

**APPA 2024 Spring Meeting Student/Resident Poster Presentation**

**Abstract: 24-1-01**

**Title:** The impact of civil commitment laws for substance use disorder on opioid overdose deaths

**Presenting Author:** Phillip Cochran, OMS-2, Alabama College of Osteopathic Medicine

**Additional Author(s):** Peter S. Chindavong, Jurian Edelenbos, Amy Chiou, Haylee F Trulson, Rahul Garg and Robert W Parker (All authors are affiliated with Alabama College of Osteopathic Medicine)

**Introduction/Background:** Our study analyzed the impact of civil commitment (CC) laws for substance use disorder (SUD) on opioid overdose death rates (OODR) in the U.S. from 2010—21.

**Methods:** We used a retrospective study design using the CDC Wide-ranging Online Data for Epidemiologic Research (WONDER) dataset to analyze overdose death rates from any opioid during 2010—21 using ICD-10 codes. We used t-tests and two-way ANOVA to compare the OODR between the U.S. states with the law as compared to those without by using GraphPad Prism 10.0.

**Results:** We found no significant difference in the annual mean age-adjusted OODR from 2010—21 between U.S. states with and without CC SUD laws. During the pre-COVID era (2010—19), the presence or absence of CC SUD law had no difference in age-adjusted OODR. However, in the post-COVID era (2020—21), there was a significant increase in OODR in states with a CC SUD law compared to states without the law ( $p = 0.032$ ). We also found that OODR increased at a faster rate post-COVID among both the states with CC SUD laws ( $p < 0.001$ ) and the states without the law ( $p = 0.019$ ).

**Discussion:** We found higher age-adjusted OODR in states with a CC SUD law which could be due to the laws being enacted in response to the opioid crisis or physicians' opposition to or unawareness of the law's existence leading to underutilization. Recent enactment of CC SUD law(s), a lack of a central database for recording relapse rates, and disparities in opioid overdose rate reductions uncovers multiple variables potentially influencing OODR. Thus, further investigation is needed to analyze the factors influencing OODRs and long-term effects of the CC SUD laws.

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**APPA 2024 Spring Meeting Student/Resident Poster Presentation**

**Abstract: 24-1-02**

**Title:** Effectiveness of Clozapine for Bipolar 1 disorder in a first trimester pregnant patient - A Case Report

**Presenting Author:** Humna Ellahi, PGY2, North Alabama Shoals Hospital

**Additional Author(s):** Bradford Montane, North Alabama Shoals Hospital

**Introduction/Background:** Clozapine, an atypical antipsychotic, can be an effective treatment of bipolar disorder in pregnant patients. Considering that clozapine does not have a proven side effect of being a teratogen, its use in pregnancy is relatively safe as compared to traditional mood stabilizers. Clozapine dose should be up-titrated slowly to avoid the side effects. Psychotropic medication therapy for pregnant women carries certain risks and benefits, with treatment restricted to circumstances where the risk of disorder to the mother and fetus outweighs the risk of drug treatment<sup>1</sup>.

**Description:** We present a case of a 35-year-old female with a past psychiatric history of schizoaffective disorder, bipolar type. On admission, the patient had euphoric mood with hypersexuality and hyper religiosity and decreased need for sleep. Her thought process was tangential. Her thought content had grandiose delusions and homicidal ideations, but she denied suicidal ideations and hallucinations. We started her on Lurasidone and added adjunct Quetiapine with no improvement as she continued to have manic symptoms. We later started her on haloperidol, but haloperidol gave her EPS, including resting tremors and akathisia, leading to haloperidol discontinuation. We initiated clozapine with improvement, and she no longer had manic or psychotic symptoms. She did not exhibit any EPS or agranulocytosis with the increasing dosage throughout her stay in the hospital. We discharged her home on clozapine.

**Discussion and Conclusion:** Clozapine is proven to be helpful for bipolar disorder resistant to treatment<sup>2</sup>. Its use resulted in a decrease in self-harm/overdose, psychotropic comedication, and psychiatric hospitalizations, proving that clozapine has potent mood-stabilizing effects<sup>3</sup>. Anti-suicidal properties of clozapine are proven as suicide mortality with bipolar disorder is approximately 25 times higher than the general population<sup>4</sup>. Clozapine did not cause any acute toxicological consequences in the exposed neonates, such as agranulocytosis or convulsions and there is currently little evidence that it is teratogenic and raises the chance of stillbirth, miscarriage, or fetal abnormalities<sup>5,6</sup>. Congenital birth abnormalities are associated with all medications commonly used to treat bipolar disorder, including lithium, carbamazepine, and lamotrigine hence, clozapine is an option worth considering specially in instances that are resistant to treatment<sup>7</sup>.

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**APPA 2024 Spring Meeting Student/Resident Poster Presentation**

**Abstract: 24-1-03**

**Title:** The Mental Health Crisis in Schools

**Presenting Author:** Madison Jeziorski, MS3, UAB Heersink School of Medicine

**Additional Author(s):** Clinton Martin M.D., Zachary Gilliam CRNP, Janaki Nimmagadda M.D., UABSOM Huntsville, Department of Psychiatry

**Introduction/Background:** It is estimated that approximately 10-20% of children under 18 have a mental disorder.<sup>1</sup> However, psychiatric treatment rates vary. Eight out of ten children with depression receive treatment, but six in ten children receive treatment for anxiety and only one in five for behavioral disorders.<sup>2</sup> Inability to identify children in need of mental health services and difficulty accessing necessary services serve as major barriers to adequate mental health treatment. The development of relationships between school faculty and psychiatrists is one for the crucial aspects of addressing these barriers. In this case report, we discuss a patient that presented to the emergency room (ER) for behavioral issues who was accompanied by her school principal.

