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ARTICLE

Brexanolone: A Novel Therapeutic in the Treatment of Postpartum Depression

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Postpartum depression (PPD) is an affective illness characterized by emotional, cognitive, and behavioral disturbances in the postpartum period. Prior to the approval of brexanolone, the standard of care for PPD was psychotherapy or antidepressants, often taking up to 6–8 weeks for efficacy.

Postpartum depression (PPD), or major depressive disorder (MDD) with peripartum onset, is an affective illness associated with childbirth and characterized by emotional, cognitive, and behavioral disturbances in the mother during pregnancy or the postpartum period (defined as the first 4 weeks to 12 months following birth) (1, 2). PPD is arguably the most common complication of childbirth, with prevalence rates ranging from 13% to 19% (3). The exact pathophysiology of PPD is unknown, and it is unclear whether it represents a distinct entity separate from MDD or a variant thereof.

Risk factors for PPD include a personal or family history of depression, low socioeconomic status, and poor social support (4). It is postulated that an interplay between genetic (diathesis) and environmental (stress) factors contributes to the development of PPD, with a heritability cited as high as 40% (5). In addition to this stress-diathesis paradigm, hormonal fluctuations and sleep deprivation during the peripartum period are associated with PPD. Implicated endocrinological changes include variations in estrogen, progesterone, cortisol, oxytocin, and allopregnanolone—a progesterone derivative (6, 7). The presenting symptomatology of PPD includes anhedonia, anergia, low mood, suicidality, and disturbances in sleep, appetite, and concentration (2).

Prior to the approval of allopregnanolone (marketed as brexanolone, brand name Zulresso) by the U.S. Food and Drug Administration (FDA) in March 2019, the standard of care for PPD was psychotherapy, psychotropics, or combination treatment. Nonpharmacologic interventions included peer support, psychodynamic approaches, interpersonal therapy, and cognitive-behavioral therapy. Available medications included selective serotonin/norepinephrine reuptake inhibitors, as well as tricyclic and second-generation antidepressants (8). For severe presentations, there was augmentation with drugs such as second-generation antipsychotics, with ECT as an option for treatment-refractory cases.

THE ROAD TO FDA APPROVAL

Brexanolone became the first drug approved by the FDA specifically intended to treat PPD after a series of three randomized, double-blind, placebo-controlled trials showed remarkable promise (9). The first phase II study enrolled 21 women with severe PPD—defined in the study as a Hamilton Depression Rating Scale (HAM-D) score ≥26—between December 15, 2015 and May 19, 2016, and compared mean score reductions between the 10 subjects receiving brexanolone and 11 controls receiving placebo (10). Kanes et al. (10) found that those receiving brexanolone experienced a mean reduction of 21 points, compared with 8.8 points for those receiving placebo. After 60 hours, seven of the 10 women receiving brexanolone had remission of symptoms. No serious adverse events, discontinuations of the trial, or deaths of participants were reported. Although eight of the 11 women receiving placebo experienced adverse events, only four of the 10 women receiving brexanolone reported the symptoms of dizziness and somnolence (10).

Thereafter, two phase III trials ensued (11). Of the 138 women in one study, 45 were assigned to receive intravenous brexanolone 60 μg/kg/hour, 47 to receive intravenous brexanolone 90 μg/kg/hour, and 46 to receive placebo. After 60 hours, the least-squares mean reductions in the HAM-D score were 19.5 (SE=1.2), 17.7 (SE=1.2), and 14.0 (SE=1.1), respectively (11). The second phase III study enrolled 108 participants randomly assigned to either intravenous brexanolone 90 μg/kg/hour or placebo (11). In contrast to a least-squares mean reduction in the HAM-D score of 12.1 among those receiving placebo, a 14.6 (SE=0.8) decrease was observed among those receiving brexanolone (11).

Headache, dizziness, and somnolence were the most common adverse events observed in the brexanolone groups across both phase III studies (11). Adverse events were found to be unremarkable across arms in both studies, except for one participant in each study (11). In the first study, a patient receiving intravenous brexanolone 60 μg/kg/hour reported suicidal ideation and an intentional overdose attempt; in the second, a patient receiving intravenous brexanolone 90 μg/kg/hour showed altered state of consciousness and syncope (11). Given these results, the drug was approved in March 2019 through a risk evaluation and mitigation strategy (REMS) and is currently available only to patients at certain certified health facilities with active monitoring by health care providers (12).

DRUG PROFILE

Mechanism of Action

Allopregnanolone is an endogenous progesterone metabolite produced by the brain, corpus luteum, as well as placenta during pregnancy (13). It readily crosses the blood-brain barrier and acts as a positive allosteric modulator at the γ-aminobutyric acid type A (GABAA) receptor (13). Plasma concentrations of allopregnanolone increase during pregnancy, reach a peak at the end of pregnancy, and drop precipitously after parturition (13). Fluctuations of allopregnanolone levels have been shown to be associated with symptoms of PPD, likely mediated by changes in neural networks in vulnerable patients (6).

Brexanolone is structurally identical to allopregnanolone (12). GABAA receptors, which are ligand-gated chloride ion channels, mediate inhibitory neurotransmission in the CNS via phasic and tonic inhibition (13). Brexanolone increases phasic and tonic inhibitory tone at synaptic and extrasynaptic GABAA receptors, respectively (12). Although its exact mechanism of action is not known, brexanolone is thought to exert its therapeutic effects on patients with PPD through modulation of disrupted GABAergic activity in the CNS (13). This restoration of dysregulated neural activity may have downstream effects and subsequently ameliorate symptoms of depression. The formulated compound that was used for the randomized-controlled clinical trials is comprised of an isotonic solution of allopregnanolone in citrate-buffered sulfobutylether-β-cyclodextrin (SBECD), diluted with sterile water (12). Given the rapid clearance of brexanolone in the blood, it is intended for continuous intravenous infusion over a 60-hour period in order to maintain steady-state therapeutic plasma concentration (11). Brexanolone is administered postpartum with weight-based dosing, with a recommended maximal dose of 90 μg/kg/hour, titrated as follows: 30 μg/kg/hour × 4 hours, 60 μg/kg/hour × 20 hours, 90 μg/kg/hour × 28 hours, 60 μg/kg/hour × 4 hours, and 30 μg/kg/hour × 4 hours (12).

Side-Effect Profile and Drug-Drug Interactions

As noted above, headache, dizziness, and somnolence were the most common adverse events observed in both phase III studies (11). Brexanolone is extensively metabolized by many pathways and thus unlikely to have significant drug-drug interactions (11). CYP2C9 is the only cytochrome P450 enzyme that has shown to be inhibited by brexanolone in in vitro studies. A clinical interaction study failed to show any alterations in pharmacokinetics when brexanolone was coadministered with phenytoin, a CYP2C9 substrate (11). Abuse potential has also been demonstrated to be low, as evidenced by no differences in subjective reports compared with placebo (12). In terms of the impact of hepatic and renal impairment on pharmacokinetics, there were no changes in tolerability in patients with moderate to severe liver disease, and no dose adjustments were necessary for severe kidney disease (12). However, the solubilizing agent SBECD may accumulate in patients with severe renal impairment (14), and thus brexanolone should not be given to patients with end-stage renal disease.

CLINICAL APPLICATIONS

Many were enthused by brexanolone's approval, not only as an innovation in maternal-child health but also as a sign of promise that more targeted pharmacotherapies are under way. With regard to its clinical applications, some have expressed concerns about brexanolone's accessibility, notably its approval status contingent upon the REMS program, which limits its delivery to certain certified health care facilities and requires a patient to be hospitalized for 60 hours. Another concern is its cost, which comes to about $34,000, depending on the patient's weight and excluding costs of hospitalization (15). Elucidating the salience of these concerns, a study examining attitudes regarding treatment for PPD among well-educated, high-income women found that only 35% of those surveyed indicated that they would opt to take medication if their clinician recommended pharmacotherapy (16). Among the factors preventing treatment, 65% of women reported lack of time, 43% stigma, and 33% issues with childcare (16). These issues come into conversation with recently announced findings from SAGE Therapeutics' Phase III ROBIN study, in which a sister formulation of brexanolone with oral bioavailability demonstrated efficacy in reducing symptoms of PPD after 2 weeks of outpatient administration (17).

Nevertheless, over half of women with PPD remain undiagnosed, 85% go untreated, and over 90% are inadequately treated (18). Moreover, some researchers have theorized that incidence rates of PPD may be higher among women of color or of lower socioeconomic status (19). Furthermore, black postpartum mothers have been found to be less likely than their Caucasian counterparts to accept both psychotherapy and pharmacotherapy (20). Given these findings in the setting of this exciting psychopharmacologic breakthrough, more translational and implementation research is needed

Key Points/Clinical Pearls

- Brexanolone is the first therapeutic option approved by the Food and Drug Administration specifically for the treatment of postpartum depression.
- Recent trials of brexanolone demonstrated its efficacy, with a limited side-effect profile and minimal drug-drug interactions. Headache, dizziness, and somnolence were the most commonly reported side effects.
- Rare instances of suicidal ideation, altered consciousness, and syncope warrant the administration of brexanolone under medical supervision.
- Postpartum depression is a highly prevalent, underdiagnosed, and undertreated mental illness. Further research is needed to mitigate gaps in access to evolving standards of care.

to understand how this innovation affects individual- and structural-level factors that have historically limited access to new standards of care.

