The Incidence and Economic Burden of Extrapyramidal Symptoms in Patients with Schizophrenia Initiating Atypical Antipsychotics in a Commercially Insured Population

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Abstract

Background. Extrapyramidal symptoms (EPS) affect 15% to 30% of patients with schizophrenia treated with antipsychotics and have been associated with poor patient outcomes.
Objectives. To examine the incidence and economic burden of EPS in patients with schizophrenia initiating treatment with atypical antipsychotics (AAPs).
Methods. Patients with schizophrenia newly initiating AAPs with no prior EPS were identified in the MarketScan Commercial and Medicare Supplemental database from January 1, 2012 to December 31, 2018. Incidence of EPS (new diagnosis or medication) was assessed in the year following AAP initiation. Patients were classified as developing (EPS cohort) or not developing (non-EPS cohort) EPS. All-cause and schizophrenia-related healthcare resource use and costs were compared between cohorts over the year following the first EPS claim (EPS) or randomly assigned index date (non-EPS). Multivariate models were developed for total healthcare costs and inpatient admissions.
Results. A total of 3558 patients qualified for the study; 22.1% developed EPS in the year following AAP initiation (incidence: 26.9 cases/100-person-years). Multivariate analyses demonstrated that EPS patients had a 34% higher odds of all-cause (OR:1.3361, 95% CI:1.0770-1.6575, $P < .01$) and 84% increased odds of schizophrenia-related (OR:1.8436, 95% CI:1.0434-2.4219, $P < .0001$) inpatient admissions, as well as significantly higher all-cause (EPS: $26,632 vs non-EPS: $21,273, $P < .001$) and schizophrenia-related (EPS: $9018 vs non-EPS: $4475, $P < .0001$) total costs compared to the non-EPS cohort.
Conclusions. Approximately 20% of patients developed EPS in the year following AAP initiation. The significant increases in healthcare resource utilization and costs in the EPS cohorts highlight the need for treatments that effectively target schizophrenia symptoms while reducing the risk of EPS.
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These Are Not the Droids You Are Looking For: Mechanical Variant of Cotard's Syndrome

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Abstract

Introduction. Cotard's syndrome is a nihilistic delusion where the individual believes they are dead, partly dead, or replaced by an animal. The delusion that their body has been replaced by a purely inanimate azooic (but physical entity), such as a robot or a droid, has not hitherto been described.
Methods. Case study: This 60-year-old, right-handed, female, with a past history of schizophrenia presented with complaints of depression, irritability, and anger. When confronted with commitment papers signed by her father, she denied their truthfulness, insisting that he had been replaced by an imposter. This belief persisted unabated, despite treatment with 20 mg of haloperidol per day. Over time, she expressed the belief that she had been replaced by another person, whom she refused to identify. The following day she refused all food and water proclaiming that she had died and been replaced by a machine revealing, "I am not her. I am a robot." Soon thereafter she developed tremulousness, stiffness, and rigidity. After haloperidol was decreased and benztropine started, these parkinsonism symptoms subsided, but her delusions persisted.
Results. Abnormalities in physical examination: General: decreased blink frequency. Neurologic examination: Mental status examination: bradyphrenia, hypoverbal, blunted affect. Oriented ×2. Motor examination: bradykinetic, cogwheel rigidity in both upper extremities. Gait examination: slow shuffling gait, reduced bilateral arm swing. Cerebellar examination: resting tremor in both upper extremities at 3 cycles per second. Other: EEG: focal sharp transients in the left temporal region. MRI with and without contrast: normal. Toxicological, metabolic, endocrine screening: normal.
Conclusion. This illustrated sequential presentations of three delusions of misidentification. Upon presentation, she exhibited Capgras syndrome, the delusional belief that a familiar person has been replaced by a double. The nidus for this may have been the discovery that her father had signed her commitment papers. This was followed by the belief she was a double of herself, which is the syndrome of Reverse Subjective Doubles. Finally, she manifested Cotard's syndrome in a previously undescribed manner, believing she had died and become a robot. Cotard's and Capgras syndromes are known to present sequentially rather than concurrently, whereas the patient presented concurrently with all three syndromes. Drug-induced parkinsonism may have made the patient subjectively feel stiff, which she interpreted as being rigid like a robot. She was bradykinetic, did not eat or drink, and had rigidity, suggesting that these were somatic manifestations of her underlying delusion of being a robot or alternatively, may have been the somatic nidus for the delusion. Those who present with Cotard's syndrome warrant evaluation for underlying medical conditions, serving as a substrate for this delusion.
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