**Description:** An 8-year-old girl with a past medical history of ADHD and anxiety presented to the ER for behavioral outbursts. The patient was taking long-acting amphetamine 10mg and clonidine 0.1mg as prescribed by her PCP. She was accompanied by her mother and her school principal. While mother noted some behavioral changes since the patient's father's death, she denies serious concerns at home. Her principal described the patient as having poor frustration tolerance and difficulty coping with stress. She has had "fits of rage and outbursts" that included throwing objects in class, yelling, and aggression towards students and faculty. It was decided to discontinue her amphetamine to observe behavior without stimulants.

On follow-up with the outpatient clinic, the patient was accompanied by her mom and principal. Her IEP described difficulty with math and average IQ. She was continued on clonidine. However, her teacher called two weeks later and described continued behavior outbursts that resulted in in-school suspension. The patient was then started on sertraline for concern of anxiety prompting behavioral issues. At the next appointment, the patient's mother explained that her behavior was greatly improved with both teachers, and at home she was "a completely different child". Her mood swings, irritability, and outbursts improved, and the patient now looked forward to attending school.

**Discussion and Conclusion:** This case serves as an example of effective collaboration between the educational system and psychiatric services. Below are recommendations that can create a stronger relationship between school faculty and mental health providers and reduce barriers to mental healthcare for children.

1. Psychiatrists and school faculty should foster an environment that is supportive of in-school mental health interventions.

- A school culture of support as well as a willingness to try new things has shown to improve sustainability of mental health interventions.<sup>3</sup>
- School leadership support and prioritization can greatly influence the success of in-school programs.<sup>3</sup>

2. School faculty should be made aware of and feel comfortable utilizing community mental health support for students.

- Short-term crisis intervention for children has been shown to significantly improve patients' symptoms and limit need for extended psychotherapy.<sup>4</sup>

3. Psychiatrists should be able to serve as a liaison for school faculty and parents regarding the necessary accommodations or additional services for children with psychiatric disorders.

- Psychiatrists can act as a member of a multi-disciplinary team in student evaluations. They can provide specialized evaluations to supplement and guide in-school treatment and provide support during meetings with family members.<sup>1</sup>

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APPA 2024 Spring Meeting Student/Resident Poster Presentation

**Abstract: 24-1-04**

**Title:** Psychiatric presentation of an early-onset Binswanger's disease: Case report

**Presenting Author:** Venkatesh Panthangi, PGY1, North Alabama Shoals Hospital

**Additional Author(s):** Bhargavi Nagendra, MD, PGY1, North Alabama Shoals Hospital; Praveen Narahari, MD, Department of Psychiatry, North Alabama Shoals Hospital, AL

**Introduction/Background:** Binswanger's disease (BD) represents a distinct form of vascular dementia, often associated with hypertension and stroke [1,2]. The characteristic symptoms include apathy, abulia, amnesia, executive dysfunction, abnormal gait, dysphagia, and incontinence [3]. Psychiatrists are often the first medical-practitioners to interact with these individuals whose presentation frequently resembles depression. The average age of onset is between 55-65 years. Here, we describe a unique case with onset at age 49 exhibiting clinical and pathological features of vascular dementia of Binswanger type.

**Description:** A 49-year-old African-American female was involuntarily admitted for hostile behavior, amnesia, and cognitive dysfunction. She had history of hypertension, stroke and no substantial psychiatric history. Over past six months, family noted significant decline in functioning. She had dysphagia, ataxia, bowel and bladder incontinence and was disregarding her hygiene. She would occasionally act aggressively on family members. On presentation, she was disheveled, guarded, withdrawn, had speech latency, flat and restricted affect with poor insight. No suicidal, homicidal, or perceptual abnormalities were elicited. A preemptive diagnosis of depression with psychosis was considered, for which Lexapro and Abilify were initiated. The lack of anticipated response to these medications prompted us to shift our focus to a neuropathological etiology. A bedside neurological exam revealed hyperreflexia and positive Babinski. A comprehensive neurological workup was unremarkable. She scored 21/30 on MMSE and 17/30 on MoCA. CT head and brain MRI revealed severe white-matter hyperintensities, multiple areas of porencephaly, and pericallosal-lacunar infarcts, indicating Binswanger's disease.

**Discussion and Conclusion:** BD's pathophysiology is complicated and poorly understood. The white-matter changes of BD are linked to thrombotic or ischemic vascular occlusion [4]. Treatment options are primarily preventative and aimed at managing underlying risk factors. Mood disorders and psychotic phenomena often precede neurological presentation and are amenable to therapy, resulting in symptomatic improvement and better quality of life [5]. Early detection may delay progression and avoid late-stage complications (progressive pseudo-bulbar palsy and decorticate rigidity) [6]. With the global rise in vascular dementia cases, psychiatrists must be aware of the varied neuropsychiatric presentations of this condition. BD should be considered in adult patients presenting with new-onset psychiatric symptoms with an underlying history of hypertension and stroke.

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**APPA 2024 Spring Meeting Student/Resident Poster Presentation**

**Abstract: 24-1-05**

**Title:** Depakote-Induced Pancreatitis in a 12-Year-Old Male with Complex Psychiatric Comorbidities

**Presenting Author:** Neil Vuppala, OMS-III, Alabama College of Osteopathic Medicine

**Additional Author(s):** Kamran Ather, OMS-III, Alabama College of Osteopathic Medicine; Soumya Sidana, OMS-III, Alabama College of Osteopathic Medicine; Aparna Vuppala, MD, Behavioral Sciences of Alabama

**Introduction/Background:** This case delves into the complex medical history of a 12-year-old male marked by a diverse range of psychiatric conditions, including bipolar disorder with psychosis, autism spectrum disorder, ADHD, and generalized anxiety disorder. Central to this case is the unforeseen and severe reaction to Depakote, a medication widely used to manage psychiatric illnesses, culminating in acute pancreatitis.

