to determine what benefits they provide over paper records, if any. Such a study could examine which elements of EMRs are most useful and how these elements can be optimized in an outpatient setting. In the coming years, we will begin to see whether or not EMRs can help psychiatrists better communicate a patient's condition and treatment in an efficient, effective manner. A study that examines this would be useful, given the large amount of money that will be invested into this new system of medical record documentation.

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Case Report

Bromo-DragonFLY-Induced Dystonia

Gayle Pletsch, M.D.
Christopher Rodgman, M.D.

Bromo-DragonFLY, or bromo-benzodifurany-lisopropylamine, is a designer hallucinogenic drug. Commonly found in Europe, it is relatively unheard of in the United States but recently has been gaining popularity in New Orleans. Undetectable through standard drug screens, it has a wide variability of case presentations, and given the often severe adverse effects, it may be helpful to incorporate this agent into standard drug-use questionnaires. We present the case of a 21-year-old woman with dystonia and delusions secondary to ingestion of Bromo-DragonFLY.

Case

"Miss A" is a 21-year-old woman with a history of bipolar disorder who presented to the emergency department stating that her skin was "rotting" off her back. The patient's bipolar disorder symptoms were stable despite discontinuation of medications for several months. Tired and unable to sleep, she had ingested Bromo-DragonFLY and immediately began experiencing uncontrollable muscle twitching and pain. After 5 days of discomfort and delusions, she presented to our facility. On examination, she was afebrile with stable vitals and well-perfused skin. Her range of motion was decreased with abnormal positioning of her left arm, with her muscles twitching over the left upper back. She had poor eye contact, rapid speech, an affect ranging from expansive to irritable, linear thought process, and delusions. Neither clonus nor ocular abnormalities were present. Alcohol was not detected in her blood, and her urine toxicology was positive only for cannabis. Urine myoglobin and creatinine kinase were within normal limits at 28 mg/dl and 44 ng/ml, respectively. The patient was prescribed lorazepam, olanzapine for delusions, and baclofen for dystonia. Her psychiatric symptoms secondary to the hallucinogen, including paranoia, resolved slowly with treatment, after 2 full days, and her dystonia symptoms were resolved with baclofen during that time.

Discussion

Bromo-DragonFLY is a designer drug that is chemically similar to lysergic acid diethylamide and amphetamine and has also been sold under the name "ABDF," an acronym of its chemical name based on the placement of the bromide atom in what is considered the active position on the molecule (1). First synthesized in the laboratory of David E. Nichols by Steven Parker, it was intended for brain research in rats. Case reports first cite its use as early as 2001, and it was first classified as a drug of abuse in Europe in 2008. It is sold in the form of "blotters," or small squares of paper, as well as in liquid, powder, and tablet forms. It can take effect immediately or with delayed onset, sometimes up to 6 hours. If the user is impatient and takes a second dose in the meantime, this can cause a double-dosing effect, with results lasting for days (2–4). Available for purchase mostly through the Internet and sold as a hallucinogen similar to LSD, there are two distinct dosages: the European batch (commonly 200 µg–400 µg) and the American formulation (800 µg–1,300 µg) (5). Officially a controlled substance in Denmark, Sweden, and Norway, Bromo-DragonFLY is similar to controlled substances in the United States. Currently, its pharmacology is unclear, although it appears to have alpha-1 vasoconstrictive properties, specifically affecting the limbs. Its serotonergic effects are also likely to cause vasospasm in the extremities (6). As drug abusers seek new ways to legally achieve a "high," the substance has been growing in popularity and has been notably mixed with most other substances of abuse (cocaine, alcohol, marijuana, etc.) (2).

A search in PubMed using the keywords "Bromo-DragonFLY," "bromo-benzodifurany-lisopropylamine," and "dystonia" revealed no case reports from North America at the time this article was written. Three case reports from Europe were noted. A case from Denmark, published in 2010, described an 18-year-old male who became psychotic and suffered from hyperpyrexia, tachycardia, tachypnea, and hypertension, possibly representing neuroleptic malignant syndrome (7). The patient was treated at the hospital and received high-dose benzodiazepines. He was released from the hospital after 4 days, and his symptoms resolved. A case from England described a male patient suffering from delusions, hallucinations, and tonic-clonic seizures associated with Bromo-DragonFLY use with ketamine and cannabis (8). This patient's symptoms also resolved with benzodiazepines.