CONCLUSIONS

PPD is a highly prevalent, underdiagnosed, and undertreated mental illness. Brexanolone, approved by the FDA under a REMS in March 2019, offers promise as a targeted pharmacotherapeutic intervention for PPD, with limited side effects and drug-drug interactions. More research is needed to understand the etiology of postpartum depression, expand therapeutic options, and translate findings to meaningful patient care.

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Collateral Damage in Countertransference

Manal Khan, M.D.

The conversation begins with, "You don't know what I have done." It's a preamble to what he considers truly atrocious. Conditioned by my training, I use a curious and silent stance to prompt him to tell me more. "When you are in the military, you don't operate like normal people, you have to do things.... I have done things.... I have killed people.... I have killed children."

My hand reflexively searches for my cell phone. I need to hold it. As a new mother, I am expected to share pictures of my 17-month-old toddler so frequently that in his absence, the cell phone has become a transitional object. In this moment, clutching my cell phone is the physical manifestation of my urge to protect. I have seen enough images of young brown boys—boys just like my son, boys I grew up with—bleeding, screaming, scared, and dead. My visceral reaction is anger: "How dare you? After perpetrating trauma, you are claiming to be traumatized? You don't belong here. Your victims do!"

I am appalled by the injustice of access to care. My heart is breaking knowing that those children did not have this opportunity. They probably passed away without access to basic medical aid, let alone a psychiatry appointment. There are not enough doctors in those countries. There are not enough "me's." I am not there. Am I an accomplice by choosing to serve him and not them? My throat starts to constrict, and I fight back tears. This time, I choose silence because I am afraid my voice will quiver. I am also overwhelmed by a new emotion: guilt. I need a moment to metabolize all that's happening inside me.

Over the course of my residency training, I have developed the habit of using narratives to understand stories of patients in their rich, multifactorial contexts. I begin to contextualize his painful experiences: chaotic upbringing, youth recruitment, military hazing, substance use, war and a constant fear of death, return to his home country, transition to civilian life, loss of identity, and now having to sit across from a brown female physician. As I contextualize his experiences, I do the same for mine: privileged in my home country, educated in a low-resourced setting, transition to a high-income country, loss of privilege, guilt about the transition, guilt about not serving those who raised me, guilt about not being able to correct disparities—guilt! There are always two stories in the room, and through clinical supervision, personal psychotherapy, process groups, and self-reflection, we can begin to understand the complex interactions between these stories.

The war may be over for us, but we are both battling guilt. He is here hoping that I can help him heal, and I am hoping the same by writing this story. I find solace in knowing that we are alike. All of us. There is no us and them, no matter how loudly and frequently we are told otherwise. We share the same emotions, similar heartbreak, and identical yearning for redemption.

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Sixteen, Borderline, and Pregnant: A Case of Poetry-Informed Care

Laurel Payne, D.O.

"Miss K," a 16-year-old female with a history of multiple hospitalizations and suicidal gestures, presented to the inpatient unit with acute suicidality. The psychiatry team met with her daily and discussed her persistent depression, which had prominent themes of abandonment by her mother. Although there was evidence that she had some characterological traits, it was not until she shared her poetry that the team began to consider a diagnosis of borderline personality disorder (BPD).

Through her poems, she shared with the team some of her most personal inner experiences of insecure identity, relationship turbulence, and emotional intensity. These expressions became the primary focus of discussion and helped us communicate her diagnosis of BPD (1).

Because BPD is often related to early childhood attachment patterns (2), the team further explored the patient's relationship with her mother. She said that her mother had serial boyfriends and thus was often not emotionally present, was somewhat dismissive of the abuse that she had experienced, and was unable to provide consistent boundaries or a safe environment. Miss K aptly noted that she, like her mother, had multiple dramatic and unstable relationships.

Two weeks into her hospital stay, she reported morning nausea; a pregnancy test (initially negative) was positive and confirmed by ultrasound. She had unprotected sex prior to admission and was determined to be three weeks pregnant. Her medications were discontinued; however, her mood changed abruptly. She was no longer suicidal but euthymic and optimistic about her future with her baby.

Suddenly, the clinical import of the patient's borderline experience gained dimension. When asked about her reasons for wanting to keep the baby she said, "Because I'll always have someone who will love me." Given the associated increase in psychopathology among offspring of mothers with BPD, the team prompted Kate to describe how she could provide her child with an environment of consistency and safety. She recognized how her mother was not able to do that for her, and she began to see how her actions and emotions could affect the life of her yet unborn child, just as her mother's actions and emotions so profoundly affected her (3).

Awaiting disposition, Miss K remained an inpatient for 42 days and was finally discharged to a home for pregnant teenagers. In a telephone follow-up interview 2 years later, she generously consented to share her story as well as her poetry. She reported that she had given birth to a healthy daughter, now with loving parents via an open adoption. She had received her high school diploma and enrolled in college and had not returned to the hospital.

This case is an elegant example of how a patient's poetry led us to a diagnosis and to dialogue about the multigenerational effects of BPD. It represented a shift from clinician-administered diagnostic questioning to a phenomenological approach in which the patient was able to communicate her personal experience of BPD. The interaction allowed her a much-needed sense of acceptance that facilitated reflection and openness to treatment, leading to clinical progress and healing.

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The author thanks Drs. Cecilia DeVargas and Marie Leiner for their teaching and collaboration on the case described in this manuscript. The author has confirmed that details of the case have been disguised to protect patient privacy.

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CASE REPORT

New-Onset Psychosis: Differentiating Encephalopathy From Psychopathology

Tomi Rumano, D.O., and Virmarie Diaz-Fernandez, M.D.

Hashimoto's encephalopathy was first described in 1966 as an autoimmune disease without definite diagnostic criteria (1). Because most patients with Hashimoto's encephalopathy present euthyroid at the time of diagnosis (1), Hashimoto's encephalopathy is often unrecognized or misdiagnosed (2). Clinical presentation can vary from psychiatric symptoms of acute psychosis, depression, and neurocognitive decline (2) to episodes of cerebral ischemia, myoclonus, tremors, or seizures (1). This case study presents a patient with symptoms of acute psychosis and cognitive decline, who was ultimately diagnosed with Hashimoto's encephalopathy.

CASE

A 57-year-old African-American man with no known past medical or psychiatric history presented to the psychiatric unit under an involuntary psychiatric commitment petitioned by law enforcement after he was found at a gas station stating that he was being followed. On initial presentation, he constantly looked around the examination room and appeared to be paranoid as he reported several different accounts of being followed, including by a friend wanting to murder him because he "knew too much," as well as by assassins trying to kill him. He stated that the only other people who knew about these attempts to kill him had been incarcerated.

Collateral information was obtained from the patient's wife. She confirmed that he had no past psychiatric history and no known family psychiatric history. In the past month, he had become paranoid and began hiding knives at home, reporting that he felt that he was being followed and that someone wanted to kill him. He then went missing and was later found to have unexpectedly driven himself out of state.

On admission, the patient scored 18/30 on the Montreal Cognitive Assessment, with significant deficits observed in executive function domains. He was oriented to person and time but not to place. During his hospital course, he denied any physical symptoms; however, he had slow responses to questioning, and on physical examination, he exhibited bradykinesia in the form of walking with short slow steps. On mental status examination, he demonstrated guarded and anxious behavior; he reported "good" mood, but his affect was irritable. He was isolative on the psychiatric unit, exhibited confabulation and delusional thought content, and demonstrated poor insight into his situation. Because he refused psychiatric treatment, the medical team obtained consent for treatment from his next of kin (wife) in accordance with state law. Subsequently, he was started on risperidone (oral disintegrating tablet, 0.5 mg twice daily) and treated for 16 days without any improvement of symptoms.

The differential diagnoses included unspecified schizophrenia spectrum disorder, meningoencephalitis, delirium, Lewy body dementia, dementia with behavioral disturbance, frontotemporal dementia, Parkinson's disease, and anti-*N*-methyl-D-aspartate (NMDA) receptor encephalitis. Despite the patient's apparent psychiatric presentation, given his age and lack of family and personal psychiatric history, we pursued a neurological consultation and clinical workup. Results of his neurological and physical examinations were within normal limits. Diagnostic tests included brain CT and MRI, EEG, rapid plasma reagin, NMDA antibodies, and lumbar puncture serology/immunology testing (see box). Imaging and EEG were unremarkable. A urine drug screen was negative, and CBC was unremarkable. NMDA testing was negative. Rheumatoid factor, ANA pattern, c-ANCA, p-ANCA (anti-granulocyte antibodies), anti-proteinase 3, and anti-myeloperoxidase were within normal limits. Tests for syphilis, HIV, and tuberculosis were all negative. Lumbar puncture CSF alpha 1-globulin, alpha 2-globulin, beta globulin, gamma globulin, beta 2-microglob, serum protein electrophoresis M spike, Venereal Disease Research Laboratory Test, Lyme immunoglobulin G/M (IgG/IgM), coccidiosis IgG, cryptococcus

Box 1. Diagnostic Tests Performed

Laboratory examinations

Serum

- Elevated anti-thyroid peroxidase antibody (TPOAb)
- Elevated antithyroglobulin antibody (TgAb)
- Elevated C-reactive protein
- Elevated erythrocyte sedimentation rate
- Thyroid hormone levels (hypothyroidism or hyperthyroidism)

CSF

- Elevated protein
- Elevated TPOAb and/or TgAb
- Glucose normal
- Presence of oligoclonal bands
- Lymphocytic pleocytosis

Imaging

- MRI: usually normal but may demonstrate cerebral atrophy or nonspecific T2 signal abnormalities in the subcortical white matter.
- Single-photon emission computed tomography: may show focal, multifocal, or global hypoperfusion.

