ALABAMA PSYCHIATRIC PHYSICIANS ASSOCIATION
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APPA 2021 Spring Meeting Medical Student/Resident Poster Presentation

Abstract 21-1-01

Title: Medical and Psychiatric Management of Prader-Willi Syndrome

Authors: Kelly Chen MS3, Clinton Martin MD, Janaki Nimmagadda MD, Anapuma Yedla MD. UABSOM Huntsville Campus, Department of Psychiatry, University of Alabama at Birmingham School of Medicine.

Introduction: Prader-Willi Syndrome (PWS) is a rare neurodevelopmental disorder which occurs in roughly 1 in 22000 births (1). PWS is caused by abnormal parent-specific imprinting within the Prader-Willi critical region 15q13 on chromosome 15 (2). Most cases of PWS are due to loss of a segment of the paternal chromosome 15 (2). Children with PWS have more severe affective and somatic problems compared to controls (2). Management of PWS requires multidisciplinary care.

Case Presentation: The patient is a 19 yo Caucasian male with PWS, moderate intellectual disability, Generalized Anxiety Disorder, Impulse control disorder, Major Depressive Disorder and with comorbid diabetes. He presented with increasing apathy, tantrums, and nightmares over a several month period. During this time, his mother noted his lack of regular scheduled extracurricular activities due to disruption from the COVID-19 pandemic. He was currently treated with Fluoxetine 60 mg daily, Oxcarbazepine 300 mg twice a day, Lithium 600 mg twice a day, Bupropion XL 300 mg daily, Metformin 2000 mg daily, NovoLog 36 mg daily, and Lantus 33 mg daily. His height was 183 cm and his weight was 152 kg with a BMI of 45, indicating morbid obesity.

Discussion: PWS is a complex medical disorder with an array of somatic and behavioral problems. PWS presents in infancy as hypotonia and failure to thrive. The most common affective disorders in patients with PWS are Major depressive disorder and Bipolar disorder. Children with PWS also classically have cognitive delay. Most strikingly, defects in satiety leads to obsession with food, hyperphagia, and obesity, with the latter contributing to the development of obstructive sleep apnea (4, 5). Endocrine conditions include hypogonadism leading to sex hormone deficiency and impaired sexual development and growth hormone deficiency leading to short stature, osteoporosis or scoliosis from deficient calcium intake (5). Life expectancy of a patient with PWS depends on obesity and comorbidities. Medical supervision becomes increasingly important after age 40. (3) This case highlights the need for long-term multidisciplinary care including a comprehensive psychiatric assessment in patients with PWS.

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ALABAMA PSYCHIATRIC PHYSICIANS ASSOCIATION
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APPA 2021 Spring Meeting Medical Student/Resident Poster Presentation

Abstract 21-1-02

Title: Risperdal-Induced Neutropenia: a case report

Authors: Annie Herren, MD; Clinton Martin, MD

Introduction: Adverse reactions to antipsychotics are commonly known to include metabolic syndrome, tardive dyskinesia, anticholingeric effects, and QTc prolongation.[1] Neutropenia is a lesser-known adverse reaction that can occur with antipsychotic medication use, as well as with carbamazepine, procainamide, methimazole, and sulfasalazine[2]. Agranulocytosis, which represents the severe, life-threatening form of neutropenia, is rare at an incidence of about 7 cases per million people per year[3]. Neutropenia can be seen in up to 1 in 30 patients on clozapine, and close monitoring of CBC is required for prescription[4], however other antipsychotics may not be often recognized as causes of neutropenia by primary care providers. This case report presents evidence that long-term antipsychotic use should be considered in the differential for otherwise unexplained neutropenia, and it encourages providers to monitor CBC on all patients undergoing antipsychotic therapy.

Case presentation: A 33-year-old man with a history of intellectual disability, ADHD, psychosis, and impulse control disorder, as well as type 2 diabetes mellitus who presented to UAB Family Medicine to establish primary care, as well as UAB Psychiatry for medication management. He had no complaints or recent illness, and he recently moved from a group home to his mother's home. He was noted to have lost about 30lbs over the preceding 6 months. Of note, patient had been stable on Risperdal, methylphenidate, and guanfacine for many years. No records were available. Upon routine lab work, it he was found to have a low white blood count of 2.5 x 10^3/µL (normal range 3.4-10.8). Peripheral smear was done showing absolute neutrophil count of 0.7 x10^3/µL (range 1.4-7.0). Reticulocyte count, ESR, and CRP were reassuring. Discussion between his primary care provider and psychiatry was held, and it was determined that Risperdal may be a cause of his neutropenia. This was tapered off over 1 month, and he was changed to aripiprazole. Subsequent neutrophil count showed improvement to 1.7x10^3/µL after only 1 week, then returned to normal at 2.0x10^3/µL after 3 weeks. WBC at this time was also normal at 3.6$10^3$/µL. He did well on aripiprazole and his weight stabilized.

