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Abstracts

Aripiprazole: Examining the Clinical Implications of D2 Affinity

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Abstract

Background. Aripiprazole has high binding affinity for the dopamine D2 receptor, which is thought to be responsible for the antipsychotic effect, though aripiprazole is not the most potent of the second-generation antipsychotics. Theoretically, aripiprazole could displace or outcompete more potent antipsychotics, prompting decreased antipsychotic effect. We describe a case of aripiprazole potentially worsening psychiatric symptoms by blocking paliperidone.

Case. Ms. A is a 43-year-old woman with schizophrenia, multiple inpatient hospitalizations, and a history of court-ordered treatment. She historically has had good response to oral and long-acting formulations of risperidone and paliperidone. Ms. A requested a medication change and was transitioned to aripiprazole lauroxil injection with plan for bimonthly administration. Approximately 1 month after receiving her aripiprazole lauroxil injection, Ms. A presented to our CPEP due to symptoms of psychosis and was admitted to our inpatient unit. She was restarted on oral paliperidone, titrated up to her previously effective dose, and was transitioned to paliperidone palmitate LAI. In contrast to prior admissions, she did not respond well to paliperidone and displayed continued and worsened psychosis.

Discussion. Prior studies have examined how adding aripiprazole to another, more potent D2 antagonist can cause a relapse in psychotic symptoms; however, few studies have investigated the inverse relationship or mechanism. Those that have proposed mechanisms typically refer to aripiprazole's partial agonist activity as the causative factor, rather than an impediment to antipsychotic binding which we have described. Prescribers should be aware of this potential interaction and carefully consider initiating long-acting injectable forms of aripiprazole to avoid this phenomenon.

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Analyzing Demographic Variabilities Associated With Age of Diagnosis of Schizophrenia Among Patients in Controlled Clinical Trials

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Abstract

Background. Prior literature and epidemiological data suggests that the age of diagnosis of schizophrenia (AOD) follows a bimodal and trimodal distribution for males and females, respectively. The studies used to generate these findings were often small and relied on self-reported patient data from a single geographic region in addition to other methodological limitations. We replicated these studies using a modern big data approach by combining raw data from large randomized controlled clinical trials.

Methods. Patient-level data from 15 similarly designed, randomized, double-blind, placebo-controlled, crossover studies with patients using paliperidone extended-release tablets, paliperidone palmitate 1-month, and paliperidone palmitate 3-month, were obtained through the Yale Open Data Access Initiative (YODA). Descriptive statistics and histograms were calculated for continuous variables. A multivariable linear regression was performed with AOD as the outcome variable. Race and sex were used as predictor variables.