EEG

- Nonspecific slowing

Ag, herpes DNA, toxoplasma IgM/IgG, and varicella-zoster virus DNA were also all unremarkable. However, the patient's lumbar puncture revealed elevated CSF IgG, increased IgG synthesis rate, and elevated total protein. Thyroid-stimulating hormone (TSH) was 1.340 uIU/mL (normal range, 0.358–3.740), and free T4 was 1.04 ng/dl (reference range, 0.76–1.46). Thyroid peroxidase antibody was elevated at 39.4 (reference range, 0.0–35.0). Thyroglobulin antibody was <20.0 (reference range, 0.0–40.0). Serology showed elevated Epstein-Barr virus (EBV) capsid Ag IgG and EBV nuclear antigen antibodies. C-reactive protein was elevated at 0.40 (reference range, 0.00–0.29), and erythrocyte sedimentation rate was elevated at 14 (reference range, 0–10).

On the basis of the presentation and elevated thyroid peroxidase antibodies, the patient was diagnosed as having Hashimoto's encephalopathy. He was transferred to the medical unit and started on methylprednisolone sodium succinate (1,000 mg intravenous infusion, over 24 hours for 5 days). Treatment with steroids led to resolution of the patient's delusions and paranoia. His mental status and cognitive function returned to his baseline, and the patient was discharged home.

DISCUSSION

Etiologies of autoimmune encephalopathy are currently divided into two groups: those of rheumatic conditions with neuropsychiatric symptoms and antibody-associated autoimmune encephalitis (3). The latter include Hashimoto's encephalopathy, which has a prevalence of 2.1 per 100,000 and mean age at onset of 44–46 years (4). Clinical features include acute confusion or diffuse progressive pattern of cognitive impairment, seizures, tremors, hyperreflexia, or psychosis (1). It is not uncommon for patients to be euthyroid at the time of presentation, and a previous report on the topic indicated that over 40% of patients were euthyroid at the time of diagnosis (1). For patients with Hashimoto's encephalopathy, the results of thyroid function tests may be normal or may suggest a range of thyroid pathologies, including subclinical hypothyroidism, hypothyroidism, subclinical hyperthyroidism, or hyperthyroidism (2).

Two primary types of antibodies play a role in the pathogenesis of autoimmune thyroid disease: antibodies against TSH receptors, and antibodies against the thyroid gland (5). These are antiperoxidase antibodies, antithyroglobulin antibody, and antisodium-iodine symporter antibodies, which are the most important factors to the pathogenesis of the disease. About 70% of patients diagnosed as having Hashimoto's thyroiditis will have positive antithyroglobulin antibodies (3). In addition, up to 85% of patients will be positive for antithyroid peroxidase antibodies (3); however, this antibody can also be detected in about 10% of the healthy population. In the case reported above, antithyroid peroxidase antibodies were found, but no antithyroglobulin antibodies were found. The presence of either of these antibodies can help establish the diagnosis of Hashimoto's encephalopathy (6). Some evidence suggests that thyroid autoimmune factors are directly involved in the presentation of encephalopathy, although no significant correlation has been detected between the level of antibodies and the severity of the disease (7). In addition, although excessive secretion of TSH may cause damage to brain tissues in multiple ways, no significant correlation has been found between nervous system impairment and thyroid gland dysfunction (8, 9). Furthermore, there is no evidence to suggest that antithyroid antibodies directly contribute to the damage of neurons. Thus, it is unknown at this time whether altered hormonal feedback related to thyroid gland dysfunction or autoimmune response is responsible for the associated encephalopathy.

Treatment of choice includes high-dose prednisone (1–2 mg/kg) for up to 4–6 weeks, followed by a slow taper to avoid recurrence (5). Serum thyroid antibody levels do not correlate with response to treatment and can remain elevated even after treatment. Clinical improvement is best monitored by resolution of symptoms, which tend to improve with high-dose steroids (9).

CONCLUSIONS

Psychiatrists must maintain a broad differential diagnosis for nonpsychiatric causes of acute psychosis that do not fit the normal clinical picture. Although patients with Hashimoto's encephalopathy may exhibit psychotic symptoms similar to those seen in other primary psychiatric disorders, the treatment of autoimmune encephalopathy is vastly different. Both early recognition and an understanding that normal thyroid studies do not automatically rule out the diagnosis of Hashimoto's encephalopathy is important to the treatment of this condition. In cases of psychosis in which thyroid studies are equivocal, psychiatrists must maintain a high index of suspicion for Hashimoto's encephalopathy. Additional research is needed to further identify the pathophysiology of the syndrome.

Key Points/Clinical Pearls

- Psychiatrists must maintain a broad differential diagnosis for nonpsychiatric causes of acute psychosis that do not fit the normal clinical picture.
- Hashimoto's encephalopathy presentation can include psychiatric symptoms of acute psychosis, depression, and neurocognitive decline to episodes of cerebral ischemia, myoclonus, tremors, or seizures.
- Treatment of choice includes high-dose prednisone (1–2 mg/kg) for up to 4–6 weeks, followed by a slow taper to avoid recurrence.

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The authors have confirmed that details of the case have been disguised to protect patient privacy.

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CASE REPORT

Electroconvulsive Therapy Intolerance

Caleb Heiberger, B.S.

CASE

"Ms. Z" is a 35-year-old woman with recurrent major depression, generalized anxiety disorder, and a history of childhood trauma who was initially referred for psychiatric treatment after she endorsed suicidal ideation to her primary care provider in the context of marital and work-related stressors. At the time, she was on a regimen of escitalopram 10 mg, bupropion 300 mg, clonazepam 0.5 mg, and alprazolam 0.5 mg, all scheduled once daily, as prescribed by her primary care provider. Other than those listed, she had not been treated with other psychotropic medications. Following presentation to our clinic, because she was taking two benzodiazepines, clonazepam was discontinued shortly following referral. Escitalopram was also discontinued because of emotional blunting. Duloxetine was trialed as an antidepressant in place of escitalopram, which led to an improvement in mood, as well as remission of suicidal ideation.

However, 2 months after her initial improvement, Ms. Z experienced a relapse into depression. Brief periods of remission followed by additional episodes of depression occurred over the following year. She also reported binge eating and self-harm behaviors during this period and was diagnosed as having bulimia nervosa, as well as cluster B and C personality traits. Multiple medication trials during this period of relapse aimed to treat her depressive symptoms, as well as her difficulties with self-harm and bulimia nervosa. Treatments included topiramate, naltrexone, paroxetine, sertraline, venlafaxine, duloxetine, amitriptyline, trazodone, vilazodone, and lisdexamfetamine. However, many of these medications were either ineffective following adequate trials or discontinued as a result of adverse effects.

One year after her initial referral, the patient presented to a psychiatric facility with her husband given his concern that she was researching methods to attempt suicide. ECT was elected for treatment because of her suicidal ideation and because her condition had been resistant to pharmacotherapy. Informed consent was provided, and she voiced an understanding and willingness to start treatment. Later, however, she admitted feeling pressured into treatments by the urgency portrayed by both her husband and psychiatrist. Consequently, she reported that she consented to ECT treatments without a firm understanding of the potential risks and benefits of and alternatives to the intervention.

No remission of her depression was evident after an acute series of seven unilateral ECT treatments delivered over 2 weeks. At that time, the patient expressed to her counselor (but not her ECT provider) that treatments were causing intolerable effects. She told her counselor that she developed worsened binge eating, insomnia, avolition, anxiety, anhedonia, emotional lability, tearfulness, mixed retro- and anterograde amnesia, chills, and unsteadiness on her feet. Even while these adverse effects progressed in intensity, she received six additional bilateral treatments over another 2 weeks without any improvement. Throughout her treatment she continued to share concerns with her counselor about the side effects that she was experiencing, but she assured her ECT provider that the sessions were well tolerated.

Ultimately, ECT was discontinued per the patient's request, and she elected to enter a partial hospitalization program. The adverse effects, aside from lingering memory concerns, resolved within a week of stopping treatment. After 1 month in the partial hospitalization program, her depression and suicidal ideation remitted, and she returned to outpatient management on a regimen of aripiprazole 5 mg, amphetamine/dextroamphetamine 20 mg, clonazepam 1 mg, desvenlafaxine 50 mg, and bupropion 300 mg, all scheduled once daily.

Two years later, a severe episode of major depression prompted reconsideration of ECT treatments, although the patient initially expressed hesitation because of her previous negative experiences with ECT. Over the course of several clinical visits, her treatment team continued to discuss the risks and benefits of and alternatives to treatment, including the use of ketamine as an augmenting therapy. Following these discussions, she elected to undergo ECT with ketamine augmentation. At this time, she reported a much more robust understanding of the context and purpose of the treatment.

