

alarm cats as warning for imminent seizures is warranted.

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My Inner Blizzard: Effect of Weather on Multiple Sclerosis Exacerbation

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ABSTRACT: Study Objective: Exacerbation of Multiple Sclerosis (MS) symptoms prior to weather change has not heretofore been described.

METHODS: Case Study: A 60 year old right handed female with lifelong anxiety and four years of depression presented with a 20 year history of MS manifested by bilateral lower extremity pain and weakness and urinary incontinence. Since the onset, she observed that approaching storms or weather changes cause her symptoms to worsen. This manifests one day prior to the meteorological shifts of rain or snow. This occurs whether she is at home or on vacation and unlike the weatherman, “she is never wrong.” The aggravation of symptomatology would consist of worsening leg pain and weakness of both lower extremities so that her functional status changes from using a cane to a wheelchair. These symptoms begin one day prior to the storm and gradually worsen to the point of maximum intensity as the storm arrives. The baseline pain is usually 5/10 in severity but with the storm it increases to 8/10. The pain, which progressively worsens as the storm advances, is a vice-like numbness in her shins and spasm in her legs. The pain and weakness will persist for as long as the storm lasts. The pain diminishes and the motor symptoms improve six hours after the storm is over. She can differentiate approaching snow or rain such that snow causes more intense symptoms. She denies change in symptomatology on airplanes or when she is present at high altitude such as Las Vegas or Colorado. She also affirms that her symptoms are worse when she is in a hot tub and better in a cold-water bath. She reports that there is a family history of similar ability to predict the weather in a cousin and nephew, both who also suffer from MS.

RESULTS: Abnormalities in Neurological Examination: BP 159/115. Pulse 100. Mental Status Examination: disheveled. Depressed mood with congruent affect. Short-term

memory: 5 digits forwards, 2 digits backwards. Recent memory: able to recall none of 4 objects in 3 minutes without improvement with reinforcement. Unable to interpret similarities or proverbs. Poor ability to calculate. Reflexes: 3+ bilateral lower extremities. Clock Drawing Test: 1 (abnormal).

CONCLUSIONS: Uhthoff's phenomena (hot bath test) is well described in MS (Humm, 2004), however the worsening of symptoms prior to weather change has not been reported. Possible mechanisms include meteorological induced anxiety and depression with associated exacerbation (Ackerman, 1998). Other possible mechanisms include misattribution, selective recall, or a misreporting due to psychological needs for acceptance by examiner, similar to the Hawthorne effect (observer effect) (Adair, 1984). With the approaching storms there could be a change in internal temperature, which then preferentially affects areas of demyelination (Kudo, 2014). It is worth querying those with epoch associated neurological disorders as to linkage with meteorological events.

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Dronabinol-Induced Hypomania: A Case Report and Literature Review

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ABSTRACT: Purpose: Present a case of dronabinol-induced hypomania.

BACKGROUND: Dronabinol is a synthetic derivative of cannabis that is commonly prescribed for chemotherapy-induced nausea and vomiting or cachexia due to HIV/AIDS. The safety in those with bipolar disorder warrants further investigation as previous studies suggest that the use of cannabis may be associated with exacerbation of manic symptoms. The risk of developing manic symptoms in patients with bipolar disorder who use dronabinol is largely unknown. Clinical Case: A 55-year-old Caucasian male, following with psychiatry since July of 2016 for substance use disorder (alcohol, cocaine and cannabis), bipolar I disorder, generalized anxiety, PTSD, and intermittent sleep disturbances, was prescribed dronabinol 2.5 mg twice daily on 5/19/17 to treat wasting syndrome and significant weight loss due to underlying HIV. He has been abstinent from alcohol,

tobacco, and illicit substances for more than a year. The patient's relevant medication list includes: bupropion XL 150 mg daily, quetiapine 300 mg daily at bedtime, and trazodone 50–100 mg at bedtime. At psychiatrist visit on 7/10/17, his bipolar disorder was noted to be stable. But, after his dose of dronabinol was increased on 7/21/17 to 5mg twice daily, the patient presented to psychiatrist on 8/1/2017 in a state of hypomania, with symptoms including: increased interest in sex, insomnia and increased animation. His judgment and impulse control were slightly impaired. Excluding the dronabinol dose increase, no other medication changes had taken place and the patient was not using alcohol or other substances. Quetiapine was discontinued and olanzapine 10 mg at bedtime was started. Bupropion was discontinued, trazodone was tapered off, and dronabinol was discontinued. Upon follow up within a month, our patient's hypomania symptoms resolved. He was also gaining weight with the olanzapine and reported improved sleep. He was continued on olanzapine 10 mg at bedtime and continued off the trazodone, bupropion

and dronabinol. He continues to remain abstinent from alcohol and illicit drugs.

DISCUSSION: The underlying mechanism of dronabinol-induced manic symptoms in those with bipolar disorder remains unclear but may involve dopamine. Sensitization of the dopaminergic system by THC is thought to be associated with the development of manic symptoms in those that use cannabis. THC is associated with increased dopaminergic cell firing, dopamine synthesis, and dopamine release when used acutely.

Other medications associated with causing manic symptoms include bupropion and trazodone, as relevant to our case. However, our patient was stable on these medications before the addition of dronabinol. Thus, it is reasonable to conclude that the dronabinol likely caused our patient's hypomania symptoms.

CONCLUSION: This case emphasizes the need to evaluate mental health conditions before prescribing cannabis derivatives such as dronabinol.