Impact/Discussion: The highest risk of neutropenia occurs when first initiating drug therapy, but as shown in this case, it is possible for neutropenia to occur after long-term therapy. This patient's baseline neutrophil count was unfortunately unknown. Due to his quick return to normal after cessation of Risperdal, it is reasonably assumed the drop was due to Risperdal itself. Additional research needs to be done to determine the impact of antipsychotics on blood dyscrasias with chronic therapy. We recommend primary care providers and psychiatrists participate in an interdisciplinary approach to monitoring complete blood counts and to consider antipsychotic use during the evaluation for neutropenia.

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APPA 2021 Spring Meeting Medical Student/Resident Poster Presentation

Abstract 21-1-03

Title: Psychiatric Comorbidities in Narcolepsy

Authors: James Pate MS3; Nandan Patel MS3; Janaki Nimmagadda MD

Case Presentation: A thirteen-year-old morbidly obese African American female came in for a consultation for ADHD, depression, and anxiety. On assessment, she was initially diagnosed with anxiety/depression and treated with Fluoxetine. However, her symptoms did not resolve and were persistent after three months of treatment. After more evaluation, the patient revealed cataplexic symptoms and excessive daytime sleepiness which subsequently led to the diagnosis of narcolepsy. Following initiation of Modafinil, the patient's anxiety and depressive symptoms showed significant positive improvements.

Summary: Two primary theories have been proposed to explain increased association between narcolepsy and depression. The first theory states that cognitive and social difficulties faced by patients with narcolepsy ultimately lead to depression. For example, hypersomnolence affects cognitive, social, and familial functioning. These struggles significantly disturb quality of life and may subsequently cause depression. However, the second theory proposes that deficiency in orexin, commonly seen in patients with narcolepsy, also causes depression. Orexin-A neurons have been shown in preclinical studies to be involved in regulation of several physiologic processes such as arousal, motivation, stress response, and cognitive processes, all of which are disturbed in depression.

Discussion: As seen in reported data, comorbid psychiatric disorders are more common in narcolepsy compared to the general population. Significant overlap in symptomatology may exist between narcolepsy and psychiatric disorders (Fig-1). Consequently, it may be difficult to differentiate between narcolepsy and depression in clinical settings. The relationship between psychiatric disorders and narcolepsy is multifactorial, with narcolepsy mimicking a psychiatric disorder as well as potentially causing one. Proper diagnosis of narcolepsy and appropriate management of comorbid psychiatric diagnosis has immense potential to improve patient satisfaction, quality of life, and performance. As a result, practitioners should always entertain diagnosis of narcolepsy in patients who are presenting with depression and hypersomnolence.

Medication management, psychological testing, individual and family counseling are important components of a treatment plan for these patients. Children may also need special accommodations at school to help optimize learning environments in order to reach full potential.

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APPA 2021 Spring Meeting Medical Student/Resident Poster Presentation

Abstract 21-1-04

Title: Neuropsychological Associations of Turner Syndrome

Authors: Bethany Kennedy MS3, Rahul Gaini MS3, Janaki Nimmagadda MD

Learning Objectives

- Patients with Turner syndrome (TS) should be evaluated for associated neuropsychological complications.
- The prevalence of ADHD and other psychiatric conditions is increased in patients with TS.

Introduction: Turner syndrome (TS) is a rare neurodevelopmental disorder which occurs in approximately one in 2500 live-born females. This genetically inherited condition is typically caused by either meiotic or mitotic chromosomal nondisjunction. TS affects a variety of organ systems. While the cardiovascular, renal and orthopedic symptoms pose the largest health risks overall, the infertility and altered physical appearance can contribute to self-image problems and increased rates of depression.

Case Presentation: A 7-year-old female patient with a history of Turner syndrome, and learning disability presents with behavioral problems at home and at school in the form of inattention, hyperactivity, disobedience, and throwing fits when frustrated. She is in Kindergarten for the second time, due to failure to meet academic milestones last year. She has an Individualized Education Program (IEP) at school and was recently evaluated for learning disability. At home she has difficulty completing tasks when asked, and at school she distracts others, has trouble staying focused on assignments, and often leaves her desk without permission. On exam the patient shows signs of Attention Deficit Hyperactivity disorder (ADHD) including the inability to remain seated, and trouble focusing on the conversation. Her responses were often tangential or unrelated to the questions asked.

Discussion: Patients with Turner syndrome are at an increased risk for difficulties with visual-spatial reasoning and memory, executive functioning, and attention. Particularly, an 18-fold increase in prevalence of ADHD was found in girls with TS (24%) compared with girls in the general population (1.3%). Girls with TS seem to have an increased risk for the Hyperactive/Impulsive subtype of ADHD, which is otherwise more prevalent in males with ADHD than females. TS can also increase the risk of specific learning disability, especially in mathematics. Other psychological hardships of higher prevalence in TS patients include anxiety, depression, and social difficulties.

