

A Child with Severe Choreoathetoid Movements Associated with Multiple Psychotropic Medications

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Background: Psychotropic medications, including stimulants and antipsychotics, are increasingly being used in children for a variety of disorders. Increased use increases the prevalence of adverse drug events (ADEs) and the long-term effects are still largely unknown. Choreoathetoid medication-induced movement disorders are a spectrum of these ADEs. Two causes of choreoathetoid movements in children are tardive dyskinesia (TD) and Withdrawal Emergent Syndrome (WES) and can be difficult to differentiate. TD typically includes orofacial movements and is suspected to be caused by basal ganglia damage. It generally has a worse prognosis while WES is a withdrawal phenomenon and is transient. Diagnosis of both etiologies is clinical.

Hypothesis: Tardive dyskinesia and withdrawal emergent syndrome are possible ADEs caused by psychotropic medications in children and are difficult to differentiate.

Methods: Case Report: A 9-year-old boy with a history of hypertension, hyperactivity, and aggressive/violent behavior presented for agitation, severe choreoathetoid movements, oral dyskinesias, and insomnia. Prescribed medications included risperidone, methylphenidate, labetalol, and clonidine. Recently, his risperidone dose was doubled.

Results: During initial hospitalization, all medications were stopped except for clonidine and labetalol. Benzotropine was initiated with subsequent improvement in symptoms. After restarting methylphenidate, he had worsening of choreoathetosis and he was discharged without methylphenidate.

The patient returned the next evening with worsening of choreoathetoid movements and inability to sleep for 30 hours. Psychiatry and Neurology were consulted and provided contradictory recommendations. Psychiatry diagnosed WES and wished to restart risperidone. Neurology diagnosed TD and recommended starting tetrabenazine, ginkgo biloba, Vitamin E, Vitamin B6 and holding risperidone. The patient was transferred to an outside hospital where risperidone was restarted with subsequent improvement of symptoms, and he was discharged home.

Discussion: We present a complex case of choreoathetosis and oral dyskinesias in a young child on multiple psychotropic medications. Medication-related movement disorders can be difficult to differentiate. TD and WES can both initially improve with the escalation of antipsychotic medications. WES is generally benign, but increasing doses of antipsychotic medications can worsen long-term outcomes in TD.

Conclusion: Medical toxicologists should be aware of these two pediatric movement disorders. A definitive diagnosis may remain unclear.