

ABSTRACT: Psychiatric-spectrum symptoms associated with thyrotoxicosis has been well reported in the past. However, psychosis in a patient with a thyroid nodule is a rare find. Here, the case of twenty four-year-old, single, unemployed, Albanian American male with self-reported history of Attention Deficit Disorder (ADD) and Cannabis use disorder was brought in to the Comprehensive Psychiatric Emergency Program (CPEP) due to new onset psychosis. Patient was paranoid, disorganized with labile mood. He had poor insight, judgement and impulse control. The event coincided with a period of unemployment in his life and new onset of hallucinations from past few days. He was brought in to the hospital after he was found pacing and having lack of sleep. Patient was treated with antipsychotic for acute psychosis. He was started on Risperidone initially to which he did not respond to. Blood work showed low TSH and elevated T4. Physical exam was noted for palpable thyroid nodule. Further labs resulted in high thyroid peroxidase antibody. Ultrasound of thyroid with color flow showed single nodule in the left lobe and iodine uptake activity localized to the left lobe. Patient was started on Methimazole 5 mg along with Haldol 5mg orally twice a day which improved his symptoms tremendously. Patient was stabilized and after 1 week was discharged on Haldol 5 mg by mouth two times a day for Psychosis, Cogentin 1 mg by mouth two times a day for extrapyramidal system (EPS), and Methimazole 5 mg by mouth daily for overactive thyroid nodule.

CONCLUSION: Psychosis associated with thyroid nodule is rare but possible. The onset of psychotic syndrome is an important clinical element whose underlying medical cause must be promptly clarified. Psychosis can present in a number of ways and can have different causes. Apart from psychiatric causes, underlying medical causes should always be considered. In this case it was important to get a full clinical history of the patient as well as complete physical examination. The differential diagnosis of a psychotic disorder in light of a medical disease should always be considered in order to promptly diagnose and treat the underlying cause to reduce the morbidity and possibly the mortality associated with it.

110

Implementation of Personalized Medicine in a Community Psychiatry Practice

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OBJECTIVE: To describe the initial results of implementing pharmacogenomics testing in a community-based psychiatry practice and potential impacts on medication management.

METHOD: Retrospective chart review of prospectively maintained medical records of all adult patients with pharmacogenomics results from 9/01/2017 to 6/30/2019 under the care of psychiatrist and clinical pharmacist.

RESULTS: A total of 51 patients met inclusion criteria. A total of 7 pharmacokinetic genes and, due to changes in the test report over time, a range of 6-10 pharmacodynamic genes relevant to psychotropic medications were evaluated per patient. Every patient had genetic variations, with an average of 6.1 per patient (range 3-9; SD=1.5). Patients were taking an average of 3.6 (range 1-8; SD=1.7) psychiatric medications at the time of the genetic test, to treat an average of 5 psychiatric conditions (range 1-9; SD=2.2). An average of 1.2 (range 0-4; SD=1.0) gene-drug interactions were uncovered per patient. Following review by psychiatrist and pharmacist, medication adjustments resulted in patients remaining on an average of 3.6 psychiatric medications, but decreasing the average number of gene-drug interactions per patient to 0.8 (range 0-3, SD=0.8).

DISCUSSION: The large number of genetic variations observed per patient is consistent with previous findings 1-2. The decrease in number of gene-drug interactions following testing demonstrates the practical utility of pharmacogenomics information to guide medication therapy. This study did not examine outcomes such as improvement in psychiatric condition or reduction in medication adverse effects; however, these endpoints have been evaluated in other trials 3-4.

CONCLUSIONS: Pharmacogenomics testing presents an opportunity for a personalized medicine approach in a community-based psychiatry practice.

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