Depakote, or valproate, is a medication crucial for treating various psychiatric disorders, including bipolar disorder and mood-related symptoms associated with autism spectrum disorder. However, this essential treatment is not without its potential pitfalls. This case report highlights the intricate interplay between psychiatric conditions, medication management, and unforeseen medical complications and underscores the importance of identifying and addressing adverse drug reactions. Specifically, it sheds light on the risks of Depakote therapy, such as its propensity to induce pancreatitis.

**Description:** The patient was urgently admitted to the ICU as his disposition was characterized by labored breathing, heightened blood pressure, erratic heart rate, and profound alterations in mental status. The patient's Depakote levels were measured at an alarming 180 mcg/mL in addition to a conspicuous elevation in pancreatic enzyme levels. The patient's condition continued to deteriorate throughout his hospitalization, culminating in a manic episode that harmed hospital staff. In response, all medications were discontinued, and he was relocated to the Pediatric ICU. Zyprexa was restarted on the second day of hospitalization. However, the patient remained predominantly non-verbal, with minimal interaction, and exhibited a steadfast aversion to nourishment. By the ninth day, his pancreatic enzyme levels improved, and by the fifteenth day, he showed significant progress, leading to discharge.

**Discussion and Conclusion:** This case report emphasizes the need for vigilant monitoring to address unanticipated medical complications during the care of pediatric patients grappling with intricate psychiatric disorders. It further characterizes the significance of promptly addressing medication-induced adverse effects and accentuates the risks of Depakote therapy, specifically its potential to induce pancreatitis. It highlights the importance of diligent monitoring, astute management, and swift intervention when facing unforeseen medical complications.

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**APPA 2024 Spring Meeting Student/Resident Poster Presentation**

**Abstract: 24-1-06**

**Title:** Delta-8 induced Paranoia

**Presenting Author:** Sumita Chakrapani, PGY2, North Alabama Medical Center, AL

**Additional Author(s):** Ethan Wainblat, PGY2; Anusha Chintapalli, PGY1; Praveen Narahari, Program Director, North Alabama Medical Center, AL

**Introduction/Background:** Delta 8-tetrahydrocannabinol (Delta-8) is a chemical compound in cannabis which is a less potent psychoactive than Delta-9, the intoxicating component found in marijuana. Delta-8 is legal at the federal level, leading to increased recreational use. Among past 30-day cannabis users, 16.7% reported Delta-8 use [1]. Recreational use of Delta-8 has become more familiar with increased Emergency visits and hospitalizations with lasting psychiatric conditions [2]. The effects include tachycardia, tachypnea, elevated BP, cardiac dysrhythmias, changes in mood, perception, and thought content [3].

**Description:** A 24-year-old female with a history of social anxiety presented with an increased frequency of paranoid delusions and anxiety over the past several months. She admitted to using Delta-8 for over a year. She was transferred to our psychiatric inpatient unit after initially being evaluated and cleared medically for non-suicidal self-injurious behavior that resulted in loss of consciousness, where she was also found to have atrial fibrillation that was not medically managed. During the hospital course, she was started on Zyprexa for presumed substance-induced psychosis. On subsequent examination, she was noted to have an irregular heart rate with increased anxiety. EKG showed atrial fibrillation and was initiated on metoprolol. Zyprexa was subsequently discontinued due to prolonged QTc, and she was initiated on Abilify, which was also discontinued due to continued prolonged QTc. The patient remained stable, and symptoms of paranoia gradually subsided. The patient demonstrated a logical thought process and improved insight into her condition.

**Discussion and Conclusion:** There has been a vast increase in Delta-8 since 2019 [4]. The public currently does not recognize the risks of Delta-8, including the multiple health effects [5,6], due to limited research studies available on its use and implications. It is essential to obtain a detailed history of all substances the patient is using to help guide proper treatment. Our case showed difficulties of people using delta-8 with comorbidities that can be challenging with patient treatment and resolution of symptomatology without long-term medication use. With limited research into Delta-8, it is uncertain what the course of Delta-8 psychosis consists of after the cessation of the drug with or without antipsychotic treatment.

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**APPA 2024 Spring Meeting Student/Resident Poster Presentation**

**Abstract: 24-1-07**

**Title:** Risk of Upper Gastrointestinal Tract Bleeding Associated With Selective Serotonin Reuptake Inhibitors. Effect of Acid-Suppressing Agents

**Presenting Author:** Landon Sowell, PG4, HCA

**Additional Author(s):** Barbara Gracious, MD, HCA; Hayden Dansbury, BS, HCA

**Introduction/Background:** Selective serotonin reuptake inhibitors (SSRIs) are some of the most widely used antidepressant drugs in the world, the primary reason is the favorable safety profile.<sup>1,3</sup> Since 1999, there have been several studies that have investigated the possible association between use of SSRIs and the risk of upper gastrointestinal bleeding (UGB), but results are equivocal. There are contradictory studies published on whether the use of SSRIs leads to increased risk of developing clinically significant upper GI bleeds (UGB) and using SSRIs. The research available is also unclear if acid suppressing agents are of benefit. The goal of this project was to have a large data pool to identify whether SSRI usage increases the risk of developing upper gastrointestinal bleeding (UGB). The study also looked at the potential benefit of proton pump inhibitors (PPIs) in reducing this risk.