Given the number of associated complications in Turner syndrome, management requires multidisciplinary care and collaborative efforts across various specialties. Patients with Turner syndrome should be evaluated for neuropsychological comorbidities including ADHD, learning disability, anxiety and depression. It is imperative that psychiatric conditions not be ignored in patients with TS as they can be exacerbated by their physical conditions and can further deteriorate quality of life.

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APPA 2021 Spring Meeting Medical Student/Resident Poster Presentation

Abstract 21-1-05

Title: Tianeptine: a street drug with severe opiate-like withdrawal leading to suicidal ideation

Authors: Azim Merchant, Michelle Massey, Tarak Vasavada, MD

Learning Objectives:

1. Recognize the signs and severity of Tianeptine withdrawal in two patients.
2. Differentiate between withdrawal symptoms of Tianeptine and traditional opioids.

Introduction: Tianeptine is considered an atypical antidepressant that exerts its effects via antagonism of mu and delta-opioid receptors, and may increase dopamine release. Some literature has shown that Tianeptine also modulates NDMA and AMPA receptors, while other studies have reported no measurable affinity for these receptors. This medication is closely regulated in various regions including Latin America and Europe but has not been approved for prescription usage in the United States. Due to the lack of regulations along with the loss of the drug's patent in 2012, Tianeptine has been available over the counter, online, and in many gas stations where it is marketed as "Tianna", "Tiamex" and "Zaza". In this paper, we discuss two patients who presented to the hospital with suicidal ideations associated with Tianeptine withdrawal.

Case 1:
A 37-year-old male with a PMH of depression and substance abuse of over 15 years presented to the ED due to suicidal ideation (SI) for one week, with plans to overdose on heroin. He had a history of one previous suicide attempt 5 years ago via Clonazepam overdose. The patient acknowledged overwhelming thoughts of fear and depression but denied self-harm or any psychotic symptoms. On mental status examination, he appeared slightly unkempt with decreased eye contact, psychomotor retardation, and depressed mood and affect.

Patient was recently kicked out of halfway house due to abuse of an over the counter "Tianna capsule". The patient stated he had been taking these pills on and off for 3 years, with daily usage over the past three months. He reported starting out taking 5 pills per day and progressed to 30-35 pills per day. The patient described the effects of Tianeptine as "similar to an opiate high", in which he feels carefree, has a sense of euphoria, and experiences improved sleep. He reported craving Tianeptine more than any other drug including heroin. He described his withdrawal symptoms as depression, body aches, insomnia, and restless legs, then he, later on, began experiencing gastrointestinal dysfunction including vomiting, diarrhea, and decreased appetite. He endorsed experiencing visual hallucinations in which he could view and interact with a hologram projection of his cell phone while closing his eyes.

The patient was started on Buprenorphine 0.3 mg tid for 3 days along with Baclofen 10 tid for 3 days. This regimen improved his symptoms significantly, and he was referred to an outpatient substance abuse program and discharged from the hospital after 4 days. He was given a prescription for venlafaxine 75 mg daily along with Quetiapine 100 mg qhs.

Case 2:
A 23-year-old male with a past medical history of substance abuse, anxiety, and depression presented to the emergency department with suicidal ideations with thoughts of cutting his wrists or obtaining a gun. He denied homicidal ideations or any other symptoms of psychosis. On mental status examination, he appeared slightly unkempt with decreased eye contact, psychomotor retardation, and depressed mood and affect. He reported consuming 12 ounces of vodka earlier in the day and lab results revealed a blood alcohol level of 277mg/dL.

The patient reported he has been struggling with substance abuse for the past three years, and recently started using Tianeptine about three months ago. He first learned of this drug while in recovery and was able to purchase Tianeptine from local gas stations. The first time he used Tianeptine, he took 3 pills and experienced feelings of euphoria lasting approximately 30-60 minutes. He described a sense of warmth and calmness, similar to taking an opioid, but the effects were much shorter acting. After about one week of daily use, he built up a tolerance and was taking about 15 pills every morning with effects lasting up to 2-3 hours. One week prior to admission, the patient stopped taking Tianeptine due to financial limitations and began experiencing withdrawal symptoms within 36 hours. Symptoms included intense muscle aches, an overwhelming sense of depression, rhinorrhea, nausea, and insomnia with associated restless legs.

The patient was started on Buprenorphine 0.3mg tid for 4 days, Baclofen 10 mg tid for 4 days, and Gabapentin 300mg TID for 3 days. By day four, there was a noticeable improvement in symptoms and the patient was discharged from the hospital with an outpatient psychiatric referral. He was prescribed Quetiapine 100mg qhs, venlafaxine 75 mg tid, and vortioxetine 10 mg daily.