A series of five bilateral ECT treatments was performed over 2 weeks with a 20-mg subanesthetic dose of ketamine given only during the first session. Within 1 week, the patient noted an improvement in her energy and motivation. She experienced none of the adverse effects associated with her previous ECT treatments aside from mixed retro- and anterograde amnesia after the third treatment. She began to receive maintenance ECT treatments with ketamine augmentation during each session. She did well in outpatient treatment with maintenance treatments alongside pharmacologic management and therapy, although she continued to report memory problems from the first ECT series.

DISCUSSION

The literature indicates that ECT is an efficacious treatment, with adverse ef-

TABLE 1. Duration of seizures across two series of ECT

Series[a]	Total duration (seconds)	Session and duration of seizure (seconds)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
First[b]	450	37	41	29	27	35	25	34	21	38	65	38	31	29
Second[c]	129	22	19	42	17	12	17							

[a] The first series occurred over 28 days. The second series occurred over 11 days, up to session 5; session 6 of the second series occurred a week after session 5. During the first series, mixed-grade amnesia began after session 3 and persisted through session 4; worsening depression and binge eating began after session 5 and persisted through session 6; and chills and instability began after session 7 and persisted through the end of treatment.

[b] Anesthetic drugs, 80 mg methohexital, 80 mg succinylcholine, 5 mg rocuronium, and 0.2 mg glycopyrrolate.

[c] Subanesthetic 20 mg ketamine administered with sessions 1 and 6 only. Anesthetic drugs, 120 mg methohexital and 120 mg succinylcholine. During the second series, mixed-grade amnesia began after session 4 and persisted through the end of treatment.

fects mostly limited to transient cognitive impairment (1, 2). Despite this favorable side-effect profile, the public at large tends to perceive ECT as potentially harmful (1–5). In one study, younger age, cultural factors (e.g., language), and exposure to individuals with mental illness were predictors of less favorable perceptions (2). In addition, patient intolerance of ECT, such as seen in the above case, may also partly drive the public's negative perception of this therapy (6). Intolerance of ECT has been well described in the literature (1, 6, 7). For example, a 1999 study (limited in methodology to interviews based on experiences in the distant past) found that ECT led to the amplification of preexisting psychological disorders that manifested as feelings of shame, failure, and unworthiness and a sense of being abused (8).

In recent years, fewer patients have elected to undergo ECT, as reflected by the number of inpatient ECT hospital treatments in the United States dropping from 12.6 per 100,000 people annually in 1993 to 7.2 per 100,000 in 2009 (5). ECT is generally performed in the inpatient unit, and thus this decline does not simply represent a transition to outpatient treatment (5). It may, however, reflect advances in pharmacologic and nonpharmacologic treatments for depression developed over the past 30 years. As the utilization of ECT has decreased, the percentage of U.S. hospitals conducting ECT also fell from 14.8 to 10.6 during the same time period (5).

A 2012 literature review identified two risk factors for patients' intolerance of ECT: an inadequate consent process and psychological reactions (9). As demonstrated in the above case, the informed consent process (or lack thereof) may have influenced how our patient responded to treatment. Even after providing consent, up to a third of patients believed that they were coerced to receive ECT, especially when providers used the term "last resort" (4, 9, 10). In other cases, inadequate preprocedural information caused patients to become dissatisfied with the consent process (4, 9). Our patient recalled feeling pressured by the urgency of the initial series into believing ECT was her only remaining viable option, preventing her from achieving full understanding of the treatment process, risks, and benefits. In the second series, time was taken to provide a more satisfying consent process.

Psychological reactions—the second major risk factor for ECT intolerance—include fear, feelings of powerlessness, and identity loss due to prolonged amnesia (6), which are similar to emotions recalled by our patient. Up to 50% of patients fear undergoing ECT, a reaction that stems largely from preconceived notions of its harmful nature (4, 11, 12). Fear has, in a minority of cases, been traumatic enough to impart lasting consequences (4, 11, 12). For some patients, feelings of powerlessness persist from the consent process through treatment (8, 11, 13). Finally, it has been proposed that prolonged amnesia may lead some patients to identify as "someone with memory problems," as seen in the case reported here (9).

The limited number of reports on ECT's adverse psychological effects may be related to the vulnerability of this patient population and the desire of patients undergoing ECT to maintain a nonconfrontational relationship with their health care providers (8). In our case report, this hypothesis is supported by the patient's unwillingness to share her concerns with her ECT provider. In later discussions, the patient stated she was reluctant to be open with her ECT provider for fear the treatment would be terminated. However, she freely expressed concerns to her counselor because the counselor was not part of the ECT process.

Our patient did not tolerate the first round of ECT because of exacerbation of her depression and binge eating, as well as the onset of chills and postural instability. Orthostatic hypotension, with accompanying dizziness and nausea, is a relatively common experience following anesthesia and may explain the postural findings (14). During the second ECT series, our patient experienced adverse effects limited to mild amnesia. Aside from the consent process, differences between the two series included anesthetic technique and ECT parameters (Table 1), as well as augmentation with ketamine. Av-

Key Points/Clinical Pearls

- The number of patients electing to undergo ECT has declined over the past 20 years.
- Negative public perception, driven in part by reports from patients who did not tolerate ECT, is likely a contributing factor for the decline.
- Therapeutic alliance, informed consent practices, and variations in treatment protocol may mitigate patient intolerance of ECT.

erage seizure duration was 35 seconds and 22 seconds for the first and second series, respectively, and total seizure duration was over three times longer in the first series. Longer seizure duration is correlated with cognitive impairment following ECT and may have played a role in the patient's memory problems (7). Finally, although our patient had a robust response with ketamine augmentation, the evidence base for this practice is mixed. Ketamine has been found to accelerate ECT's antidepressant effects only within the first 2 weeks of treatment, and other studies have reported negative results with ECT and ketamine augmentation (1, 15). Although research suggests that ketamine alleviates the cognitive effects of ECT (7), our patient continued to report some deficits related to ECT treatments.

The declining use of ECT and the negative perceptions of ECT in the public eye are noteworthy (and potentially related) phenomena. Improving the consent process, addressing preexisting psychopathologies, and augmenting treatments with pharmacotherapies are all options worth investigating to improve patient tolerance. This case report highlights the need for further research on the factors contributing to patient intolerance of ECT and potential means to ameliorate it.

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The author has confirmed that details of the case have been disguised to protect patient privacy.

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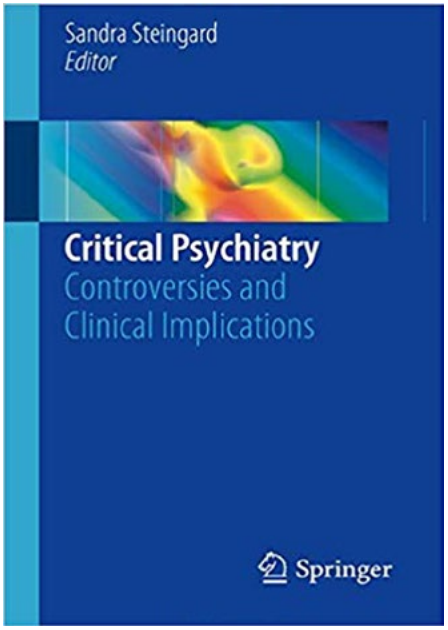
Critical Psychiatry: Controversies and Clinical Applications

Reviewed by Carissa Zeleski, M.D.



Edited by Sandra Steingard. New York, Springer, 2018, 240 pp., $84.99.

Critical Psychiatry: Controversies and Clinical Applications is a collection of essays that suggests a plan of reform for clinical psychiatric practice. The collection, edited by Dr. Sandra Steingard, Chief Medical Officer of the Howard Center in Burlington, Vermont, gives a platform to psychiatrists, psychologists, clinical researchers, and patients to express points of view critical of mainstream psychiatry.

The book begins with a short chapter that elaborates on critical psychiatry and defines it as "a field that takes exception to some or all of the current dominant premises and paradigms" in standard psychiatric practice. The subsequent chapters build on each other to form a critique, beginning with questioning the validity of the DSM diagnostic system and the search for biological causes of mental illness. Following from this is a dismantling of the disease-centered approach to treatment in favor of a drug-centered one. Chapters on patient coercion, deprescribing, and the antipsychiatry movement round out the collection. The chapters are well-cited and well-organized, and the collection is concise, around 200 pages.

Critical Psychiatry succeeds in making a case for change and suggesting pragmatic reforms. For those interested, Dr. Steingard has outlined 11 principles for providers to follow if they hold critical views. These principles vary in their approach. Some simply encourage acknowledgment of power and bias, whereas others go so far as to suggest changes to prescribing. Their usefulness is relative to the provider's comfort with nontraditional practice, because some principles can push the provider outside the standard of care. Regardless, the principles do an excellent job of condensing the book's central arguments into a set of next steps. For those who are not interested in implementing major practice changes, the collection still serves a purpose, providing a road map to the conceptual foundations of the critical argument and traction to anyone who wishes to reflect on the current practice model.