**Methods:** A retrospective case control study between January 01, 2019 - December 31, 2021 investigating the prevalence of UGB in patients prescribed SSRIs (N = 17,923). A multivariate logistic regression utilizing medication use as the predictor of interest and severity of gastrointestinal bleed as the outcome was used. Patients were grouped in two separate groups based on severity of GI diagnosis. Those in the higher severity group included only those with bleeding present. Lower severity included all other upper GI conditions.

**Results:** The results showed that there was a significantly increased risk of developing UGB when patients on NSAIDs were given SSRI as well. The results did also suggest a higher risk of UGB in patients who take PPIs.

**Discussion:** The study suggested that SSRIs increase the risk of developing UGB. We recommend that SSRIs be added to the list of drugs that increase the risk of bleeding induced by NSAIDs given the results from this study as well as prior studies. Further investigation of patients on SSRIs and NSAIDs with and without PPIs needs to be established before determining the true risk of developing an upper GI bleed.

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**APPA 2024 Spring Meeting Student/Resident Poster Presentation**

**Abstract: 24-1-08**

**Title:** A new normal: consideration of brexanolone as first line modality for treatment of severe postpartum depression

**Presenting Author:** Chloe Carroll, MS-3, UAB Heersink School of Medicine

**Additional Author(s):** Clinton Martin MD, UABSOM Huntsville Campus, Department of Psychiatry; Kaysie Freer MS-3 UAB Heersink School of Medicine

**Introduction/Background:** Postpartum depression (PPD) is one of the most common complications during the perinatal period, defined by onset of major depressive episode anytime in pregnancy up to 4 weeks postpartum. Prevalence ranges from 6.9%-12.9% in the United States. Risk factors include a history of mood or anxiety disorder and psychosocial factors including infantile health problems and intimate partner violence. First line treatment for PPD is selective serotonin reuptake inhibitors (SSRIs) and/or psychotherapy.

The neurosteroid allopregnanolone (AP), a modulator of GABA receptors, may serve a role in the pathophysiology of PPD. Brexanolone (BX) is an injectable formulation of allopregnanolone and was the first drug approved for clinical use in PPD. Infusion of the analogue immediately replenishes AP levels, providing fast and effective anxiolytic and anti-dysphoric effects. Brexanolone shows response in as early as 24 hours, significantly more rapid than that of SSRIs (2 to 8 weeks). When compared to SSRIs, BX exhibits larger change from baseline in Hamilton rating scale for depression (HAM-D-17) scores at all time points up to 30 days post infusion. Though BX showed potential to be more cost-effective in comparative clinical and economic modeling, cost remains the largest barrier to access.

**Description:** Our case involved a 24 year old female who presented with depression, suicidal ideation and self harm one month postpartum. She had a history of intimate partner violence and no other significant past medical history. She was admitted to inpatient care. BX was explored as an ideal treatment modality, but was not prescribed due to prohibitive cost. The patient was ultimately treated with escitalopram 10 mg. Her dose was subsequently increased following discharge and she began psychotherapy shortly after.

**Discussion and Conclusion:** Current standard of care for patients with PPD is essentially identical to that of major depressive disorder; patients are started on SSRIs and psychotherapy. Brexanolone is the first FDA approved drug specifically for PPD and has shown greater efficacy over SSRIs in clinical trials. This report seeks to add to the growing literature supporting a need for improved, affordable pharmacological care for patients with PPD.

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**APPA 2024 Spring Meeting Student/Resident Poster Presentation**

**Abstract: 24-1-09**

**Title:** Neurological Masquerade: A Case of Mistaken Anxiety

**Presenting Author:** Samira Stutman, OMS-III, Alabama College of Osteopathic Medicine

**Additional Author(s):** Kandace Farmer, OMS-III, Alabama College of Osteopathic Medicine; Mark Haygood, DO, MS, FAPA, New South Psychiatry

**Introduction/Background:** Abrupt episodic panic and anxiety are characteristics of the common psychiatric condition panic disorder. Panic attacks are defined by the Diagnostic and Statistical Manual of Mental Health Disorders (DSM) as a sudden surge of intense fear or discomfort reaching a peak within a few minutes, often without any notable trigger, and must have four or more of a specific set of symptoms present (1, 2). However, in some cases, patients may not present with all the classic symptoms or in a typical manner, and further investigation is warranted. Prior literature discussing the shared neural network between the propagation of fear in panic disorder versus epilepsy has highlighted the localization of temporal lobe lesions as a diagnostic distinction for epileptic fear (3). Temporal lobe epilepsy (TLE) is the most common form of focal epilepsy, accounting for about 60% of patients with focal epilepsy. TLE is associated with brain injury early in life, changes in temporal lobe structure, and a history of a prolonged or focal febrile seizure (4).

**Description:** In this case, we present a woman whose primary symptom of short, sudden, episodic fear, combined with a history of absence seizures, led to a neurology consult. Upon neurological evaluation, the patient was diagnosed with a seizure disorder localized to the temporal lobe. After an MRI without contrast, her Lamictal dosage was increased, and she noted improvement in her psychiatric symptoms.

**Discussion and Conclusion:** With this case report, we aim to stress the importance of considering all diagnoses, both physiological and psychological, when patients present in a clinically atypical manner to not delay proper treatment.