Discussion: Tianeptine withdrawal should be suspected in patients presenting with opiate withdrawal symptoms with a negative urine drug screen for opiates. Severe depression, restless legs, and visual hallucinations may be additional symptoms of Tianeptine withdrawal compared to opioids. This could be due to the increase in dopamine release that occurs with Tianeptine administration, plausibly resulting in decreased dopamine during withdrawal. Many patients may be taking Tianeptine over the counter without realizing its addictive nature, so it is important to identify and educate patients about the risks associated with Tianeptine use.

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APPA 2021 Spring Meeting Medical Student/Resident Poster Presentation

Abstract 21-1-06

Title: Systematic review investigating the relationship between autism spectrum disorder and metabolic dysfunction

Authors: Angela Y. Chieh, MPH; Bianca M Bryant, MS; Jung Won Kim, MD; Li Li, MD, PhD

Background: Comorbidities associated with autism spectrum disorder (ASD), such as obesity, hypertension and dyslipidemia, relate to result in significant morbidity and mortality. It is important to understand what roles metabolic dysfunction play in altering metabolic homeostasis that result in comorbid disease. The objective of this systematic review is to examine metabolic dysfunction, specifically metabolic syndrome and its components, as well as type 2 diabetes mellitus (T2DM) as it relates to individuals with a diagnosis of ASD.

Method: We searched PubMed, Embase, Cochrane, PsychInfo, and Scopus from January 1, 1998 to October 12, 2018 for English, peer-reviewed, original articles containing adult and pediatric populations with any form of ASD and metabolic dysfunction, including T2DM, hyperglycemia, hypertension, dyslipidemia, or central obesity. Exclusion criteria included studies without ASD-specific results, basic science research, review papers, case studies, and medication clinical trials. Eight studies were included in this review, with a total of 70,503 participants with ASD and 2,281,891 in comparison groups.

Results: Within ASD populations, higher prevalence for metabolic syndrome components hyperglycemia, hypertension, and dyslipidemia were observed, as well as increased incidence and prevalence of T2DM. However, heterogeneity of study definitions and measurements should be noted. Potential mediators or moderators include age, sex, atypical antipsychotic use, and other comorbidities. The relationship between ASD and metabolic syndrome as a diagnosis or abdominal obesity has is unknown.

Conclusion: While there is evidence of increased prevalence of T2DM, hyperglycemia, hypertension, and dyslipidemia for those with ASD, the relationship is poorly understood. There is also lack of research investigating central obesity and risk of metabolic syndrome as a diagnosis. More research addressing these gaps is warranted to evaluate the risk of metabolic dysfunction in populations with ASD.

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ALABAMA PSYCHIATRIC PHYSICIANS ASSOCIATION
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APPA 2021 Spring Meeting Medical Student/Resident Poster Presentation

Abstract 21-1-07

Title: A Case Report on Conversion Disorder: An Unusual Presentation of an Unusual Disorder

Authors: Chris Roberts, MS3; Alexandru Ghilezan, DO; Lori Lowthert, MD

Summary: Conversion disorder, or functional neurological symptom disorder, is usually characterized by a broad range of neurological symptoms, which most commonly include blindness, paralysis, or impaired sensation, without an identifiable neurological or medical cause. The pathogenesis of conversion disorder is still largely unknown today[1,2]. However, patients with conversion disorder may have increased rates of a history of trauma, abuse, or comorbid psychiatric diseases[1,2,7]. Since conversion disorder can present with a wide variety of symptoms, its diagnosis and treatment is often difficult and presents an interesting challenge for clinicians[3–6].

Here we present the case of a 27-year-old female patient, with a past medical history of schizophrenia and borderline personality disorder, who was admitted to an inpatient psychiatric hospital. During the hospital course, the patient began displaying periodic, involuntary abnormal movements and vocalizations which were precipitated by acute stress. Episodes included uncontrollable arm movements, such as flailing her arms or hitting herself in the face, as well as involuntary screaming and yelling. Although patient had been diagnosed with other psychiatric disorders, over time she became more focused and concerned about diagnosing these episodic incidents that she believed to be a tic disorder which would prevent her from being discharged.

Conversion disorder is a relatively rare diagnosis thus making it a challenging condition for clinicians. Additionally, this patient is noteworthy as she had an atypical presentation due to her uncommon symptoms which presented secondary to psychological stressors. Given the patient's anxiety about her episodes was improved once she was informed of her diagnosis this case illustrates the importance of a proper diagnosis and tactful conversation with patient about it.

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ALABAMA PSYCHIATRIC PHYSICIANS ASSOCIATION
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APPA 2021 Spring Meeting Medical Student/Resident Poster Presentation

Abstract 21-1-08

Title: Psychogenic Polydipsia in a Patient with a Mood Disorder and Borderline Intellectual Functioning – A case series.