The collection does not stand as an impartial dialectic; the critical point of view is favored. To be fair, the stated intent of the book is not to change anyone's mind but rather to "explore the implications of various critiques." However, readers new to critical psychiatry and looking to establish their position may observe that although the authors generously cite resources to support their claims, few counterpoints are addressed with similar rigor. In addition, the authors of the essays come from a variety of backgrounds. The result is writing that ranges from academic to polemic in tone and from conservative to radical in approach. Much page space is dedicated to ongoing social oppression of marginalized groups through psychiatry, institutionalized corruption in the creation of psychopharmaceuticals, and victimization of the neurologically atypical by psychiatric treatment. These viewpoints are tempered with thoughtful analysis, and Dr. Steingard incorporates them smartly in her final principles. However, on the initial read, unsuspecting readers may be distracted by this seemingly unactionable and unchecked criticism. The consequence of this approach is that while readers already critical of mainstream practices will enjoy a full spectrum of critical perspectives, readers who are looking to establish a position on these issues may find themselves maintaining a skeptical distance.

Like many psychiatrists, I have my own concerns about the current practice model, especially in terms of the diagnostic limitations of the DSM and the difficult balance between beneficence and autonomy for my patients. *Critical Psychiatry* provides a nuanced reference for the critical viewpoint, and this has been helpful when working through ethical and philosophical dilemmas in my training. For this reason and others, I recommend this book. Although it stops short of providing an unbiased analysis of controversial issues, as an exploration of critical concepts, it is quite illuminating. There is likely something of interest for anyone who wishes to know more about this movement in the field.

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EDITORIAL

Psychiatry and the Visual Arts

Badr Ratnakaran, M.B.B.S.

Welcome to this special theme section of the *American Journal of Psychiatry Residents' Journal* devoted to psychiatry and the visual arts. Mental illness and distress have traditionally occupied a prominent place in the arts. Narratives of mental disorders, healers, and therapies have all been depicted in art. Art has been used in research on and treatment of individuals with mental illness in asylums and other settings (1). The power of art has also been harnessed for purposes of psychiatric education.

Consider expressionist artist Edvard Munch's "The Scream," a ghostly depiction of a face in extreme anxiety, which was created in 1893. This curvy humanoid with a skull-shaped head and nondescript facial features is perhaps one of the most recognized depictions of nature's agony. Why did Munch decide to draw the emotion depicted by the figure in "The Scream"? What is the context of the intense angst depicted in the painting and Munch's perception of it? Many art historians and scholars believe "The Scream" was an end product of the turmoil in Munch's life and an expression of his severe anxiety (2).

The use of such art in psychiatric education serves many purposes. Art can enrich empathy for those we treat by deepening our understanding of their subjective experiences (3). Cinema in particular is a powerful medium to demonstrate psychopathology, negative stereotypes, and stigma toward mental illness (4). Furthermore, film conveys the often complicated and protracted course of mental illness. Consider *A Beautiful Mind* (2001), a drama based on the life of Nobel laureate John Nash, whose mathematical genius was limited by his struggle with schizophrenia. The film's narrative helps us appreciate Nash's psychological distress and understand how schizophrenia affected his professional life and personal relationships.

Art can enrich empathy for those we treat by deepening our understanding of their subjective experiences.

In addition, the presentation of psychiatry and mental illness in visual art over time may shed light on shifts in cultural views of mental illness. For example, William Hogarth's "A Rake's Progress" (1735), a painting depicting the 18th-century Bethlem Royal Hospital, demonstrated the poor and often inhumane treatment of people with mental illness in the past.

The authors for this special section theme have contributed articles ranging from film reviews to commentaries on paintings related to mental illness. I commend their efforts and thank them for creating an enriching and engaging edition for our readers. Enjoy!

Dr. Ratnakaran is a third-year resident in the Department of Psychiatry, Carilion Clinic–Virginia Tech Carilion School of Medicine, Roanoke, Va., and Guest Editor for this special theme issue of the *Residents' Journal*.

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ARTS AND CULTURE

Tropical Oceans: Brilliant Summer Splendors

Vanessa Vélez, M.D.

A sense of urgency takes hold. I quickly collect my art supplies. I lay them out and dollop varying blues, coral pinks, and yellow greens directly onto the canvas until there are only a few white spaces. I take the palette knife and begin to spread the colors in different directions. Tropical oceans and brilliant summer splendors emerge into my consciousness. Patterns dance from my heart and course through my arm, hands, and fingers onto the canvas. I enter a place where there is no time or space, only a quiet yet blissful stillness. As I feel close to finished, the quietness is replaced by the critic's mind: "When to stop? What if I mess up?" I become tense, yearning for someone else's opinion or to hear "STOP." I then remember to become consciously aware of my subtle breath, feel my bodily sensations, center into my truth, and create space between my thoughts and my inner being. I begin to accept not knowing when to stop or making a mistake. If I'm not able to transform my "mistake" into beauty, I could accept the joy I received from the process and not just the end result. I continue to paint and practice loving kindness until I feel a sense of gratitude or until it ceases to be magical and tiredness tells me to stop.

Painting courtesy of Vanessa Vélez, M.D.

At times, we may turn to our easels and use our paintbrush as a tool to give expression to anxiety or sadness. We can transform panic or pain into liberating strokes and loosen the grip of identifying with our mental health ailments. In fact, a study has shown that visual art production affects the brain's default mode network and, therefore, has an impact on stress resistance and psychological resilience (1). Through painting, we can appreciate our ever-changing states as they translate into color and form. We begin to learn to observe these states without judging or identifying with them. We can learn to be with the present and immerse ourselves into the profundity of our spirit. In this wisdom, the gifts of creativity and imagination emerge and flow from suffering, looking within, and the ebb and flow of life.

Painting can be used as a form of meditation. While painting, we can ask the question, "Who is painting?" The answer may be related to our social roles, the institutions to which we belong, our traits, or our values. As we dive deeper, we may begin to identify with our intrinsic intelligence, the mystery of the unknown, or the feeling of expansiveness. Our anxieties begin to pacify, and we may relax, using our breath to enter a meditative state. Similarly, Shambhavi Mahamudra kriya, a daily 21-minute yogic practice that includes deep breathing and meditation techniques, has shown a reduction in perceived stress and higher levels of general well-being (2). Creating art from our mental and emotional states can serve as a moving meditation to connect the body, mind, and spirit.

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ARTS AND CULTURE

Bonnard in the ECT Suite

Sharon B. Madanes, M.D., M.F.A.

Pierre Bonnard (1867–1947) was a French painter whose best-known works were produced at the turn of the 20th century. He painted ordinary subjects—quiet interiors, still life, and intimate portraits of young women—with rich patterns and a vibrancy that garnered him a reputation as one of the premier colorists of the century. Bonnard not only understood the chemical and physical dimensions of color, he also understood its psychological effects.

A poster of a Pierre Bonnard painting titled "Dining Room Overlooking the Garden," faded and subtly buckling behind a protective glass covering, hangs opposite a gurney where patients lie during ECT. Patients may contemplate this serene image of a Parisian breakfast, rendered in sublimely vibrant tones and from multiple perspectives, as they await the sedating and hypnotic effects of anesthesia.

On the left-hand side of the image is a figure camouflaged among a lattice and flower backdrop. The painting is thought to represent a house in which Bonnard's reclusive wife Martha resided while attending a sanitarium. The image construction tempts viewers to ignore Martha in the corner, not only because of the bright color of the table and allure of the trees in the distance, but also because the perspective, which rises vertiginously upward, simulates a gaze that is focused on the table and the lyrical foliage in the distance. A padded armchair in front of the poster extends the painting's mise en scéne into the medical suite. Like Martha, the patient across from this image is also temporarily housed in a therapeutic environment, perhaps feeling as uncomfortable and apprehensive as Martha appears, pressed so tightly against the wall that she blends in with the decor.

Photograph courtesy of Sharon B. Madanes, M.D., M.F.A.

Bonnard famously said, "There is a motto that suits painting perfectly: many small lies yield a great truth" (1). In Bonnard's art, these small lies are depictions of the world in hyperbolized color, distorted but beautiful forms hidden in plain sight. The sum of these patterns may reveal truths about the physical and psychological world. This is also true in medicine, in which histologic and radiographic images allow physician-scientists to reveal and decipher otherwise hidden information.

Bonnard's statement about painting may serve as a metaphor for the clinical encounter, during which a series of seemingly mundane facts may yield larger truths. Although the particular elements of a patient's story may seem patchy or out of sequence, their gestalt conveys a profound experience. In this way, Bonnard's breakfast room appears distorted for those who aren't themselves in the scene, sitting at the table by the window, able to take it all in. This is particularly relevant for psychiatry in which the patient may experience the world in ways unavailable to the clinician. This faded Bonnard poster in an ECT suite serves as a subtle reminder of the importance of looking through and beyond the facts to see the richly colored textures of individuals' lives.

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Elfriede Lohse-Wächtler

Eveleigh Byers Wagner, M.D.