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**APPA 2024 Spring Meeting Student/Resident Poster Presentation**

**Abstract: 24-1-10**

**Title:** Exploring Cotard Delusion within the Context of Major Depressive Disorder with Psychotic Features: A Case Report

**Presenting Author:** Alina Faunce, OMS-3, Alabama College of Osteopathic Medicine

**Additional Author(s):** Blake Tennant, MD, Director of Turning Point Psychiatry at Cullman Regional Medical Group

**Introduction/Background:** Cotard delusion manifests as a complex condition marked by a profound detachment from reality or existence itself, and is intertwined with nihilistic convictions centered on decay and mortality. This rare disorder often arises as a manifestation of an underlying psychiatric or neurological condition. In this case, Cotard delusion emerged as a symptom of unipolar psychotic depression, which is atypical given its more common association with schizophrenia. According to current American Psychiatric Association guidelines, the recommended treatment approach is combination therapy of an antidepressant and an antipsychotic. However, this patient's delusions worsened despite undergoing several combination therapy trials, and achieved substantial relief only through venlafaxine monotherapy.

**Description:** 'Mr. B' is a 44-year-old man with a history of seizure disorder and major depressive disorder with psychotic features and Cotard delusion. His delusions centered on the belief that his right leg was undergoing decay and would eventually detach, alongside a perception of an alternate version of himself inhabiting within. Additionally, he experienced pervasive sensations of having died, being deceased, or facing imminent demise. At initial presentation, he had a four-year history of unipolar psychotic depression and had undergone unsuccessful trials of sertraline, paroxetine, mirtazapine, escitalopram, and aripiprazole.

Eventually, all were discontinued due to unsatisfactory remission, adverse side effects, or increased delusion frequency. Over 11 months of treatment at this clinic, combinations of venlafaxine + cariprazine, venlafaxine + brexpiprazole, and venlafaxine + brexpiprazole + lithium also led to increased severity of his condition. Symptom improvement and eventual remission were only achieved through discontinuation of antipsychotic medication and venlafaxine monotherapy titrated to the maximum daily dose.

**Discussion and Conclusion:** This case underscores the need to better understand the concurrent manifestation of Cotard delusion in the setting of MDD with psychotic features. Cotard delusion remains significantly underexplored, and is primarily investigated within the context of schizophrenia.

Furthermore, it emphasized the necessity for additional pharmacological investigations, given the exacerbation of the patient's condition with antipsychotics and the efficacy observed with venlafaxine. While pharmacotherapy and psychotherapy offer promising avenues of treatment, the mechanism through which venlafaxine elicited a positive response remains unknown. Thus, further comprehensive studies are warranted to elucidate the underlying therapeutic mechanisms.

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**APPA 2024 Spring Meeting Student/Resident Poster Presentation**

**Abstract: 24-1-11**

**Title:** Between Stillness and Storm: Navigating Catatonia in Adolescent Psychiatry

**Presenting Author:** Johnathan Grimes, OMS3, Edward Via College of Osteopathic Medicine-Auburn Campus

**Additional Author(s):** Evan Chavers, MD, PGY-2, USA Frederick P. Whiddon College of Medicine, Department of Psychiatry

**Introduction/Background:** Catatonia, a neuropsychiatric syndrome, exhibits varied motor and behavioral disturbances, often classified as withdrawn, excited, or malignant. Withdrawn catatonia is associated with signs of negativism or resistance to movement [1,2]. Conversely, excited catatonia is marked by restlessness and heightened agitation [3]. This heightened state of arousal holds the potential to evolve into malignant catatonia, presenting life-threatening complications, including autonomic dysfunction. Studies have shown a 5%-20% incidence of catatonia in an acute inpatient psychiatric setting, while the prevalence of inpatient youth experiencing such symptoms is 0.6% to 17% [4,5], necessitating rapid diagnosis and treatment due to associations with conditions such as bipolar disorder and schizophrenia [6]. While most patients experiencing catatonic features respond rapidly with low-dose benzodiazepines, electroconvulsive therapy is utilized when initial therapy fails.

**Description:** We present two cases of adolescent catatonia showcasing diverse presentations. The first involves a 14-year-old male, recently hospitalized for brief psychotic disorder, presenting with sudden onset anxiety and agitation. He exhibited confusion, hyperactivity, and combativeness, consistent with excited catatonia related to psychosis. The second case features a 14-year-old female with a history of learning disability, ADHD, and depression, brought to the emergency department due to sudden bizarre behavior followed by withdrawal and mutism. She displayed symptoms suggestive of akinetic or withdrawn catatonia. Both patients responded positively to IV lorazepam challenge, confirming the diagnosis and guiding treatment.

**Discussion and Conclusion:** Recognizing and treating catatonia in children and adolescents is crucial. Though rare, untreated catatonia can cause prolonged suffering, worsen psychiatric or medical conditions, and increase the likelihood of complications like deep vein thrombosis. The varied clinical presentations of catatonia challenge diagnosis, but rating scales like the BFCRS aid assessment and treatment decisions by considering motor abnormalities and behavioral disturbances. Treatment often involves medications like benzodiazepines or ECT, with lorazepam providing rapid relief. It is vital for healthcare professionals to consider catatonia in adolescents and use rating scales for timely intervention, ensuring comprehensive evaluations and appropriate treatment to improve outcomes and mitigate consequences in younger populations.