Authors: Hannah Tramontano OMS3; Mohamed Jasser, DO; Lori Lowthert, MD

Summary: A 42 year old Caucasian female presented for inpatient psychiatric hospitalization with reported altered mental status, paranoia and bizarre behaviors possibly secondary to persistent hyponatremia due to psychogenic polydipsia. Patient was a previously high functioning, intelligent student who had been suffering from a slow decline in functioning since her early 20s. Previous treatments revolved around depressive episodes, a personality disorder, and PTSD. Of note patient underwent Neuropsychiatric testing that revealed patient had borderline intellectual functioning which stood out due to her history as an honor student and even completing college courses prior to her decline in functioning. It was concluded that the patient likely had been suffering from episodes of mania and hypomania that led to her having delusional thought content with concurrent episodes of hyponatremia and psychogenic polydipsia. Because this had been occurring chronically for over 20 years she likely suffered a subsequent brain injury which led to her decline in intellectual functioning. We present this series as a study of the multifactorial etiology that needs to be considered when a patient presents with psychogenic polydipsia and mood symptoms.

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ALABAMA PSYCHIATRIC PHYSICIANS ASSOCIATION
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APPA 2021 Spring Meeting Medical Student/Resident Poster Presentation

Abstract 21-1-10

Title: Gender Dysphoria in Adolesence

Authors: Adam Bashir, Janaki Nimmagadda

Introduction: Assigned gender is the gender a person has at birth. Affirmed gender is the gender by which one wishes to be known. A transgender person identifies with a different gender than their assigned gender. Gender dysphoria is psychological distress that results from an incongruence between one's sex assigned at birth and one's gender identity. Adolescents experiencing gender dysphoria do not typically disclose this at regular doctor's appointments. Adolescents with gender dysphoria often present with anxiety/depressive traits, mood disorder, decline in academic performance or school truancy. The increasing prevalence of gender dysphoria in adolescents increases the importance of identifying it early. Social transitioning is a change to an affirmed gender that typically includes name, pronoun, and clothing changes. Gender-affirming care has been shown to improve the mental health of those experiencing gender dysphoria. By providing support with social transitioning, primary care providers can support adolescents with gender dysphoria thereby decreasing their risk of suicidality, substance abuse, and other negative outcomes.

Case Report: The patient is a 11-year-old adolescent assigned female at birth who presents to the psychiatry clinic as a new patient for evaluation of mood swings and irritability after a screening PHQ-A revealed a score of 18 at recent PCP visit. The patient has no known previous psychiatric history and takes no medications. Of primary concern to the patient and parent was minute-to-minute mood swings associated with distractibility, irritability, and dysphoria but no paranoia or hallucinations. The patient feels their mood swings are exacerbated by stress associated with transitioning to virtual schooling but that they have a solid support system of friends online and in school. Of note, throughout the interview the patient's mother frequently encouraged her to share her secret but the patient consistently refused. At the end of the interview, upon the patient's mother prompting, the patient revealed that they wish to be a boy and wish to identify with a different name. They also report that they have not identified as a girl since the age of 6. At the end of the interview, the patient's desired name was recorded. The patient reported significant relief after sharing their new gender identity with the care team. On mental status examination, the patient appeared neatly dressed in male clothing with normal speech. Eye contact and motor activity was normal. The patient was guarded with normal range of affect.

Discussion: Identifying adolescents and children with gender dysphoria is crucial to their care, as their depressive/anxious symptoms may be a symptom of their dysphoria. Gender dysphoria may exacerbate underlying mental health problems. Stigmatization may present an obstacle to social transitioning that interferes with an individual identifying as their affirmed gender. Primary care providers are often the first to encounter patients with gender dysphoria. As such, they have a unique role in providing gender-affirming care. Including preferred name and pronoun on a regular doctor's office intake form is one easy way of making them feel comfortable. This may in turn help them open up to their care team about gender identity. Adding their preferred name in the chart can help the care team consistently refer to

them with that name. Asking a patient how they would like to be called and referred to can make a huge difference especially if they are ambivalent about social transitioning.

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ALABAMA PSYCHIATRIC PHYSICIANS ASSOCIATION
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APPA 2021 Spring Meeting Medical Student/Resident Poster Presentation

Abstract 21-1-11

Title: A Case of Clozapine-associated Myoclonus and Seizure, in a patient with schizoaffective disorder

Authors: Dominique Moreno DO; Conor Cronin DO; Lori Lowthert MD

Summary: Clozapine is an atypical antipsychotic that is indicated for partially or fully treatment-resistant schizophrenia or schizoaffective disorder.[1] Clozapine is arguably the most efficacious treatment option for treatment-resistant cases; however, this medication is associated with a wide variety of serious side effects including agranulocytosis[2], myocarditis[3], decreased GI motility[4], and hypersalivation[5], among others.