While currently undetectable by standard drug screens, Bromo-DragonFLY was identified in a study using gas chromatography/mass spectrometry, ultraviolet/visible spectrophotometry, and thin-layer chromatography (8). In a Finnish study, the compound was also able to be detected, using desorption atmospheric pressure photoionization (1). Using ultraperformance liquid chromatography time-of-flight mass spectrometry, Bromo-DragonFLY was found in blood from the liver of a deceased 18-year-old woman who had ingested a hallucinogenic liquid (9). Fatalities associated with the compound have been noted in Sweden, Denmark, and Norway. A Swedish case report, featured in the *Bromo-Dragonfly*

Report, described a young man who lost several fingers and toes to vasoconstriction after ingesting Bromo-DragonFLY and also suffered acute renal and hepatic failure and both respiratory and metabolic acidosis (10). The patient recovered with administration of respiratory and fluid support, intravenous diazepam, and norepinephrine.

Our patient was the fifth in a span of a few days, given that a new batch of the drug had recently appeared in Orleans Parish. All cases involved young women without a history of psychosis (Rousse J, personal communication, 2011). These cases were not confirmed through drug testing but by patient report and could have represented only a few among many more in the area. One of these patients did present with neuroleptic malignant syndrome, which is concerning with regard to a substance that affects the dopamine system.

Our patient developed dystonia, a side effect not usually associated with Bromo-DragonFLY. In contrast with other case reports, a benzodiazepine did not relieve her symptoms; however, a muscle relaxant did result in symptom improvement. An antipsychotic improved her delusions and paranoia. She did not exhibit signs of neuroleptic malignant syndrome or serotonin syndrome, the latter of which is more likely given the serotonergic properties of Bromo-DragonFLY; however, neuroleptic malignant syndrome is a concern given its association with the batch of Bromo-DragonFLY that was currently in New Orleans at the time of the patient's presentation. Our case demonstrates a new sequela of Bromo-DragonFLY necessitating prompt recognition and treatment to prevent the development of more severe neuromuscular dysfunction, such as dystonia or neuroleptic malignant syndrome.

Dr. Pletsch is a sixth-year resident, and Dr. Rodgman is a fourth-year resident in the Department of Psychiatry and Behavioral Sciences, Tulane University School of Medicine, New Orleans.

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Case Report

Video Game Addiction as a Form of Avoidance in a 61-Year Old Woman: A Common Problem in an Unlikely Subject

Diane L. Lewis, M.D.

"Ms. A" is a 61-year-old Caucasian woman who presented to the resident clinic with low mood, anhedonia, anxiety, and decreased activities of daily living, such as showering, dressing, and housekeeping. She had suffered from depression since age 5, but her symptoms had worsened over the last several years. She could not identify any precipitants to her decreased mood. She did endorse daily alcohol use of approximately 1–3 drinks per day but did not think it was problematic. The patient was diagnosed with major depressive disorder, recurrent, severe without psychotic features, with recommended further evaluation for alcohol abuse.

She responded well to pharmacotherapy with duloxetine (90 mg once daily) and alprazolam (0.5 mg twice daily as needed) for anxiety, and she engaged in group and individual cognitive-behavioral therapy but continued to struggle with "disappointment."

It was not until 2 years after her initial presentation that she first reported compulsive playing of the computer game FreeCell Solitaire, in which she had been engaging for several years. She admitted to playing up to 10 hours daily (usually 4–6 hours at a time), at the expense of sleeping, eating, socializing with friends, and maintaining hygiene. She arrived to several appointments "exhausted" after having played FreeCell the entire night before, stating that she could not stop playing. While there were no clear precipitants for why she first began playing, individual bouts of increased playing typically followed interpersonal disappointments that triggered feelings of shame and self-deprecating thoughts. On further questioning, she also revealed a several-year history of hoarding behavior that included an inability to discard mail, newspapers, and other items, to the point that several rooms in her house had become unusable. She denied any other obsessive or compulsive symptoms.