Elfriede Lohse-Wächtler, born in 1899 in Dresden, Germany, was one of the few female artists active in Germany during the Weimar Republic, between the two world wars (1). The artistic movement of the time—New Objectivity—aimed to capture the reality of postwar Germany, reconciling chaos and despair with burgeoning social progress of a new democracy (2). Lohse-Wächtler, independent and progressive for her time, was known for her paintings of the city's disenfranchised population (1). Although she was an acclaimed artist, her life was similarly plagued by poverty, trauma, and discrimination (3).

Living on her own from the age of 17, hers was a stressful life in a society still judgmental of female independence. In her early 30s, she was hospitalized for what has been described as a nervous breakdown (1). While hospitalized, she was diagnosed as having schizophrenia, although the basis of this diagnosis remains unclear (1, 3). During her hospital stay, she drew portraits of fellow patients and herself in a series later referred to as "Friedrichsberg Heads" (1). This self-portrait (Figure 1) was drawn with pencil and is minimalistic in its use of line and shading. Lohse-Wächtler imbued her art with realism and conveyed sympathy for her subjects, which in this case was herself (3). Although she appears weary, with darkened circles beneath her eyes, her bold features captivate the viewer. Her eyes transport through us, and we wonder what she sees. Her expression, resolute, exudes an inner strength. Does she see the darkness of an unknown future, or does she perhaps dream of artistic freedom? We wonder with her, and our hearts feel heavy.

FIGURE 1. Elfriede Lohse-Wächtler (1899–1940): Self-Portrait, in the State Hospital Friedrichsberg, Hamburg, February 17, 1929[a]

[a] Reproduced with permission from The Picture Art Collection/Alamy Stock.

In the period after her first hospitalization, Lohse-Wächtler produced avant-garde works of art, which challenged the social norms of the time (3). During the Nazi party's rise to power, she was labeled a producer of degenerate art, and her paintings were banned and destroyed (1). As this storm of fear and hate overtook Germany, Lohse-Wächtler and many others diagnosed as having a mental illness underwent forced sterilization, with the goal of "ridding society of genetic defects" (1). Under the T4 program, Adolf Hitler ordered the mass killing of the "mentally ill, physically ill, and those deemed unworthy of life," and Lohse-Wächtler was murdered in 1940 at Sonnenstein Euthanasia Center in Pirna (1). Elfriede Lohse-Wächtler's life is a reminder of the devastating power of hate and the unfortunate role our profession has played in the deaths of innocent persons. Almost 100 years later, her artwork remains relevant and implores us to view others with compassion and to be advocates for our patients in the face of injustice.

At the time this article was accepted for publication, Dr. Wagner was a fourth-year resident in the Department of Psychiatry, Vanderbilt University Medical Center, Nashville, Tenn.

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Sunflowers and Mortality

Ayotunde Ayobello, M.D.

I remember a time when becoming a physician was my highest aspiration. It was an ethereal dream that only hard work, dedication, and perseverance could make a reality. This dream began to come true on the first day of medical school and became more palpable with every passed shelf exam and completed rotation.

Indeed, the concerns of a medical student, eager and ambitious, can sometimes contrast with the worries of a sleep-deprived, coffee-powered resident. Although most of my effort in medical school was devoted to completing projects and getting good grades, during my residency, I became more concerned with repairing personal relationships that had deteriorated over the years. It became clear that my dedication to medical education had inadvertently taken away from the quality of my human connections. My ever-growing list of missed birthdays, weddings, and other family events was proof of this. A few sudden deaths in my family reminded me of the fragility of life and the fact that I was spending most of my time buried in my books. As I made good on the sacred oath to care for the ailing, my very own mortality began to confront me. A family history of cancer was becoming more established, and I could very well be next in line for an early cancer diagnosis. Should physicians not be somehow excluded from sickness and all forms of disease? After all, we sacrifice a big part of our most productive years to this sacred art. These thoughts drove me to my easel, where I created "Sunflowers and Mortality," an oil-on-canvas painting.

Painting courtesy of Ayotunde Ayobello, M.D.

At first glance, a surreal and somewhat mythical scene confronts the viewer. A young physician (a depiction of myself) is seen in a vast field of sunflowers. A vigilant and intimidating bull is immediately noted in the background, carefully observing the physician. The whole scene is subsumed in a dramatic and vibrant sky depicting what is, based on the youthful appearance of the physician, a sunrise. The field of sunflowers represents the wonderful satisfaction and expectations of the physician's hard-working, honest life. The bull, however, represents mortality, a formidable and inexorable foe. Although the bull maintains a reasonable distance, it constantly stalks and haunts the physician, as if urging him to more fervently press ahead on his journey, lest he be violently gored.

As I walk out the door every morning, I glance at this painting hanging on my wall, and I am reminded of a few things. First, to continually cherish human connections and foster relationships on a day-to-day basis. Second, to humbly come to terms with the fleeting and fragile nature of life. Finally, to recognize and enjoy "sunflowers," the often-overlooked everyday pleasures that make life worth living: having breakfast with a loved one, the smell of fresh air in the morning, driving with the windows down, a laugh exchanged with a friend. Appreciating these little moments helps put things in proper perspective and, in so doing, ensures a life of fulfillment and contentment.

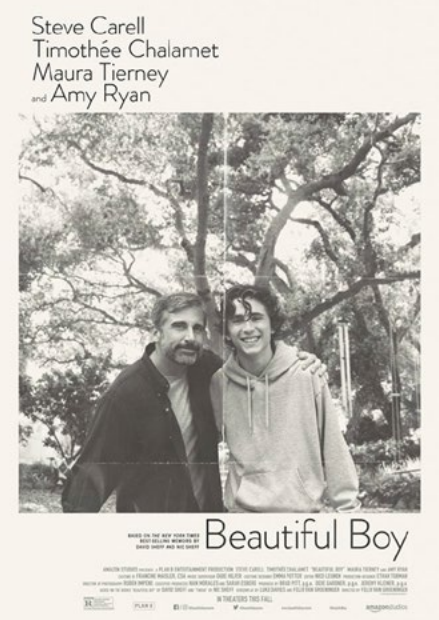
Dr. Ayobello is a third-year resident in the Department of Psychiatry, Virginia Tech Carilion School of Medicine, Roanoke, Va.

Beautiful Boy

Reviewed by Jordan Taylor, B.S.

The negative stigmatization of addiction is pervasive and characterized by a loss of self-control, a weakness of the will, and a beacon of one's immorality (1). In media, these attributes are amplified by common tropes, such as the deadbeat alcoholic parent (*Because of Winn-Dixie*, 2005); the burned out, heroin-addicted musician (*Walk the Line*, 2005), and the cocaine-fueled business executive (*The Boiler Room*, 2000). *Beautiful Boy*, a film centered on addiction and directed by Felix van Groeningen, makes a strong effort to portray how the disease process affects a person, resulting in behavior that damages strong relationships and forces individuals into a cycle of recovery and relapse.

Beautiful Boy is based on journalist David Sheff and his son Nic's memoirs, *Beautiful Boy: A Father's Journey Through His Son's Addiction* and *Tweak: Growing Up on Methamphetamines*, respectively (2, 3). Centered on this duo's grinding yet inseparable relationship, *Beautiful Boy* portrays the journey of caring for a loved one fighting with addiction. Steve Carrell (as David) offers a sincere portrayal of a parent struggling with the recovery and relapse of his son. Throughout the film, he is the subject of damage within the family each time Nic (portrayed by Timothée Chalamet) relapses. The drive to understand his son's behavior leads to intense moments of discovery, such as finding his son's hidden notes, consulting addiction scientists, and even personal experimentation with methamphetamine. Each time a discovery is made, he is left believing that he has found the key to understanding the truth of addiction, until his son relapses once again.



Directed by Felix van Groeningen, 2018.

The subplot of the film explores Nic's experience of addiction. He is forced to hide his drug use from his family, resulting in an erosion of trust and loss of classic life milestones, such as attending college, gaining financial independence, and establishing a family. Throughout the film, it is emphasized that his need to use drugs drives his behaviors. Still, Nic does not demonstrate a lack of self-control, nor is he weak-willed. This is highlighted by his long periods of sobriety, his dedication to treatment institutions, and his love for his family.

Nic's drug use and David striving for his son's recovery causes these two characters to clash. During these unsettling moments, Nic is not the dangerous "druggie" the media commonly portrays. He appears malnourished and disheveled, his mood is depressive and anxious, and he exhibits insight that he cannot care for himself. Like most persons struggling with addiction, he is not aggressive and commits only crimes of acquisition (4). By enabling us to view individuals with addiction disorders as ill, van Groeningen shows us why families devote their time and finances to treatment, even with the expectation that relapse will likely occur.

In 2018, seven million Americans self-reported having a substance use disorder (5). During their lifetimes, most Americans will interact with someone struggling with addiction. Film is an easily accessible medium, and because the focus of *Beautiful Boy* is on addiction as a disease, it has the potential to be a teaching tool for a mass audience that can reverse the stigma of addiction.

Jordan Taylor is a fourth-year medical student at Virginia Tech Carilion School of Medicine, Roanoke, Va.