With this presentation, we will discuss a case of a 34-year-old female patient with clozapine-associated myoclonus and seizures. This patient carried a past medical history of schizoaffective disorder, bipolar type and an unspecified seizure disorder. She had been trialed on various antipsychotic regimens in the past, including changes in route, dose, and medication. With these trials, she experienced only mild improvement of psychotic symptoms, but continued to have persistent auditory hallucinations, delusions, and prominent negative symptoms.

Prior treatment records displayed no previous trial of clozapine. After consideration of the increased risk of seizure versus potential improvement in psychotic symptoms, a trial of clozapine was agreed upon. Over the course of approximately 10 weeks, clozapine was slowly titrated with simultaneous tapering of other daily antipsychotics. With this medication titration and change, aforementioned side effects began to arise. This case report will further discuss this titration of clozapine, patient's seizure presentation, and the eventual treatment regimen that resulted in optimal control of seizure activity and schizoaffective disorder.

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APPA 2021 Spring Meeting Medical Student/Resident Poster Presentation

Abstract 21-1-12

Title: Analyzing Benefit vs Harm in Managing Clinically Significant Hyperprolactinemia in Patient with Treatment Resistant Schizophrenia

Authors: Sarah E. Bignault MS3; Mohamed T. Jasser DO; Candace Perry MD

Introduction: Prolactin is a hormone released from the anterior pituitary that is involved in the functioning of the reproductive, endocrine, and metabolic systems. It is synthesized and secreted by lactotrophs in response to steroids, peptides, and neurotransmitters. Inhibitory regulation is managed by dopamine binding to D2 receptors on the membranes of these cells. Antipsychotic medications remove this regulation by blocking D2 receptors, leading to potential hyperprolactinemia through uncontrolled secretion (2). Hyperprolactinemia can be asymptomatic but can also have long term consequences including amenorrhea, galactorrhea, gynecomastia, infertility, and osteoporosis (3). According to literature, if a patient has symptomatic hyperprolactinemia, the medication should be reduced in dose and serum prolactin should be remeasured after three days (6). If this is unsuccessful, a dopamine agonist such as bromocriptine can be added, or the medication should be switched to a prolactin sparing drug, such as aripiprazole or clozapine (5).

Case presentation: 40 year old woman with schizophrenia and clinically significant hyperprolactinemia in context of pituitary macroadenoma and treatment with long acting paliperidone for whom the risks of treatment of her elevated prolactin were assessed by a multi-specialty team (psychiatry, endocrinology, and neurosurgery) were assessed to be higher than interval monitoring.

Discussion: This case highlights the analysis of risks versus benefits and the treatment approach that needs to be considered when approaching medication management when the potentially detrimental long term effects to a patient due to treatment can be significant/ when psychosis is severe and refractory to most medication regimens, it is important to consider the potential harm in decreasing the dose, switching the drug, or adding a dopamine agonist compared to the symptoms from hyperprolactinemia. Additionally, it is important to recognize that medications may not be the sole cause of hyperprolactinemia and evaluation for other etiologies may be necessary for selected patients.

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APPA 2021 Spring Meeting Medical Student/Resident Poster Presentation

Abstract 21-1-13

Title: Multiple Sclerosis Manifesting as Psychosis: A Case Report

Authors: Peter Lee, MD; Darshana Pai, MD; Candace Perry, MD

Introduction: Patients with multiple sclerosis (MS) are reported to be 2-3 times more likely to suffer from psychosis compared to the general population[1]. However, there is limited body of research dedicated to MS induced psychosis in part due to MS being a relatively uncommon medical condition. We describe a case of a young female who presented with recurrent psychotic episodes who had neurological evaluations which revealed a diagnosis of multiple sclerosis.

Case presentation: A 21-year-old female presented to the regional psychiatric hospital due to sudden worsening of her psychosis. Her medical history is significant for first break psychosis around 2 years ago as well as a diagnosis of non-epileptiform seizures around that time as well. Of note, a CT scan of the head without contrast was done around that time which was unrevealing. The patient was seen at outpatient clinic 2 months ago when she presented with a relapse of psychotic symptoms presumably due to non-compliance with treatment. She was diagnosed with schizophreniform disorder and was started on olanzapine 5 mg and titrated upwards to 7.5 mg QHS as she showed favorable response to it in the past. The patient showed partial response to treatment with olanzapine and continues to have residual auditory hallucinations, ideas of reference, and disorganization, although, the symptoms decreased in severity.

Following this, the patient decompensated and had an episode of lost consciousness, odd hand movements, bizarre behavior, and worsening auditory hallucinations. She presented to the inpatient psychiatric facility with frank psychotic symptoms such as disorganization, psychomotor retardation, auditory visual hallucinations, disorientation. The patient was switched from olanzapine to aripiprazole due to the side effect of weight gain. Few days after admission, she had seizure like activity as she was found slumped in a chair with her teeth chattering and body trembling. She was transferred to the regional medical hospital where an EEG was done which displayed non epileptiform seizure activity. However, a CT scan of the head without contrast was done which displayed white matter lesions concerning for a demyelinating disease which was confirmed with MRI (periventricular and subcortical white matter lesions perpendicular to corpus callosum, right frontal lobe subcortical white matter lesion, and another lesion in the left parieto-occipital lobe), and it was determined that patient was having an active multiple sclerosis flare.