The patient grew up in an affluent neighborhood and was raised in a family of high achievers. Her relationship with her father was strained. She reported that he had exacting standards, and on multiple occasions he told her that she was "too fat." Her relationship with her mother was more supportive. She had never been married and never had children. She reported having one long-term romantic relationship after college, which lasted 10 years. Prior to retiring at age 54, she had been a social worker. She has several friends with whom she has contact but has decreased time spent with them due to FreeCell playing.

Currently, she consumes 1–3 alcoholic drinks a day, although during a depressive episode, her alcohol intake increases. She takes alprazolam (2 mg two times per month) when she wants to "escape" feeling anxious.

On mental status examination, the patient typically presents as well groomed and friendly but fidgety when discussing difficult topics. Her thought content is typically focused on long-term dissatisfaction, and her thought process tends to be circumstantial and overly inclusive. She frequently diverges into anecdotes that sound well-rehearsed.

In her therapy work, she continues to address her shame over excessive FreeCell playing, as well as her recent loss of love and closeness with her friends and family.

She is exploring "avoidance" as a coping mechanism in her life. Examples of this include her use of alcohol and alprazolam to escape, avoiding commitments that could disappoint others, lifelong shyness for fear of saying something "wrong," difficulty with linearity as a form of avoiding talking about difficult subjects, and, of course, compulsive FreeCell playing as a form of avoiding sadness about disappointment with her life.

The goal of the current therapeutic work involves decreasing the patient's reliance on avoidance by more directly addressing painful topics and experiencing negative emotions.

Discussion

Internet and gaming addiction have received increasing attention over the past decade, with a growing body of evidence that suggests these are real problems that share many features with other addictive behaviors. Multiple studies have shown changes in brain activity in gaming addiction similar to those found in other forms of addiction. Investigations using PET, EEG, functional MRI, and single photon emission computed tomography have collectively demonstrated neurochemical activity in reward circuitry, such as the ventral and dorsal striata and the nucleus accumbens, similar to that seen in substance addictions (1, 2).

While multiple terms are used in the literature, the broad term gaming addiction is used in the present article for simplicity. Up to 20% of the adolescent population may be affected by gaming addiction (3), but limitations arise in this research area because of lack of clear terminology, lack of criteria for determining casual use relative to addiction, and different media types being studied (e.g., Internet use, cell phone use, online relative to offline games, role playing relative to nonrole playing games). Furthermore, most studies are conducted in adolescents (3), which, as demonstrated in the present case, may be neglecting other affected segments of the population.

There is disagreement as to whether or not gaming addiction should even be considered a mental disorder. Some emphasize the positive aspects of gaming, such as socializing, and others warn of a slippery slope that could lead to diagnosing any avid participation in a hobby (e.g.,

golf, shopping, exercise, sunbathing) as an addiction. Furthermore, among those believing that a pathological level of use is possible, there is disagreement as to the actual nature of such a condition, specifically whether this behavior should be considered an addiction, a subtype of obsessive-compulsive disorder, or an impulse control disorder. "Internet use disorder" was in the DSM-5 proposed criteria as a "behavioral addiction," a category classified as "requiring further investigation" (4).

If one believes gaming addiction to be a disorder, the present case illustrates classic features of gaming addiction in an unlikely patient. Current literature suggests that gaming addiction is often associated with male gender, young age, impulsivity, and online game play (5, 6), none of which characterize the patient in this case; however, there are many more characteristics that do describe her situation. First, as demonstrated, she routinely engages in behaviors to avoid feeling unpleasant emotions, and current research strongly supports avoidance as a key feature in developing addictions, not only to video games but also to substances and gambling, as well as to other behaviors (6, 7). In addition, poor sleep, depression, anxiety, and obsessions/compulsions (symptoms noted to cause significant distress in our patient) have been found to be directly related to daily playing time (3). Gaming addiction is also correlated with real-ideal self-discrepancy, weaker peer relationships, lower social self-efficacy, and less cohesive parent-child relationships (6–8), all of which are prominent issues of focus in this patient's therapy. Specifically, gaming enables her to avoid face-to-face peer interactions and not dwell too much on strained family relationships, especially with her father. Still other factors associated with gaming addiction describe this patient to some degree, including problematic use of substances and shyness (9, 10). Figure 1 summarizes these and other findings associated with gaming addiction.

