At enrollment, patients in the untreated vs treated group, respectively, had a mean PD duration of 8.05 vs 10.23 years, mean duration of PDP features of 2.20 vs 3.10 yrs, and had a PDP diagnosis for a mean of 1.42 vs 2.16 yrs. Most patients in the untreated group (n=221, 77%) received no antipsychotics through follow-up. The groups were balanced in terms of age (mean 73.9 vs 73.4 yrs) and sex (65.1% vs 63.1% male). The untreated group had higher rates of hypertension (44.5% vs 36.8%) and diabetes (12.8% vs 8.8%); however, the treated group had higher rates of depression (25.6% vs 41.3%) and anxiety (22.8% vs 26.9%). The percent change from baseline at 12 months in total psychosis, hallucination, and delusion scores for the untreated group showed greater worsening than the treated group: 32.3% vs 29.3%; 29.3 % vs 25.0%; and 29.3 % vs 25.0%, respectively, as did daytime sleepiness scores (51.6% vs 40.8%). Measures of PD severity (non-motor and motor MDS-UPDRS scores) and health-related quality of life showed less worsening for the untreated group vs treated group at 12 months. Caregiver burden (per the ZBI) was lower in the untreated group vs the treated group (81.5% vs 90.0%).

Conclusions. In this descriptive analysis, untreated patients had shorter duration of PD, fewer PDP symptoms at baseline, and lower rates of mental health comorbidities vs treated patients. The untreated PDP patients had greater worsening in their psychosis and sleepiness scores at 12 months versus the treated group, yet remained untreated. Future studies are needed to better understand clinicians' rationale for withholding PDP treatment.

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Study Outcomes Among Patients with Parkinson's Disease Treated for Psychosis Residing in the Long-Term Care Setting and Newly Initiating Pimavanserin or Off-Label Atypical Antipsychotics

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Abstract

Introduction. Psychosis is a common feature of Parkinson's Disease (PD), with an estimated 50% of PD patients experiencing psychosis (i.e., hallucinations [H] or delusions [D]) at some time during the course of their illness. Pimavanserin (PIM) is the only medication approved in the US for the treatment of H&D associated with Parkinson's disease psychosis (PDP); however, off-label atypical antipsychotics (AAP) are continuously used. Currently, there are very few real-world studies which evaluate the patient characteristics and clinical outcomes among PD patients residing in the long-term care (LTC) setting within the US, newly initiated on PIM or other AAPs to treat psychosis.

Methods. A national LTC database consisting of diagnoses (DX), pharmacy orders (RX), and EHR data linked with the Minimum Data Set (MDS) was used to identify PD patients with a PD DX and 1 PD RX from 01/01/2017 to 09/30/2021 retrospectively. Patient groups were created: PIM group (patients with a PIM RX); AAP group (patients with an AAP RX [and no PIM RX]); and no treatment (No Tx) group (no PIM or AAP RX). All patients were required to have at least 100 days in LTC to be labelled as a resident (≤7 days between discharge and admission were included as LTC stay). Psychosis diagnosis was required at any time for the AAP and No Tx groups. Other medical causes of psychosis beyond PD were not excluded. The index dates were the first RX identified during the study time period for the PIM and AAP groups; and the psychosis DX date for the No Tx group. Incident treatment patients were defined as having no history of PIM or AAP in the 6 months prior to the index date. Patient/clinical characteristics, treatment patterns, and study outcomes were reported using means (SD) and frequencies during the post index period.

Results. There were: PIM group (N=3,120; N=870 incident), AAP group (N=5,880; N=2,396 incident), and No Tx group (N=1,802). The PIM and AAP groups had an average of 415 days and 383 days between the admitting date and the date of RX. The mean age among all groups was 76–77 years and 48–50% were female. PIM group patients were observed to be sicker with higher rates of concomitant dementia, depression, diabetes, and hypertension versus the AAP group or No Tx group. Initial treatments in the AAP group were mostly quetiapine (49%), risperidone (21%), or olanzapine (12%). The descriptive analysis during the 6 months post index showed the outcomes for the incident AAP group to have: higher proportion of falls and aggression events; higher incidence of new DX (physical changes, anxiety disorders, cognitive decline, insomnia, depression, and anticholinergic effects); and higher proportion of new medication orders (anticonvulsants, antidepressants, and benzodiazepines) compared with the incident PIM group.

Conclusions. In this descriptive LTC retrospective analysis, incident PIM patients were shown to have better outcomes versus the AAP group. These findings are subject to study limitations.

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Hyperammonemia and First-Degree Atrio-Ventricular Block in Adult Male from Valproic Acid Toxicity

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Abstract

Introduction. The purpose of this case study is to review the clinical presentation and medical work of an adult male who experienced symptomatic hyperammonemia and first-degree atrio-ventricular block in the setting of valproic acid toxicity.