Discussion: Multiple sclerosis is a disease process that can cause psychiatric symptoms such as depression, anxiety, and sleep inpairment[2]. In this case, patient's non-epileptiform seizures as well as psychosis can be explained by multiple sclerosis. We postulate that the first CT scan 2 years ago did not detect MS lesions as it is less accurate compared to an MRI[3]. We also postulate that she may have been suffering from an active MS flare during her first psychotic episode because she presented similarly as she impulsivity was running into the middle of the highway and presented to the ED with paranoia, significant disorganization, and a month later, pseudoseizures. This case illustrates an example of psychosis secondary to an uncommon medical, neurological condition. It also exemplifies the importance of ruling out potential organic causes of psychiatric symptoms, especially with appropriate imaging. This case is distinct in that she presented with psychotic symptoms in her 20's right around the age of onset of psychotic illnesses like schizophrenia and bipolar disorder. Although, this patient did not

have any medical history suggestive of underlying neurological illness, this case poses a clinical challenge to consider a medical condition presenting with psychiatric manifestations.

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APPA 2021 Spring Meeting Medical Student/Resident Poster Presentation

Abstract 21-1-14

Title: Burnout and Depression Among Residents And Faculty in a Single Academic Medical Institution– A Pilot Study

Authors: Manasa Enja MD[#]; Rosebella Capio MS*; Inmaculada B. Aban, PhD[*]; Irena Bukelis MD[#]

Introduction: Burnout is defined as a long term, unresolvable job stress leading to feelings of exhaustion, overwhelm, cynicism, detachment from job and a lack in sense of personal accomplishment. Medscape National Physician Burnout surveys over the last 3 years have shown greater than 40% physicians reporting burnout. It is a well-established problem among physicians and health care professionals which can have a negative impact on themselves(anxiety/depression/suicide) as well as possible interference in patient care. Although there are several studies nationwide on burnout among physicians, there is a scarcity of studies that investigated the association between physician burnout and depression. Here we investigate this association in our study population and compare to see if this association changes by groups of interest.

Methods: Maslach Burnout Inventory (MBI) and Quick Inventory of Depressive Symptomatology – Self Report (QIDS-SR) was used to assess burnout and depression respectively among faculty and trainees in two departments (N =181 including Psychiatry and Pediatrics) at the University of Alabama in Birmingham. The three subscale scores of MBI (emotional exhaustion, depersonalization, and personal accomplishment) and QIDS-SR scores are being analyzed between different levels of training vs faculty, age groups, race, gender, marital status, and specialty. MBI instrument is used to assess burnout as a continuum (low to high) rather than a cut off score. Whereas QIDS-SR scores are categorized from no depression to very severe depression.

Results: Current analysis is ongoing. Preliminary findings using Pearson correlation indicate positive correlation between total and average emotional exhaustion and depersonalization scores and each of them are negatively correlated with personal accomplishment scores ($p<0.0001$). Further analyses would include investigating how the association between level of burnout and depression among physicians compare at different levels of training vs faculty, age groups, race, gender, marital status, and specialty etc. The results from these analyses will be presented.

Conclusions: Although a well-known problem among health care professionals, burnout among physicians is challenging to acknowledge and address appropriately for various system related reasons. Creating a better understanding of the interrelationships among the measures can provide more awareness among physician community which may help identify burnout early, seek help, and prevent serious downstream effects such as anxiety, depression, and physician suicide.

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APPA 2021 Spring Meeting Medical Student/Resident Poster Presentation

Abstract 21-1-15

Title: Serotonin Toxicity and Reactive Attachment Disorder, a Case Study.

Authors: Mohamed Jasser D.O., Jeffrey Tisch D.O., Sandra Parker M.D.

Summary: Serotonin syndrome is a potentially lethal medication induced condition that is associated with the use of medications that increase serotonergic activity, most often antidepressant medications. The clinical features of serotonin syndrome can vary widely, thus early identification and intervention is critical to reduce mortality rates.

The case described here is a 16-year-old male, with a past psychiatric history of oppositional defiant disorder and reactive attachment disorder, who was transferred to the hospital for a higher level of care following a suicide attempt via overdose. Prior to arriving to hospital, the patient was intubated and showed signs concerning for possible serotonin syndrome. The patient's primary team was informed by his mother that the patient had recently overdosed on a one week supply of Abilify, Lamictal, Singular, and Zoloft. The patient reportedly began to feel "bad" and was taken to the ED emergently for evaluation. On initial presentation, the patient was alert and responsive. However, soon after the patient's condition became dire and he decompensated and required life saving interventions. We use this case to highlight the various important features of serotonin toxicity including early signs and considerations that should be recognized in an emergency setting.

