Methylphenidate Induced Acute Dystonic Reaction

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Received: 24 December 2017 / Accepted: 15 May 2018 / Published online: 23 May 2018
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To the Editor: Dystonia is a neurological movement disorder that may cause patients to visit the pediatric emergency department. It is defined by maintained involuntary muscle contractions, which result in twisting, abnormal, and often repetitive movements and/or postures. It may affect any part of the body, isolated or in various combinations [1].

Attention deficit hyperactivity disorder (ADHD) is a common neurodevelopmental disorder characterized by inattentiveness and hyperactivity/impulsivity. Methylphenidate (MPH) alleviates the ADHD symptoms and is currently considered the first choice medication [2].

A 7-y-old girl was brought by her parents with complaints of hyperactivity, inattentiveness, excessive talking, excitement, and difficulty to remain focused on school-work. She was diagnosed with ADHD according to Diagnostic and Statistical Manual of Mental Disorders, Fifth edition (DSM 5) and was prescribed short-acting immediate-release MPH at a dose of 5 mg twice daily.

After being administered the third dose of MPH, she developed dystonic involuntary movements characterized by turning the neck sideways and by twisted facial muscles. Routine laboratory assessments and magnetic resonance imaging were normal. The patient had no significant history of head trauma, acute/chronic diseases, or susceptibility to intoxication. The patient was diagnosed with MPH-induced acute dystonia. MPH was discontinued,

and she was administered intramuscular biperiden (0.4 mg/kg). Her symptoms reduced within 12 h and entirely resolved after 3 d.

Drug-induced movement disorders are usually associated with antipsychotic drugs. Neuroleptics are the most common cause of dystonia. Among these are the antiemetics that block central dopamine receptors (*i.e.*, droperidol, metoclopramide, and prochlorperazine), lithium, selective serotonin reuptake inhibitors, stimulants, and tricyclic antidepressants [3].

A limited number of cases that developed dystonia after single MPH therapy are presented in the literature [4, 5]. Dystonia due to MPH treatment has generally been reported during combined treatments with antiepileptic and other psychotropic drugs [4]. In one example, Waugh et al. [5] reported transient torticollis and orolingual dyskinesia in a child treated with MPH.

Here we emphasize the need for clinicians to keep in mind that there is a potential risk for the development of dystonic reactions with initial or low doses of MPH as a side effect.

Compliance with Ethical Standards

Conflict of Interest None.

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