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2. Sheff D: Beautiful Boy: A Father's Journey Through His Son's Addiction. Boston, Houghton Mifflin, 2008
3. Sheff N: Tweak: Growing Up on Methamphetamines. New York, Atheneum Books for Young Readers, 2007
4. Crisp A, Gelder M, Goddard E, et al: Stigmatization of people with mental illnesses: a follow-up study within the Changing Minds campaign of the Royal College of Psychiatrists. World Psychiatry 2005; 4:106–113
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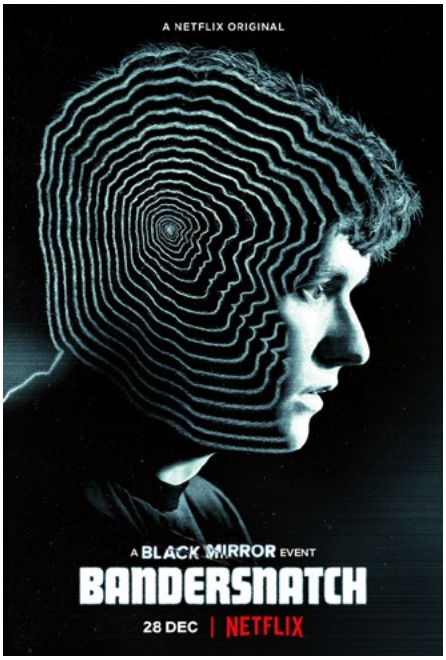
Black Mirror: Bandersnatch

Reviewed by John Henning, M.D.

Bandersnatch is a recently released film on Netflix from the creators of the TV series *Black Mirror*. It uses a unique choose-your-own-adventure interface to absorb the viewer into an enthralling and thought-provoking narrative with multiple pathways and alternate endings. Although it perpetuates several misleading tropes about mental illness, the engrossing nature of the experimental interactive medium makes it worth watching, exploring, and discussing.

The story begins as the protagonist Stefan is abruptly awakened by his alarm clock, which is ironically blaring the 1980s hit song "Relax." The camera then cuts to Stefan, staring baggy-eyed into the mirror as he chokes down what we presume to be his psychiatric medications. Our uncomfortable, unsettling, and "cannot put your finger on it" feelings only grow as we become aware of strained interactions with his father and several allusions to a troubled past. Early on, we are brought into the unfolding drama more personally when we are asked to participate by deciding what Stefan will do or say at critical moments. The controller rumbles as the timer counts down, and we are forced to decide. We quickly learn that decisions have dire consequences for Stefan and of his goal to adapt an interactive adventure novel to a video game.

As the drama unfolds, Stefan's mental state deteriorates, and psychotic symptoms emerge. We are not privy to his psychiatrist's working diagnosis, but a history of psychotic spectrum illness is implied. Despite its entertainment value, *Bandersnatch* falls in line with many films featuring mental illness



by reinforcing epidemiologic discrepancies and misleading tropes. A white male (Stefan) with a troubled past and a penchant toward brilliance is driven to insanity and ultimately becomes violent. Although plausible, this recurring plot arc obscures reality. For example, there is a lack of racial diversity in media portrayals of individuals with schizophrenia, with Caucasians accounting for 95% of the total population represented in film and on television (1, 2). Patients with schizophrenia are also often portrayed in the media as being of higher socioeconomic status than what is typical, and their violent tendencies are exaggerated. The trope of the "troubled genius" is also present. Undoubtedly, there is a complicated intersection of artistic expression and psychosis. However, the notion that worsening mental illness directly leads to creative output, as is strongly implied in this film, is overdone. Debilitating negative and cognitive symptoms are hallmarks of schizophrenia and are rarely given their due in media portrayals.

Despite some flaws, *Bandersnatch* excels in exploring the relationship between paranoia and control. We watch Stefan unravel as he learns that someone is monitoring him and making his decisions. His psychiatrist understandably interprets this as worsening symptoms; however, the audience knows that Stefan is correct when he begins to fear what we, the audience, understand—namely, that the film's creators have dictated the scope of our freedom within the film. Later, the film playfully steps back further to show *Bandersnatch's* creator influenced by another inscrutable force. With this disorientation, we are left to go back and explore alternate endings. Or we could turn off the television and return to our lives and regain our control—more or less.

Dr. Henning is a third-year resident in the Department of Psychiatry, University of Cincinnati.

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1. Owen PR: Portrayals of schizophrenia by entertainment media: a content analysis of contemporary movies. Psychiatr Serv 2012; 63:655–659
2. Bresnahan M, Begg MD, Brown A, et al: Race and risk of schizophrenia in a US birth cohort: another example of health disparity? Int J Epidemiol 2007; 36:751–758

Residents' Resources

Here we highlight upcoming national opportunities for medical students and trainees to be recognized for their hard work, dedication, and scholarship.

To contribute to the Residents' Resources feature, contact Matthew L. Edwards, M.D., Senior Deputy Editor (ajpresidentsjournal media@gmail.com).

Fellowship/Award	**American Psychiatric Association/American Psychiatric Association Foundation (APA/APAF) Diversity Leadership Fellowship**
Organization	APA
Deadline	**January 31, 2020**
Brief Description	The Diversity Leadership Fellowship is designed to develop leadership to improve the quality of mental health care for the following (not limited to) minority groups at risk and underrepresented in psychiatry: American Indians/Native Alaskans, Asian Americans/Native Hawaiians/Native Pacific Islanders, Blacks/African Americans, Hispanics/Latinos, and the LGBTQ community. Fellows will receive mentorship from the National Minority Mentor's Network and at multiple levels throughout APA, attend APA Annual Meetings, and have the opportunity to sit on the APA Board of Trustees as a nonvoting member.
Eligibility	Applicants must be an APA member and at least a PGY-2 with 2 remaining years of training in an accredited U.S. or Canadian psychiatry residency program.
Contact/Website	E-mail: podai-afotey@psych.org; Web: https://www.psychiatry.org/residents-medical-students/residents/fellowships/available-apa-apaf-fellowships/diversity-leadership-fellowship
Fellowship/Award	**APA/APAF Public Psychiatry Fellowship**
Organization	APA
Deadline	**January 31, 2020**
Brief Description	The aim of the Public Psychiatry Fellowship is to create the next generation of leaders in public psychiatry. This program creates opportunities for residents to participate in important APA activities, plan workshops at the Institute on Psychiatric Services (IPS), and interact with thought leaders in the field of public psychiatry. Fellows have the opportunity to sit on the APA Board of Trustees as a nonvoting member.
Eligibility	Applicants must be an APA member, a PGY 1 or PGY-2 in accredited U.S. or Canadian psychiatry residency program with 2 remaining years of training, and have strong interest in public/community psychiatry.
Contact/Website	E-mail: podai-afotey@psych.org; Web: https://www.psychiatry.org/residents-medical-students/residents/fellowships/available-apa-apaf-fellowships/public-psychiatry-fellowship
Fellowship/Award	**APA/APAF Psychiatric Research Fellowship**
Organization	APA
Deadline	**January 31, 2020**
Brief Description	The Psychiatric Research Fellowship provides funding for an early-research career psychiatrist to design and conduct a health services-/policy-related research study using national data housed at the APA. The fellow's research activities will be carried out under the supervision and guidance of a mentor at his or her institution in collaboration with his or her mentor(s) at the APA Division of Research. Fellows receive a $45,000 stipend and funding to attend four to five APA meetings.
Eligibility	Applicants must be an APA member or eligible to become a member of the APA. Psychiatrists who have received their M.D. or D.O. degree and who have completed residency training in general psychiatry or child psychiatry immediately prior to the time the fellowship commences and senior residents (e.g., ≥PGY-3) with at least 50% protected time for research during the fellowship period are eligible. Prior research experience is preferred.
Contact/Website	E-mail: dclarke@psych.org; Web: https://www.psychiatry.org/residents-medical-students/residents/fellowships/available-apa-apaf-fellowships/psychiatric-research-fellowship
Fellowship/Award	**APA Substance Abuse and Mental Health Services Administration (SAMSHA) Minority Fellowship Program and APA SAMSHA Substance Abuse Minority Fellowship**
Organization	APA/SAMSHA
Deadline	**January 31, 2020**
Brief Description	The goal of the APA SAMSHA Minority Fellowship is to enhance the knowledge and capabilities of racial and ethnic minority psychiatry residents to teach, administer, conduct services research, and provide culturally competent, evidence-based mental health services to minority and/or underserved populations. Fellows receive mentorship from the National Minority Mentor's Network and at multiple levels throughout APA. Fellows have the opportunity to sit on the APA Board of Trustees as a nonvoting member.
Eligibility	Applicants must be an APA member, at least a PGY-2, and remain in training the entire duration of the fellowship. African-American, Alaskan Native, American Indian, Asian American, Hispanic/Latino, and Native Hawaiian and Pacific Islander residents are especially encouraged to apply.
Contact/Website	E-mail: mfp@psych.org; Web: https://www.psychiatry.org/residents-medical-students/residents/fellowships/available-apa-apaf-fellowships/samhsa-minority-fellowship

continued

Residents' Resources (*continued*)