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APPA 2024 Spring Meeting Student/Resident Poster Presentation

**Abstract: 24-1-12**

**Title:** Modeling the Methamphetamine-Sensitive Circadian Oscillator in *Drosophila melanogaster*

**Presenting Author:** Reid Black, PGY3, University of Alabama at Birmingham, Department of Psychiatry and Behavioral Neurobiology

**Additional Author(s):** Jodi Paul, PhD, University of Alabama at Birmingham, Department of Psychiatry and Behavioral Neurobiology; Yanqi Zhu, BE, University of Alabama at Birmingham, Department of Surgery; Ruan Moares, PhD, University of Alabama at Birmingham, Department of Psychiatry and Behavioral Neurobiology; Aurelio Galli, PhD, University of Alabama at Birmingham, Department of Surgery; Karen Gamble, PhD, University of Alabama at Birmingham, Department of Psychiatry and Behavioral Neurobiology

**Introduction/Background:** The core mechanisms of circadian (~24 hour) rhythms have been well described. Although there is evidence supporting the existence of other intrinsic rhythms, these have not been as clearly explained. The methamphetamine-sensitive circadian oscillator (MASCO) is one such rhythm that was discovered after methamphetamine was chronically administered to rodents. This both lengthened endogenous locomotor rhythms and restored rhythmicity after rhythms had been mechanically or genetically abolished. However, MASCO has never been demonstrated in *Drosophila melanogaster* despite *Drosophila*'s essential role in understanding circadian molecular mechanisms.

**Methods:** *Drosophila melanogaster* Canton S flies were grown and maintained on standard cornmeal-molasses media at 25 °C under a 12:12 h light-dark (LD) schedule. Virgin male flies ages 3-5 days were transferred individually to activity tubes containing either standard cornmeal-molasses media (n = 32) or amphetamine-containing media (10mM, n = 30). TriKinetics *Drosophila* Activity Monitoring system (Waltham, MA) was used to measure locomotion. Flies were placed in locomotion tubes on day 0. On days 1 and 2, flies were exposed to 12:12 h LD schedules. On days 3-9, flies were exposed to constant darkness (DD). ClockLab (Actimetrics, Wilmette, IL) was used to generate actograms and associated Lomb-Scargle periodograms for days 3-9 (7 days under DD).

**Results:** Flies that received 10mM amphetamine food (n = 27, M = 23.75h, SD = 0.575) demonstrated significantly lengthened circadian periods (p = 0.01) compared to those that received vehicle food (n = 27, M = 23.36h, SD = 0.503). One fly in the amphetamine group was excluded as its period was a statistical outlier (>2 SD's below the mean). Two flies in the amphetamine group and five in the vehicle group that did not have a significant rhythm in a circadian range were not included.

**Discussion:** These findings suggest that MASCO may be reproducible in *Drosophila*. Replicating MASCO in *Drosophila* would be a major step towards establishing the molecular mechanisms that govern it. Ascertaining these mechanisms may shed further light on extra-suprachiasmatic oscillators driving behavior, which could have implications for the understanding and treatment of stimulant use and other psychiatric disorders.

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**APPA 2024 Spring Meeting Student/Resident Poster Presentation**

**Abstract: 24-1-13**

**Title:** Lymphocytic Colitis: A Rare Complication of Selective Serotonin Reuptake Inhibitors

**Presenting Author:** Jeanetta Malone, PGY-3, USA Whiddon College of Medicine

**Additional Author(s):** Marianne Saitz, D.O., USA Whiddon College of Medicine Faculty

**Introduction/Background:** Lymphocytic colitis (LC) is a rare inflammatory disease occurring with an incidence of approximately 25 per 100,000 person-years.<sup>4</sup> This disease primarily effects the colon and is characterized by symptoms of watery diarrhea, fecal urgency, abdominal pain, arthralgias, and weight loss.<sup>5</sup> There are a number of risk factors that may make an individual more likely to develop this disease including advanced age, female sex, comorbid autoimmune diseases, and the use of certain medications.<sup>5</sup> Medications most implicated in the development of lymphocytic colitis include proton pump inhibitors, NSAIDs, statins, and selective serotonin reuptake inhibitors.<sup>3</sup> Evidence suggests these medications are implicated not only in the development of LC but also exacerbating flares. This association complicates the treatment of comorbid mood disorders in patients with LC. Below we discuss the treatment of a patient with comorbid MDD and lymphocytic colitis.

**Description:** Patient B is a 42 year old female who presented to outpatient psychiatry for further management of depression and anxiety. Patient reported ongoing depression and anxiety leading back to late adolescence. She had initially been trialed on sertraline however was taken off of the medication after developing severe watery diarrhea and abdominal pain. Symptoms significantly improved with discontinuation of medication. Patient was later diagnosed with lymphocytic colitis that was thought to be related to the trial of sertraline. She was later trialed on multiple antidepressants including fluoxetine, escitalopram, and vortioxetine all of which caused intolerable flaring of her LC. Eventually patient was initiated on aripiprazole for treatment of MDD. Mood symptoms were able to be stabilized on this medication without any exacerbation of LC.

**Discussion and Conclusion:** Lymphocytic colitis may be a rare side effect of ongoing treatment with SSRIs. The exact mechanism of this connection remains unknown though there is some evidence that serotonin may possess inflammatory characteristics similar to those seen in colitis.<sup>1</sup> It is unclear if all serotonergic agents share this propensity to increase the risk of developing LC. One case study did appear to show a link between a patient treated with the SNRI duloxetine and development of LC.<sup>2</sup> Further research is needed to fully understand the relationship between serotonergic medications and lymphocytic colitis. It is important for providers to keep this connection in mind especially in the management of patients with comorbid mood disorder and gastrointestinal disease.

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**APPA 2024 Spring Meeting Student/Resident Poster Presentation**

**Abstract: 24-1-14**

**Title:** Overprescribing Antipsychotics in Patients with Intellectual Disability

**Presenting Author:** Kaysie Freer, MS3, University of Alabama Birmingham Heersink School of Medicine

**Additional Author(s):** Janaki Nimmagadda, MD

**Introduction/Background:** Antipsychotics are frequently used off-label in patients with intellectual disability who suffer from aggression or impulse control issues. It is reported that 20-45% of patients with ID will be placed on an antipsychotic at some point and 14-30% of those will be to manage aggressive or dangerous behaviors.

