

Ballistic Movements and Psychotic Symptoms due to Methadone Use: A Letter to the Editor

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Dear Editor,

Despite a convincing concordance between choreic signs and neuroradiological findings was possible in four patients only, it was possible to assign an etiology, in most cases, with vascular related causes, as the most frequent metabolic factors of movement disorders. Huntington's disease (HD) is not unusual, as a cause of sporadic choreas (1). The HIV infection is an emerging cause of chorea and AIDS-related disease should be considered, in young patients presenting without a family history of movement disorders. We emphasize the importance of follow-up to identify persistent chorea, for which genetic testing is mandatory. Sporadic chorea has multiple etiologies. The HD is a more common presentation compared to others. The HIV infection (specially, no family history of movement disorders in younger), vascular causes and drugs are not common (2, 3).

A 28-year-old married Iranian woman presented with a 7 day history of involuntary movements of the left-sided unilateral upper and lower extremities, with akathisia, disorganized behavior, amnesia, dystonia and aggressive behaviors. The patient had mild hypertension, sweating, jerk and ballistic movements. The patient did not had other withdrawal symptoms, like nausea, vomiting, considerable tremor, yawning, while the familial history of psychiatric and neurologic disorders were negative. She had a chaotic life and smoked for 3 years already. She had withdrawn of the habit twice, in the past, even though she was unsuccessful. Again, she tried to discontinue opium and general physician started her on 8 mL methadone daily. However, on the next day she had agitation, sweating and involuntary and jerk movements. These movements have rapidly become progressive. The psychotic symptoms had fluctuated. Imaging and laboratory tests were intact. We discontinued methadone and

started opium, with 20% of the previous amount. Other drugs include: Gabapentin 100 mg tablet BID, Chlordiazepoxide 10 mg BID tablet, Biperiden 2 mg BID. However, her stated did not improved the next day. Then, we prescribed tablet. Clonidine 0.2 mg. The next day she was better and psychotic symptoms and involuntary movements were declined. We report this patient as a case with hemichorea, probably caused by opium withdrawal and methadone insufficiency.

We found a case report about a man with methadone maintenance therapy for heroin addiction, that experienced choreatic movements induced by mu-opioid receptor agonist methadone use (4). In this case, chorea is attributed be methadone use. Of course, we believe that withdrawal of opium or replacement of insufficient methadone can induce abnormal movement disorder. Our case had more extensive symptoms, plus ballistic movements.

Movement disorders, characterized by tremor, choreiform movements, and a gait disturbance, probably relate to methadone uncommonly (5). Acute chorea, due to methadone use, will ameliorate after switching to another opioid. Therefore, other mechanisms like non-opioid process are explained (6).

The substances increase dopamine levels of the forebrain via blocking the inhibitory gamma aminobutyric acid interneurons, prone to the ventral tegmental area, that activate the mesocorticolimbic system (7, 8). Therefore, the discontinuation or replacement and unsuitable adjustment with other mu opioid receptor agonists may decrease dopamine level. Consequently, it is not expected to be applicable for hyperkinetic movements and psychotic symptoms. However, our patient showed these two features. Therefore, other etiologies are suspected.

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Authors' Contributions

Reza Bidaki did the study design; data collection; drafting and revision. Pouria Yazdian revised and submitted it.

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