



## APPA 2018 Fall Meeting Resident Poster Presentation

### Abstract 18-2-01

**Title:** Stable, Low-Dose Quetiapine Causing Neuroleptic Malignant Syndrome in an Elderly Patient

**Authors:** Garrett Dunn, MS3; Tarak Vasavada, MD

**Summary:** The incidence of neuroleptic malignant syndrome is 0.02 to 0.03 percent in patients taking dopamine antagonist, with the vast majority of cases reported with use of high-potency, first-generation antipsychotics, and few in patients on atypical antipsychotics, such as quetiapine, and even fewer with patients on low doses of these medications. This is a case of a 72-year-old man on a 50mg daily dose of quetiapine, as well as multiple serotonergic medications, who presented with symptoms and history suggestive of both NMS and serotonin syndrome, ultimately diagnosed with NMS. The goal of this case is to raise awareness of NMS in patients taking these newer, atypical antipsychotics, as early recognition and supportive treatment is key in reducing mortality.

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## Abstract 18-2-02

**Title:** "Mood disorder treatment makes you urinate"- A case of lithium induced nephrogenic diabetes insipidus

**Authors:** F. D. Zaunklay; R. D. Smalligan; K. Moody

### Summary:

#### Objectives

- 1: Review why Lithium is a risk factor for Nephrogenic Diabetes Insipidus (NDI)
- 2: Evaluation of treatment options for Lithium Induced Nephrogenic Diabetes Insipidus (LINDI)

**Case:** A 57 yo female presents one month after dental surgery on antibiotics with stomatitis. She returned to the dentist who treated her with Magic mouthwash, nystatin, and fluconazole. The patient did not improve on medication and was having weight loss due to decreased oral intake, one protein drink/day. She was brought to the hospital and treated with IV fluids. She was admitted for AKI and elevated lithium levels. PMHx: includes CKD stage 2, and bipolar. PSHx: includes parathyroidectomy. Medications: Allopurinol, vitamin D, colchicine, fluconazole, folic acid, lithium, lorazepam, and pericalcitol. PE: temperature 98.6, HR 81, BP 125/62, RR 18, saturation 96% on RA. Emaciated appearing, anxious and intermittently confused, shallow lip ulcers. Labs: sodium 141, potassium 3.1, chloride 102, CO<sub>2</sub> 26, BUN 31, creatinine 2.3, glucose, 91, calcium 9.7, lithium 1.94 (normal 0.6-1.2 mmol/L), WBC 31.24, h/h 12.3/38.9, PLT 385000, u/a: leukocytes and bacteria. Imaging: CXR showed no findings. Labs the following day urine sodium- 23, urine osmolality- 167, and serum sodium- 160. Lithium was stopped. She was treated with fluid replacement, DDVAP, amiloride, and HCTZ.

**Discussion:** Lithium is used widely for the treatment of bipolar and other mood disorders. Great care must be used with lithium as it can have many side effects. One of the many side effects is NDI. When the levels of lithium rise, the molecules enter the principal cells of the collecting ducts in the kidneys via sodium transport channels on the luminal surface. Once lithium enters the principal cells it causes decreased expression of aquaporin-2 water channels (AQP2). Studies have suggested increased expression of cyclooxygenase-2 causes increased expression of prostaglandin-E2 which increases apoptosis of the AQP2 channels. Others have shown distal tubular acidification defects or decreased production of cAMP lead to NDI. Regardless of the many proposed mechanisms known to cause NDI, treatment is necessary. NDI is the decreased ability of the kidneys to concentrate urine. This causes an increase in solute concentration within serum and stimulation of thirst, leading to polyuria and polydipsia. NDI can cause electrolyte imbalances which can be corrected. Most LINDI can be corrected with the following treatments and stopping lithium. Treatment should start with IV fluids to maintain a fluid balance in the body. Then additional treatment approaches such as a low solute and low protein diet, thiazide with/without potassium sparing diuretic, acetazolamide, NSAIDs, or exogenous ADH can be given. It is advised to use thiazides with a potassium sparing diuretics, such as amiloride, to treat lithium-induced NDI. Amiloride decreases the uptake of lithium into the principal cells of the collecting duct. This case reminds physicians that patients on lithium therapy should have lithium levels checked when starting, changing dose, and with renal impairment to prevent complications such as NDI.

**Resources:**

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## Abstract 18-2-03

**Title:** Panic attacks, an Ominous Sign of Pheochromocytoma

**Authors:** Johnston, Samuel, MS3; Vasavada, Tarak, MD

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**Summary:** Panic attacks are spontaneous episodes of intense fear that last for several minutes to an hour. Research proposes the pathogenesis of a panic attack with a neuroanatomical model involving a hyperexcitable amygdala and hypothalamus which excessively stimulates: release of norepinephrine, adrenal gland secretions, and increased respirations. The medical workup for panic attacks includes substance use, myocardial infarction, pulmonary embolus, but rarely pheochromocytoma. Pheochromocytoma is a tumor of the chromaffin cells of the adrenal medulla that secretes catecholamines and commonly manifests as episodic headaches, sweating, tachycardia, and hypertension and can imitate recurrent panic attacks. The incidence is rare (0.8 per 100,000) but one case series review suggested 50% of pheochromocytomas are not diagnosed until autopsy.

