Screening for Dextromethorphan Abuse in First-Break Psychosis

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Disclosures

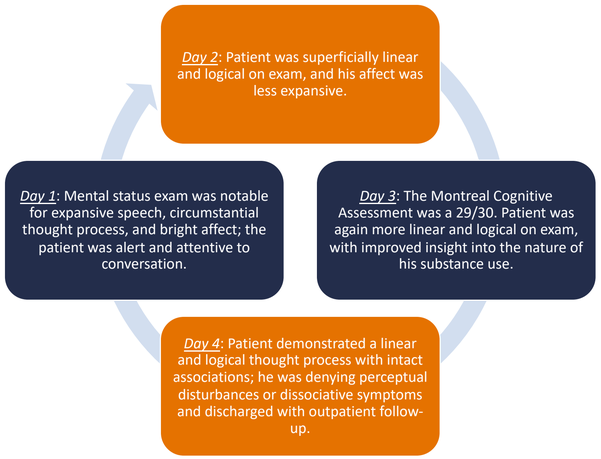
- Dr. Klein has nothing to disclose.
- Dr. Stewart is a PI on a Janssen Pharmaceutical multi-site trial looking at a novel treatment for Major Depressive Disorder. The University of Virginia Research Department receives the research funding and manages the funds.

Background

- Dextromethorphan is an over-the-counter cough suppressant that has high potential for abuse given its dose-dependent hallucinogenic and dissociative effects (Martinak, 2017).
- When consumed in excess, dextromethorphan can cause euphoria, hallucinations, dissociation, confusion, and disorientation (Ritter, 2020).

Case Presentation

- Mr. "B" is a 44-year-old male with a past psychiatric history of alcohol use disorder and opioid use disorder and past medical history of non-Hodgkin's lymphoma (in remission) and chronic sinusitis who was admitted to the Epilepsy Monitoring Unit (EMU) for spell capture.
- Spells were characterized by feelings of euphoria, depersonalization, derealization, mood lability, and racing thoughts; some also consisted of motor symptoms (e.g., stiffening, convulsions).
- Previously treated with levetiracetam 1500 mg BID, but this medication was held during admission.
- The patient was found to be tachycardic on admission, but labs, imaging, and EEG findings were unremarkable. Neurologic exam demonstrated no abnormalities.



Evaluation by Consult-Liaison Psychiatry Team

- Psychiatry was consulted for diagnostic clarification.
- Further collateral demonstrated that the patient originally started using dextromethorphan for relief of his chronic sinusitis, but that his use escalated when he discovered its euphoric effects. His symptoms would improve and recur with dextromethorphan use.
- Given his age, psychiatric history, and relation between his "spells" and excessive dextromethorphan ingestion (up to 1422 mg/day), his symptoms were determined to be substance induced. We discussed Naltrexone for dextromethorphan dependence given its success in preventing relapse, though therapeutic options remain understudied (Miller, 2005).

Discussion

- This is a patient with past psychiatric history of alcohol and opioid use disorders presenting with a six-month history of acute-onset mood and psychotic symptoms in the setting of excessive dextromethorphan use.
- Psychiatrists should consider dextromethorphan abuse in the differential diagnosis for patients presenting with acute-onset psychosis or mood symptoms in the absence of previously diagnosed mood or psychotic disorders.
- Particular emphasis on screening for dextromethorphan abuse should be given to teenagers, young adults, and patients with a known history of opioid use disorder (Martinak, 2017).

Conclusion

- In patients with acute-onset mood or psychotic symptoms and/or intermittent episodes of depersonalization and dissociation, we suggest screening for dextromethorphan abuse, particularly in vulnerable patients with a known history of opioid dependence or concomitant substance use disorders.

References

[1] Martinak, Bridgette, Ramy A. Bolis, Jeffrey Ryne Black, Rachel E. Fargason, and Badari Birur. "Dextromethorphan in Cough Syrup: The Poor Man's Psychosis." *Psychopharmacology Bulletin* 47, no. 4 (September 15, 2017): 59–63.

[2] Miller, Shannon C. "Treatment of Dextromethorphan Dependence with Naltrexone." *Addictive Disorders & Their Treatment* 4, no. 4 (December 2005): 145.

[3] Ritter, Daniel, Lindsey Ouellette, J. D. Sheets, Brad Riley, Bryan Judge, Allison Cook, Justin Houseman, and J. S. Jones. "'Robo-Tripping': Dextromethorphan Toxicity and Abuse." *The American Journal of Emergency Medicine* 38, no. 4 (April 1, 2020): 839–41.