**Description:** A 21 year old black male with history of intellectual disability (ID), tardive dyskinesia, attention-hyperactivity deficit disorder (ADHD), and impulse control disorder came to the psychiatry clinic to establish care. He had a history of violent outbursts and his mother, who he was fully dependent on, was concerned about future violence. His current psychiatric medication list included atomoxetine 100 mg, divalproex sodium 500 mg thrice daily, escitalopram 20 mg, and quetiapine 400 mg. At this appointment he shared his frustrations with the effects of his medications including fatigue, increased appetite, and weight gain. His BMI was 40.6. After discussion with the patient and his mother, they agreed to lower his quetiapine and begin a trial of methylphenidate 10 mg to help with his attention and impulse control.

Over the next two years of care he began working part time, attending drivers education classes, and successfully moved into his own apartment. His mother reported improved impulsivity and attention as well as decreased aggression. His BMI decreased to 35.7. His current medication regimen includes atomoxetine 100 mg, divalproex 500 mg once daily, methylphenidate long acting 40 mg, and quetiapine 200 mg.

**Discussion and Conclusion:** Antipsychotics can cause a myriad of side effects when used in the long term in large doses. These effects are well documented to include sedation, increased appetite, weight gain, and hypertension. Those with ID are also more likely to develop metabolic syndromes, with long term antipsychotic use only increasing the risk. Notable cognitive effects include trouble focusing, decreased cognitive ability, and therefore decreased ability to complete their activities of daily living.

A higher proportion of patients with ID suffer from ADHD than their non intellectually disabled counterparts. In some patients, a stimulant can be more helpful in aiding focus, impulse control, and aggression without the added risk of sedation and metabolic dysfunction.

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**APPA 2024 Spring Meeting Student/Resident Poster Presentation**

**Abstract: 24-1-15**

**Title:** Consideration of Delusional Disorder in Severe Somatic Symptom Disorder

**Presenting Author:** Amanda Davis, PGY-2, USA Frederick P. Whiddon College of Medicine, Department of Psychiatry

**Additional Author(s):** J. Luke Engeriser, MD, USA Frederick P. Whiddon College of Medicine, AltaPointe Health

**Introduction/Background:** Individuals affected by Somatic Symptom Disorder (SSD) have excessive thoughts, feelings, or behaviors related to their somatic symptom(s) to the point of distress and/or functional impairment [1]. Catastrophic interpretations are common, and convictions may persist despite contradictory evidence and high healthcare utilization. At times, the degree and intensity of preoccupation may be severe and warrant consideration of underlying delusional disorder [1].

**Description:** 32-year-old male with a history of depression, somatic symptom disorder, OCD, IBS, and POTS. He presented to the CDU for SI secondary to ongoing somatic concerns. He expressed multiple somatic symptoms that were distressing to him and which he interpreted to represent undiagnosed cancer. Over several months, he underwent extensive medical workup including imaging, labs, and procedures by numerous providers at various facilities. This workup was largely unremarkable and reassuring. Despite this, he believed his health was rapidly deteriorating due to his perceived illness. This belief negatively impacted his ability to function and limited his willingness to engage in psychiatric treatment. He was difficult to redirect and appeared to have poor insight into the role his medical and psychiatric conditions may be playing in his presentation.

**Discussion and Conclusion:** Functional improvement and coping strategies are the primary treatment focus for patients with SSD [2]. It is important to reassure patients that their symptoms may be related to an underlying medical condition and that the diagnosis of SSD does not exclude that. Patients may feel dismissed or as though their symptoms are “all in their head” with the suggestion of a psychiatric diagnosis, which can negatively impact treatment. Given the high association with anxiety and depressive disorders [1], patients may benefit from psychotherapy and antidepressants (SSRI/SNRI) [2]. In severe cases, there also appears to be a role for augmentation with antipsychotics such as quetiapine or brexpiprazole [2,3]. The use of antipsychotics further highlights the question, at what point does severe SSD warrant consideration of delusional disorder? Based on the DSM-5-TR, the belief's intensity, fixedness, and bizarreness are paramount. In the case above, the patient's belief was fixed, severe, and appeared to be delusional. He was agreeable to increasing home fluoxetine to 80 mg daily but declined augmentation with aripiprazole.

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APPA 2024 Spring Meeting Student/Resident Poster Presentation

**Abstract: 24-1-16**

**Title:** Traumatic Birth Experience and Post-Partum Depression

**Presenting Author:** Veronica Smith, MS-3, UAB Heersink School of Medicine

**Introduction/Background:** Post-partum depression (PPD), also known as perinatal depression, is a form of depression that manifests during pregnancy or within four weeks following delivery. Globally, approximately 13-19% of women endure PPD, with higher prevalence observed in regions with elevated rates of maternal and infant mortality. PPD symptoms can cause adverse parent-child interactions, neglect of the newborn, and tragically, maternal suicide.