Method. This case involves a 28-year-old African American male with a past psychiatric history of bipolar 1 disorder with psychotic

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features, antisocial personality disorder, PTSD, and ASD, who was psychiatrically hospitalized for mania and psychosis at a large midwestern university hospital. At the time of evaluation in the emergency department, the patient endorsed suicidal ideation, religious/persecutory delusions, and auditory hallucinations of demons. Zyprexa Zydis was started and titrated to 20 mg every 12 hours, which did not sufficiently improve symptoms. Depakote EC/DR 1000 mg every 12 hours was then added for treatment of mania. Approximately 1 week later, the patient was observed to be somnolent and complained of malaise, nausea, and vomiting.

Results. Labs were collected which showed an elevated ammonia level of 336 umol/L and free valproic acid level of 13.3 mcg/ml. An EKG was performed which showed first-degree atrio-ventricular block with fusion complexes. The patient's baseline EKG displayed sinus bradycardia with no evidence of atrio-ventricular block. The patient's CMP was unremarkable except total bilirubin of 1.5 mg/dL and glucose of 104 mg/dL. His lactate was elevated at 1.95 mmol/L. The patient's troponin and CRP were unremarkable. The patient was medically transferred for management of hyperammonemia and EKG changes. Depakote was discontinued and lactulose 20 g TID was initiated. Patient was placed on telemetry and the first-degree atrio-ventricular block resolved within 24 hours after discontinuation of Depakote. Daily ammonia level, chem 7, and magnesium were collected. Ammonia decreased to 79 and 59 umol/L on consecutive days. Sodium was mildly elevated at 144 on day 2 of medical admission. Poison control was contacted and L-carnitine 990 TID was started for suspected carnitine deficiency. The patient medically recovered after several days and was readmitted to the psychiatric hospital for further psychiatric management.

Conclusions. The patient's presentation of hyperammonemia and first-degree atrio-ventricular block were likely due to valproic acid toxicity. We suspect that carnitine deficiency contributed to the patient's valproic acid toxicity at lower-than-expected blood levels. Although antipsychotics can cause prolonged QTc interval, conduction disorders are not typical abnormalities. Caution should be taken when prescribing Depakote to individuals at higher risk of developing toxicity, including those with potential nutritional deficiencies as well as those with limited self-advocacy abilities secondary to psychiatric illness. Rapid identification of side effects, such as valproic acid toxicity, remain crucial for favorable patient outcomes.

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Stimulant Use for ADHD in a Cardiac Transplant Recipient: A Case Report

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Abstract

Introduction. Methylphenidate is a central nervous system stimulant used as first-line treatment for attention-deficit/hyperactivity disorder (ADHD). CNS stimulant use is associated with increased risk of cardiovascular events such as increased resting heart rate and blood pressure, sudden cardiac death, arrhythmia, and stroke. Its safety profile in recipients of cardiovascular transplants is unknown, and more research is warranted to determine the risk of adverse cardiac events due to stimulant medication in this population.

Methods. Clinical case report, n=1

Results/Clinical Case. A 19-year-old female with a history of restrictive cardiomyopathy, cardiac arrest, and orthotopic cardiac transplant has been treated with methylphenidate for ADHD for approximately 2 years without incident. The patient was diagnosed with ADHD between the ages of 8 and 10 and historically was treated with stimulant medication. At age 13, she experienced a cardiac arrest after a volleyball game with 4–6 minutes of pulselessness. She was successfully resuscitated and underwent defibrillator placement. It was concluded that the patient had restrictive cardiomyopathy undetected at birth, leading to the need for orthotopic cardiac transplantation at age 16. After her cardiac arrest, the patient's memory and cognition worsened, and approximately 1 year after her transplant, she was prescribed amantadine. The patient remained untreated for her ADHD until approximately 1.5 years after her cardiac transplant, at which time she underwent neuropsychological testing that showed findings consistent with attention deficit disorder, and was restarted on stimulant medication. Her transplant cardiologist and psychiatrist have collaborated in her ongoing treatment with methylphenidate 40 mg daily and monitoring symptom response and cardiac stability. Because the patient had previously been stable on stimulant medication for many years, it is reasonable to conclude that stimulant medication did not lead to her cardiac arrest. The patient reports that methylphenidate has been helpful in improving her functioning as a college student, through reduction of her ADHD symptoms. The patient's blood pressure and heart rate remain within an acceptable range and she has not experienced any adverse cardiac events to date while taking methylphenidate.

Conclusion. This case sheds light on the potential to treat cardiac transplant recipients with stimulant medication for ADHD. Although a careful evaluation of risk factors must be undertaken in cooperation with cardiology and other specialists, a role exists for the safe use of stimulant medications in the cardiac transplant population.

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Cariprazine for the Adjunctive Treatment of Major Depressive Disorder: Results of a Randomized Phase 3 Placebo-Controlled Study (Study 301)

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