Fellowship/Award	American Psychiatric Association (APA) Resident Recognition Award
Organization	APA
Deadline	**March 31, 2020**
Brief Description	The Resident Recognition Award is presented annually to outstanding psychiatry residents or fellows from each department or institution who exemplify one or more APA values. Multiple awards are given each year.
Eligibility	Candidates must be resident or fellow members in good standing in their training program and exemplify one or more APA values.
Contact/Website	E-mail: kputnam@psych.org; Web: https://www.psychiatry.org/psychiatrists/awards-leadership-opportunities/awards/resident-recognition-award
Fellowship/Award	**American Academy of Child and Adolescent Psychiatry (AACAP) Pilot Research Award for Junior Faculty and Child and Adolescent Psychiatry Fellows**
Organization	AACAP
Deadline	**April 1, 2020**
Brief Description	The AACAP Pilot Research Award offers $15,000 for general psychiatry residents who have an interest in beginning a career in child and adolescent mental health research. By providing up to three awards to general psychiatry residents for pilot research programs, the funders support young investigators at a critical stage, encouraging future careers in child and adolescent psychiatry research. Recipients have the opportunity to submit a poster presentation on their research for AACAP's 67th Annual Meeting in San Francisco, October 19–24, 2020. The award also includes the cost of attending the AACAP Annual Meeting for 5 days.
Eligibility	Applicants must be a general psychiatry resident, not have any previous significant individual research funding in child and adolescent mental health, and either be members of AACAP or have a membership application pending. Candidates must agree to submit a poster presentation at the annual meeting.
Contact/Website	E-mail: research@aacap.org; Web: https://www.aacap.org/AACAP/Awards/Resident_and_ECP_Awards/AACAP_Pilot_Research_Award.aspx
Fellowship/Award	**American Academy of Child and Adolescent Psychiatry (AACAP) Pilot Research Award for Learning Disabilities**
Organization	AACAP Supported by the Elaine Schlosser Lewis Fund
Deadline	**April 1, 2020**
Brief Description	The AACAP Pilot Research Award for Learning Disabilities for Junior Faculty and Child and Adolescent Psychiatry Fellows offers $15,000 for child and adolescent psychiatry fellows and junior faculty who have an interest in beginning a career in child and adolescent mental health research. By providing one award to a child and adolescent psychiatry junior faculty member or fellow for pilot research on learning disabilities, the funders support a young investigator at a critical stage, encouraging a future career in child and adolescent psychiatry research. The recipient has the opportunity to submit a poster presentation at AACAP's 67th Annual Meeting in San Francisco, October 19–24, 2020.
Eligibility	Candidates must be board-eligible or certified in child and adolescent psychiatry or enrolled in a child and adolescent psychiatry residency or fellowship program or have a faculty appointment in an accredited medical school or be in a fully accredited child and adolescent psychiatry clinical research or training program. Candidates may not have more than 2 years of experience following graduation from residency or fellowship training and must not have any previous significant, individual research funding in the field. All candidates must either be AACAP members or have a membership application pending and agree to submit a poster presentation on his or her research at the annual meeting.
Contact/Website	E-mail: research@aacap.org; Web: https://www.aacap.org/AACAP/Awards/Resident_and_ECP_Awards/AACAP_Pilot_Research_Award_for_Learning_Disabilities.aspx

Call for Applications to Join the 2020–2021 Editorial Board

The *American Journal of Psychiatry—Residents' Journal* is now accepting applications to join the 2020–2021 Editorial Board for the following positions:

SENIOR DEPUTY EDITOR (SDE) POSITION

Job Description/Responsibilities

- Frequent correspondence with *AJP-Residents' Journal* Editorial Board and *AJP* editorial staff, including conference calls.
- Frequent correspondence with authors.
- Peer review manuscripts on a weekly basis.
- Make decisions regarding manuscript acceptance.
- Work with *AJP* editorial staff to prepare accepted manuscripts for publication to ensure clarity, conciseness, and conformity with *AJP* style guidelines.
- Recruit authors and guest editors for the journal.
- Fulfill the responsibilities of the Editor-in-Chief when called upon, including forming quarterly issue lineup.
- Collaborate with the Editor-in-Chief in selecting the 2021 SDE, Deputy Editor, and Associate Editors.
- Attend and present at the APA Annual Meeting.
- Commitment averages 10–15 hours per week.

Requirements

- Must be an APA resident-fellow member.
- Must be starting as a PGY-3 in July 2020, or a PGY-4 in July 2020 with plans to enter an ACGME fellowship in July 2021.
- Must be in a U.S. residency program.

Selected candidate will be considered for a 2-year position, including advancement to Editor-in-Chief in 2021.

DEPUTY EDITOR (DE) POSITION

(three positions available)

Job Description/Responsibilities

- Frequent correspondence with *Residents' Journal* Editorial Board and *AJP* editorial staff, including conference calls.
- Frequent correspondence with authors.
- Peer review manuscripts on a weekly basis.
- Make decisions regarding manuscript acceptance.
- Work with *AJP* editorial staff to prepare accepted manuscripts for publication to ensure clarity, conciseness, and conformity with *AJP* style guidelines.
- Prepare a quarterly *Residents' Resources* section for the journal that highlights upcoming national opportunities for medical students and trainees.
- Recruit authors and guest editors for the journal.
- Collaborate with the Editor-in-Chief in selecting the 2021–2021 Editorial Board.
- Attend and present at the APA Annual Meeting.
- Commitment averages 10 hours per week.

Requirements

- Must be an APA resident-fellow member.
- Must be a PGY-2, PGY-3, or PGY-4 resident starting in July 2020, or a fellow in an ACGME fellowship in July 2020.
- Must be in a U.S. residency program or fellowship.

This is a 1-year position only, with no automatic advancement to the SDE position in 2021. If the selected candidate is interested in serving as SDE in 2021, he or she would need to formally apply for the position at that time.

ASSOCIATE EDITOR (AE) POSITIONS

(five positions available)

Job Description/Responsibilities

- Peer review manuscripts on a weekly basis.
- Make decisions regarding manuscript acceptance.
- Recruit authors and guest editors for the journal.
- Collaborate with the SDE, DE, and Editor-in-Chief to develop innovative ideas for the journal.
- Attend and present at the APA Annual Meeting.
- Commitment averages 5 hours per week.

Requirements

- Must be an APA resident-fellow member
- Must be a PGY-2, PGY-3, or PGY-4 resident in July 2020, or a fellow in an ACGME fellowship in July 2020.
- Must be in a U.S. residency program or fellowship

This is a 1-year position only, with no automatic advancement to the DE or SDE position in 2021. If the selected candidate is interested in serving as DE or SDE in 2021, he or she would need to formally apply for the position at that time.

MEDIA EDITOR

(two positions available)

Job Description/Responsibilities

- Manage the *Residents' Journal* Facebook, Instagram, Twitter, and YouTube accounts.
- Oversee podcasts.
- Collaborate with the AEs to decide on content
- Collaborate with SDE, DE, and Editor-in-Chief to develop innovative ideas for the journal.
- Peer review manuscripts on a weekly basis.
- Attend and present at the APA Annual Meeting.
- Commitment averages 5 hours per week.

Requirements

- Must be an APA resident-fellow member.
- Must be an upcoming PGY-2, PGY-3, or PGY-4 resident in July 2020, or a fellow in an ACGME fellowship in July 2020.
- Must be in a U.S. residency program or fellowship.

This is a 1-year position only, with no automatic advancement to the DE or SDE position in 2021. If the selected candidate is interested in serving as DE or SDE in 2021, he or she would need to formally apply for the position at that time.

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For all positions, e-mail a CV and personal statement of up to 500 words, including reasons for applying and ideas for journal development, to matthewedwardsmd@gmail.com. The deadline for applications is March 15, 2020.

Information for Authors

Editor-in-Chief

Shapir Rosenberg, M.D.
(University of South Florida)

Senior Deputy Editor

Matthew L. Edwards, M.D.
(Stanford University)

We invite proposals from readers for podcast interviews or guest-edited theme sections. Submit proposals to **ajpresidentsjournalmedia@gmail.com.**

Submissions

The Residents' Journal considers manuscripts authored by medical students, resident physicians, and fellows in the United States and Canada.

To submit a manuscript, please visit **https://mc.manuscriptcentral.com/appi-ajp**, and select a manuscript type for AJP *Residents' Journal*. See **https://ajp.psychiatryonline.org/residents_journal/rj_ifora** for more detailed instructions.

Article: Reports of novel observations and research. May include meta-analyses. Includes a 100-word structured or nonstructured abstract.

Drug Review: A review of a pharmacological agent that highlights mechanism of action, efficacy, side-effects and drug interactions.

Case Report: A presentation and discussion of an unusual clinical event. All patient information must be adequately disguised, with written consent of the patient described.

Commentary: Generally includes descriptions of recent events, opinion pieces, or narratives.

History of Psychiatry: Provides a historical perspective on a topic relevant to psychiatry.

Arts and Culture: Includes introspective pieces, poetry, and reviews of books and films. All submissions must be relevant to the field of psychiatry.

Letters to the Editor: Comments on articles published in the *Residents' Journal* will be considered for publication if received within 1 month of publication of the original article.

Manuscript Type	Word Limit	Maximum Figures and Tables	Key Points*	Maximum References
Article**	1,500	2	Yes	20
Drug Review	1,500	2	Yes	20
Case Report	1,500	2	Yes	20
Commentary	600	0		5
History of Psychiatry	600	0		5
Arts and Culture	600	0		5
Letters to the Editor	300	0		5

*Box with 3–4 key teaching points
**All Articles must include a 100-word abstract.