In summary, evidence exists that supports the idea of gaming addiction as an entity similar to substance dependence or any other addictive behavior. Multiple demographic and psychosocial features have been identified as highly correlated with gaming addiction. This case demonstrates a person who would be an unlikely candidate for gaming addiction based on demographic characteristics alone but who does have many other identified associated factors, most notably a motivation to avoid negative affect and an inability to abstain despite significant harm. While certain populations (e.g., adolescents) may be more at risk, the possibility of such problems in any patient (e.g., the geriatric population), especially those with other known associated features, must not be overlooked.

FIGURE 1. Summary of Factors Studied in Relation to Gaming Addiction

Correlated

- Social isolation, shyness/social inhibition, poor peer relationships
- High social self-efficacy in the virtual world or low social self-efficacy in the real world
- Less social activities with parents or poor relationship with parents
- Desire to escape from self, real-ideal self-discrepancy
- Lower scores on life satisfaction measures
- Firm belief in the irresistible power of others or trust in chance to impact life
- Anxiety, obsessions/compulsions
- Depression, current low mood, or suicidal thoughts
- Impulsivity
- Alcohol/substance abuse, other addictions
- Increased truancy
- Self-reported sleeping problems
- Limited leisure activities
- Online player
- Male
- Young age group
- Single marital status
- Less faith

Not Correlated

- Reported amount of physical exercise

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Perspective

Not So Loose Associations

Alan Hsu, M.D.

As Margaret hopped across the stage holding her fist near her tailbone, I was struck by the thought that she was miming a rabbit. I stared at her, leaned toward the microphone, and then stood back up. A rabbit? That couldn't possibly be the answer. So Bev and I both stayed silent as time ran out. The players on the other two teams (Cornell and the University of Texas at Houston) slowly withdrew their hands from their buzzers.

We all looked toward Glen Gabbard, legendary psychoanalyst, author, and, for the night, host of the annual "Mind Games" competition at last year's APA Annual Meeting in Philadelphia.

The road to this match—Tuesday evening's entertainment and a kind of *Jeopardy!* for psychiatry residents—started 3 months earlier. Every year, each psychiatry residency program in the United States enters a team of three trainees into the preliminary round. Margaret, Bev, and I spent an hour one morning last February huddled together around a timed online multiple-choice exam.

"Are you sure? Blindness?," asked Margaret. One of the last questions provided us with a long vignette of a woman with various symptoms and asked what the goal of treatment would be. I don't remember the details. In "Alan's Guide for Taking Multiple-Choice Tests," rule #1 is "gloss over details." It probably was an overweight, young woman with headaches, vision problems, and normal head imaging. In the language of multiple choice tests, that symptom cluster is synonymous with pseudotumor cerebri. "Yep," I replied, with total confidence. "I can't back that up with any kind of explanation other than that I remember reading it once somewhere." Rule #2 is "don't try to talk yourself out of an answer." Bev shrugged. "That sounds good to me." Margaret clicked answer D: Prevent blindness.

Three months later, having scored in the top three, we sat together in the lobby of the Marriott Courtyard Hotel in Center City, Philadelphia. Index cards with neatly printed factoids littered the table: Philippe Pinel pioneered moral therapy for psychiatric patients in "insane" asylums in the Salpetriere; Judd Hirsch played Dr. Tyrone Berger, the psychiatrist in *Ordinary People*; APA was founded in 1844 as the Association of Medical Superintendants of American Institutions for the Insane. I met with two friends for lunch at the Reading Terminal. As they talked excitedly about new applications for repetitive transcranial magnetic stimulation and the APA's position on several landmark criminal cases involving mentally ill defendants, I churned the list of facts in my brain: Pinel, moral therapy; Moniz, frontal lobotomy; Allan Arbus, the psychiatrist in *M*A*S*H*.