**Description:** A 39-year-old woman presents with depressive symptoms, notably a loss of interest in engaging in activities with her children, during the winter months. She recounts her initial diagnosis of a depressive disorder in 2013, following a traumatic childbirth experience with her first child, which led to PPD. She was offered early induction of labor without medical justification, to which she reluctantly agreed. Upon arrival at the hospital, she endured a prolonged wait to see her physician and her request for a break between contractions before receiving an epidural was disregarded. During delivery, she suffered a 4th degree laceration resulting in significant blood loss. She was denied the opportunity for skin-to-skin contact with her newborn and was left in a lithotomy position while family members interacted with the baby. Neither the physician nor the nurses offered reassurance or communicated about her delivery complications, leaving her feeling isolated. She struggled to connect with her baby and experienced physical healing complications along with breastfeeding issues, leading to overwhelming feelings of guilt. At her follow-up visit she was diagnosed with PPD, and prescribed Celexa, which yielded some improvement. Currently, she continues to battle Seasonal Affective Disorder and has challenges bonding with her children during these times.

**Discussion and Conclusion:** While a history of depression and lack of social support are well-established risk factors for PPD, it is imperative to recognize that traumatic birth experiences are also correlated with the development of PPD. Factors such as the quality of patient-caregiver relationships and medical interventions contribute to a mother's perception of her birth experience. Given that approximately 20% of post-partum deaths are attributed to suicide, identifying risk factors associated with PPD is crucial. This case highlights the role that provider support and birth experience have in PPD and its long-term consequences.

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**APPA 2024 Spring Meeting Student/Resident Poster Presentation**

**Abstract: 24-1-17**

**Title:** Breaking Through: Strategies for Navigating Complex Psychiatric Cases and Healthcare Obstacles

**Presenting Author:** Daniel Mazzorana, OMS-III, Alabama College of Osteopathic Medicine

**Additional Author(s):** Sarah Seghrouchni, OMS-III, Alabama College of Osteopathic Medicine; Mark Haygood, DO, MS, FAPA, New South Psychiatry

**Introduction/Background:** Mental health services in rural communities have shown delays in treatment due to lack of specialized care [1]. Patients with complex psychiatric diagnoses are forced to not only find, but trust a physician with the broad knowledge of psychiatry and primary care to treat lifetime diagnoses.

**Description:** This case highlights a 40-year-old female with a complex history including uncontrolled schizoaffective disorder, tardive dyskinesia, post-traumatic stress disorder, intellectual disability, and diabetes who resides in a rural community. Some of the issues that have further complicated her treatment progress include non-adherence with treatment, side effects of medications, and lack of access to care. After the failure of status quo treatment planning, a more aggressive treatment team approach was initiated. Intuitive solutions, such as enhancing caregiver and primary care involvement, have demonstrated improvement in overall outcomes for patients [2]. In this patient scenario, responsibility for monitoring behaviors and medication was assumed by the patient's husband after psychoeducation was performed by the psychiatrist. Additionally, tools like telehealth have improved overall access to specialty care such as psychiatry, especially for those in rural areas [3].

**Discussion and Conclusion:** Although the patient does not receive ongoing telehealth services, coordination of care with her husband and more frequent visits to the office have proven successful in her health. In order to achieve the goal of reducing overall hospitalizations, it is imperative to coordinate and individualize the care of patients who require a network of supportive services.

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**APPA 2024 Spring Meeting Student/Resident Poster Presentation**

**Abstract: 24-1-18**

**Title:** Navigating the Interplay of Antidepressants and Inherited Hyperbilirubinemia in a Clinical Landscape

**Presenting Author:** Lauren Usrey, MS3, UABHSOM

**Additional Author(s):** Kaysie Freer, MS3, Clinton Martin, MD

**Introduction/Background:** Inherited hyperbilirubinemia conditions are a group of genetic disorders affecting bilirubin metabolism that present a unique challenge in medical management. These conditions often result in transient jaundice and other mild clinical manifestations, but have further clinical nuance regarding drug metabolism. While the genetic basis of these disorders is well-established, the interplay between inherited hyperbilirubinemias and psychotropic medication-induced exacerbation is a less-explored area.

Mirtazapine and trazodone are antidepressants extensively metabolized in the liver, primarily through the cytochrome P450 system (CYP1A2, CYP2D6, CYP3A4). Inherited hyperbilirubinemia conditions affect enzyme activity, such as the CYP450 system, and thus can result in altered breakdown of both bilirubin and psychotropic medications. This interplay, coupled with the competition for shared metabolic pathways in the liver, can lead to an accumulation of both bilirubin and pharmaceutical byproducts resulting in exacerbated jaundice and medication adverse effects.

The focus of this case report is to highlight trazodone and mirtazapine as specific psychotropic medications that may exacerbate hyperbilirubinemia in affected individuals.

**Description:** A 16 year old male with depression, anxiety, and insomnia presented to the Emergency Department with one week of decreased appetite, nausea, and scleral icterus. He had been taking trazodone for insomnia for 1.5 weeks and mirtazapine for depression and appetite stimulation for two months. His CMP was notable for Total Bilirubin of 1.9 and mildly elevated albumin. Non-reactive hepatitis panel, normal coagulation studies, CBC, lipase, and GGT further ruled out alternate etiologies. Upon discontinuation of both mirtazapine and trazodone, the patient experienced moderate symptom resolution.

**Discussion and Conclusion:** Psychotropic medications frequently influence liver function and drug metabolism, posing potential risks for individuals with inherited hyperbilirubinemia conditions. In this case, the presence of jaundice, isolated hyperbilirubinemia, and normal liver function tests suggested an inherited intrahepatic disorder, though further laboratory testing is needed to make a definitive diagnosis. The temporal relationship between symptom onset and medication intake, along with the resolution upon discontinuation, strongly implicate trazodone and/or mirtazapine as potential triggers for this presentation. This case report seeks to shed light on the interplay between antidepressants and inherited hyperbilirubinemia conditions, advocating for safer and more tailored approaches in clinical management.

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