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APPA 2021 Spring Meeting Medical Student/Resident Poster Presentation

Abstract 21-1-16

Title: Gender "Euphoria": Somatic Delusions versus Gender Dysphoria in Patient with Schizophrenia

Authors: Conor Cronin D.O., Candace Lyn Perry M.D.

Summary: We will present the case of a 37-year-old cisgender male with a history of schizophrenia and unspecified tic disorder with somatic delusions regarding his genitalia who had previously been referred for gender affirming therapy including consideration of hormonal and surgical interventions.

The patient was admitted to our inpatient adult hospital for evaluation and stabilization after concerns from family for acute decompensation of his schizophrenia after he had discontinued medication and therapy through his previous treatment setting. Of note, the patient denied having a gender identity incongruent with his gender assigned at birth. He exhibited paranoid delusions, disorganized thinking, and acute agitation, and per family, the patient had been noncompliant with medication because he feared his "medications are causing a sex change." During the initial weeks of his admission, he remained extremely resistant to evaluation and treatment, and he was very guarded about his past and his history of mental illness. Outside records indicated past treatment for schizophrenia including somatic delusions that his internal and external sexual characteristics were being manipulated by malignant external forces including a computer with some changes being intermittent while others were progressive and permanent, such as development of a uterus, change of his penis into a clitoris, and development of a vagina from his scrotum. He reportedly expressed concern about these changes including the belief that if he "completed the transition" that his tic disorder would be cured. Records indicated a high degree of distress related to these delusions and he was hospitalized at another facility. Upon that admission, he expressed the chief compliant of "gender euphoria" and was referred for gender affirming treatment including psychotherapy and referral to ob-gyn to discuss hormonal therapy and gender affirming surgery upon discharge from that hospital. While awaiting evaluation, he began purchasing hormone therapy products online. At time of his evaluation by gynecology, the patient expressed belief that his gender identity was male (congruent with sex assigned at birth), denied a desire to be a different gender, and denied a desire to be rid of primary and secondary sex characteristics and maintained his belief that he had developed a uterus and vagina due to malignant external forces. The evaluating gynecologist identified that the patient did not meet criteria for gender dysphoria and recommended further stabilization of the patient's schizophrenia; the patient declined further treatment and terminated all medical and psychiatric treatment leading to his eventual decompensation and admission to our service.

During his treatment at our hospital, an appropriate antipsychotic regimen was started with prolactin sparing medication (lurasidone), and the patient's psychotic symptoms eventually began to improve, although he remained guarded with questionable reliability. Throughout the admission he continued to verbalize a male gender identity and continually denied any changes to his male anatomy, either in the present or the past. He had been compliant with medication for several weeks by time of discharge and denied any concerns about them causing changes to his body.

Discussion: Signs and complaints consistent with gender dysphoria or somatic delusions involving the genitals are relatively common in patients with schizophrenia, with some studies suggesting up to 20-25% of patients (Borras, 2007; Stusiński, 2018). These occurrences may stem from a patient's genuine, established concerns about their gender and sexual identities, from a delusional process and/or hallucinations during periods of inadequate control of psychotic symptoms, or they may exist, to some degree, under both scenarios simultaneously. Clearly identifying the context of gender dysphoria complaints can be a diagnostic challenge in patients with schizophrenia (Meijer, 2017). In general, it is important to adequately address concerns of gender dysphoria in all patients who express incongruence between their expressed gender and the gender that has been socially assigned to them. It is equally important to contextualize these complaints in patients exhibiting psychotic symptoms as certain therapies might do more harm than good if the complaints stem solely from a delusional or hallucinatory process. Complaints that include changes in primary or secondary sex characteristics concurrent with periods of active delusions or hallucinations, might be helpful in making this distinction, especially when they can be verified by physical exam. Patient interpretations of "changes" in sexual anatomy must also be considered given that certain adverse effects (gynecomastia, for example) possible with many antipsychotics might easily be interpreted in this way. Some form of delusions involving changes of sex or sexual organs may persist even after an acute psychotic exacerbation abates (Borras, 2007). Even with confirmation of expected anatomy on physical exam, it is important to consider comorbid gender dysphoria in psychotic patients with these complaints, although quality data on this is limited as actively psychotic patients are typically excluded from research studies. Investigation into onset and timing of gender dysphoria relative to the presence of psychotic symptoms may be particularly important when evaluating patients without complaints of actual anatomic change. Full understanding of these complaints may not be possible until resolution of psychotic symptoms.

Treatments such as gender-affirming therapy are generally not recommended during periods of active psychosis or without thorough observation and evaluation to help clarify understanding of the origin of the patient's gender-based concerns (Byne 2018). Inappropriate use of these treatments increases the risk of unrealistic expectations from treatment, future regret, and potential harm to patients (Meijer, 2017).

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