Tardive Oculogyric Crisis With Low-Dose Antipsychotic in an Adolescent: A Case Report

To the Editor: Tardive movement disorders are relatively uncommon with second-generation antipsychotics as compared to the first-generation antipsychotics. Also, tardive syndromes in general are rarer as compared to acute movement disorders with antipsychotic use. In this report, the case of a 13-year-old boy who developed tardive oculogyric crisis with low-dose risperidone is described. To my knowledge, this case is the first such reported, although there are previous case reports with adults who were usually on higher antipsychotic doses.

Case report. This 13-year-old boy was diagnosed with ADHD (attention-deficit/hyperactivity disorder) and conduct disorder according to *ICD-10* classification system. Initially, he was started on methylphenidate 5 mg/d and was titrated gradually to 20 mg/d. His ADHD symptoms were reasonably well controlled with medication. His attention span improved, and he was less hyperactive than he had been. However, he continued to exhibit increasingly challenging behaviors including verbal and physical aggression. There were incidents of aggression directed against peers reported from school as well. Emotional modulation and anger management continued to be major concerns. Behavioral interventions were attempted and resulted in limited success. Hence, in a subsequent review, he was started on risperidone 0.50 mg twice a day. Common adverse effects were explained. He responded well to introduction of risperidone as evident by a decrease in frequency of anger outbursts and exclusions at school.

Six months after initiation of risperidone, he started to complain of intermittent up-rolling of eyeballs associated with anxiety, palpitations, and light-headedness. These episodes occurred at a frequency of 2 to 3 times a day. He could voluntarily bring down the eyeballs for a few minutes before they rolled up once again. He was distressed by these episodes, which would typically last around 15 to 30 minutes. He was assessed by his general practitioner who ruled out possible seizure disorder. (An electroencephalogram was carried out, and results were within normal limits.) Subsequently, he was referred to our care.

There was no past history of antipsychotic use or extrapyramidal symptoms. There was no family history of seizure or movement disorders. A provisional diagnosis of tardive oculogyric crisis was made, and the dose of risperidone was reduced to 0.25 mg twice daily (half the original dose). This dosage change was followed by a decrease in frequency of these episodes and a complete cessation of the same within a week. According to Naranjo's algorithm,[1] the drug-related adverse effect can be classified as a "probable" adverse drug reaction (score of 6).

Other recommended treatment strategies include switch to a different antipsychotic, decrease frequency of administration, and use of anticholinergic drugs.[2] Chronic blockade of dopaminergic (D_2, D_3) receptors and 5-hydroxytryptamine-2 ($5\text{-}HT_2$) receptors that are widely distributed in the striatum, modulating dopaminergic neurotransmission, is considered a putative pathophysiologic mechanism for tardive dystonias, including oculogyric crisis.[3] The differential diagnosis includes choreoathetoid dyskinesia, which typically worsens on tapering or omission of the drug.[4] This case report highlights the need for clinicians to be vigilant for the possibility of tardive syndromes even with low-dose antipsychotics, typically used in children and adolescents.

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Sundar Gnanavel, MD[a]
sundar221103@yahoo.com

[a]Child and Adolescent Mental Health Services, Northumberland, Tyne and Wear NHS Foundation Trust, Morpeth, United Kingdom

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