That evening, we took the stage and stared out at a sea of psychiatrists. Dr. Gabbard introduced the rules of the game. "Mind Games" follows a format very similar to that of *Jeopardy!* The exceptions being that instead of individuals, the competitors are teams of three, point ranges are 100–500 for both rounds, there are no daily doubles, and contestants don't need to answer in the form of a question. Texas jumped out to an early lead, and I glanced nervously at Margaret and Bev. On a question about an anticonvulsant medication that didn't cause weight gain, I applied rule #1.

"Topiramate!" I answered. I heard groans from the audience, then looked again at the question. I'd done a little too much glossing; the second half of the question asked for a medication that helped with depression but not mania.

"Lamotrigine," answered Texas, and the gap between our teams widened. We entered round 2 with a negative score, while Texas sat with a 2,000-point lead over Cornell. With little else to lose, we roared back into contention. Area 25 is the target of deep brain stimulation for the treatment of major depressive disorder; ephebiphobia is the fear of teenagers; Egas Moniz invented frontal lobotomy (yes, studying does help!).

But then it was time for the charades category (another deviation from traditional *Jeopardy!*), and for the 500-point clue, Margaret walked to the front of the stage and began her hopping routine. When Dr. Gabbard announced that the correct answer was rabbit syndrome, I realized that I'd failed to apply rule #2. It was all downhill from there. Ropinirole, not pergolide, was the first Food and Drug Administration-approved medication for restless leg syndrome. Alcohol, not nicotine, is the most abused substance among the elderly. And cytochrome p450 3A4, not 2D6, is inhibited by grapefruit juice.

When we reached the final round, Texas stood comfortably at 2,800 points, Cornell at 1,200, and Columbia at negative 200. The final clue was "name the psychological concept, a form of social cognition, that enables us to perceive and interpret behavior in terms of intentional mental states (e.g., needs, desires, feelings, goals, and reasons) and is used in several types of psychotherapy."

We wagered 2.5 million points, answered correctly with "mentalization," and won the game! (not really). That's rule #3: "Try your best and have fun!"

Dr. Hsu is a fourth-year resident, Columbia University Medical Center/New York State Psychiatric Institute, New York.

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)

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This month's questions are courtesy of David Buxton, M.D., a first-year fellow in child and adolescent psychiatry at Massachusetts General Hospital/Mclean, Boston.

Question #1
Priapism is most likely to occur as a side effect of which of the following classes of medications?

A) Selective serotonin reuptake inhibitors
B) Serotonin norepinephrine reuptake inhibitors
C) Alpha adrenergic antagonist
D) Dopamine antagonist

Question #2
What treatment is most used for a patient that presents with priapism?

A) Acetaminophen
B) Pseudoephedrine
C) Sertraline
D) Lidocaine

ANSWERS TO JANUARY QUESTIONS

Question #1.

Answer: D. Have the patient complete the HIV Dementia Scale

HIV-associated dementia affects 10.4%–25.2% of patients with HIV over the course of the illness (1) and is often mistaken for depression. The patient's cluster of symptoms, including decreased fine motor skills, decreased concentration, lapses in memory, anhedonia, cognitive slowing, and personality change, are suggestive of HIV-associated dementia. The best screening tool to use for HIV-associated dementia is the HIV Dementia Scale because it includes components that address the subcortical (versus cortical) dementia seen in HIV-related impairment (2).

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Question #2

Answer: C. Apraxia

Unlike DSM-IV criteria for dementia of the Alzheimer's disease type, which includes apraxia and agnosia, the criteria for clinical diagnosis of HIV-1-associated dementia complex does not include apraxia. Apraxia is a primarily cortical skill. The cognitive criteria for HIV-1-associated dementia complex are acquired abnormality in at least two of the following cognitive abilities for at least 1 month: attention/concentration, speed of processing information, abstraction/reasoning, visuospatial skills, memory/learning, and speech/language (1).

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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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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.

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Section Theme: Military Psychiatry
Guest Section Editor: George Loeffler, M.D.
George.Loeffler@med.navy.mil

May 2013

Section Theme: DSM-5
Editor-in-Chief: Monifa Seawell, M.D.
mseawell@med.wayne.edu

June 2013

Section Theme: Forensic Psychiatry
Guest Section Editor: Megan Testa, M.D.
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