Here we present a case of a young female with history of panic attacks and anxiety, who was admitted to the hospital with severe sepsis, acute respiratory failure, acute kidney injury, and metabolic acidosis with DKA. Initial labs found patient to be hypoxic, acidotic with leukocytosis and the patient decompensated with need for intubation. After complaints of diffuse abdominal pain, MRI was done which showed a right adrenal mass. Labs for urine and plasma metanephrines were obtained and the patient was diagnosed with pheochromocytoma. This case reminds physicians to be vigilant and expand the workup of panic attacks so as to not miss a dangerous diagnosis.

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## Abstract 18-2-04

**Title:** Overdose without the Dose: A Case Study of Patient Handoff in Psychiatry

**Authors:** Lauren Chastain, MS4, Shyla Hossain, MA, MS2, Shanthi Gatla, MD, W. Bogan Brooks, MD

**Summary:** Communication is a crucial part of patient safety, yet information that should be conveyed during handoffs between providers is often incomplete, untimely, or misunderstood. These errors lead to poorer patient outcomes and comprise a significant number of malpractice lawsuits. We reviewed the records of a 62-year-old female whose psychiatric diagnosis and treatment changed multiple times over the course of five months while transferring from hospital care to an inpatient facility and ultimately to outpatient services. We found that records of her care were not adequately shared throughout the numerous transfers, which ultimately raised questions about her prior diagnoses, treatments, and effects on her well-being. Research regarding patient handoff has been published for almost a decade, yet no inter- or intra-disciplinary structure has been standardized. A review of literature on patient handoffs presented several strategies that have been shown to effectively reducing medical errors, resulting in better patient care and safer practices. Our patient was a prime example of the consequences of inadequate patient handoff both inside and outside of networked facilities including misdiagnoses, incorrect medication treatment, and significant impact to mental, physical, and financial well-being of the patient. We believe these negative outcomes may have been prevented by more effective patient handoff practices between the departments of a hospital as well as communication between hospitals on different networks.

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## Abstract 18-2-05

**Title:** Psychiatric management of psychogenic and epileptic seizures

**Authors:** Destini A. Smith BS, Tina Jackson MD, Sandra Parker MD

**Summary:** Psychogenic nonepileptic seizures, formerly called pseudo-seizures, resemble epileptic seizures in clinical presentation but lack the characteristic EEG changes seen in epileptic seizures and have a psychological etiology. Specifically, the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-V) categorizes psychogenic seizures with conversion disorder, where psychological distress precipitates symptoms similar to those of a generalized tonic-clonic seizure. It was once believed that patients with epilepsy could be clearly distinguished from those with psychogenic nonepileptic seizures. However, research indicates that anywhere from 3.5% to 58% of patients with psychogenic nonepileptic seizures also have epileptic seizures. While epilepsy can be managed with antiepileptics, treatment of pure psychogenic seizures with antiepileptics can place patients at risk for adverse effects related to the pharmacotherapy. Therefore, it is important to indicate the psychiatrist's role in the management of seizures, especially patients who present with both psychogenic and epileptic seizures. Here, we distinguish between epileptic and nonepileptic seizures and present current research regarding the psychiatric management of both.

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## Abstract 18-2-06

**Title:** Cost Analysis of Implementing Contraception in a Medication Assisted Treatment (MAT) Facility in Mobile, AL

**Authors:** Tina Jackson, MD, PGY2, University of South Alabama (USA) Psychiatry Department; Lindsey Stewart, MD, PGY2, USA Psychiatry; Adam Ali, MD, PGY2, USA Psychiatry; Peyman Tashkandi, DO, PGY2, USA Psychiatry; Marianne Saitz, DO, Altapointe Health Systems.

**Introduction:** After noting several women reporting to the MAT facility with unplanned pregnancies, clinicians began to explore the possibility of offering contraception on-site in order to increase access to services. Exploration of this concept included a literature review, a survey of current MAT participants to evaluate interest and a cost analysis.

**Purpose:** To determine possible implications of offering contraceptives at the MAT clinic from a cost perspective.

**Methods:** Literature review; previous survey conducted at MAT in Mobile, AL.

**Results:** Providing contraception on-site at the MAT facility has the potential to have a significant cost benefit.

**Discussion/Conclusions:** The most common reported barrier to contraceptive use was convenience. National statistics correlated with findings in Mobile that women in MAT are more likely to have unintended pregnancy than the general population. Participants indicated interest in having contraceptive options available in the same location as their addiction treatment. Reported costs of care for an infant with neonatal abstinence syndrome compared to a non-affected infant are significantly greater. Reducing the unintended pregnancy rate in the population at the MAT clinic by a small amount has the potential to have a profound economic impact. Many articles have advocated for an integrated approach to contraceptive health and addiction treatment. A pilot program to offer contraception at the Mobile location is currently under way.

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