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Lurasidone - Induced Rabbit Syndrome: A Case Report

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To the Editor:

Rabbit Syndrome is an uncommon extrapyramidal symptom occurring in 1.5–4.4% of patients receiving antipsychotics, characterized by fine, rapid, rhythmic perioral muscle movements along the vertical axis resembling chewing motions of a rabbit¹. First described by Villeneuve in 1972², it is traditionally associated with first-generation antipsychotic use. However, case reports have attributed this syndrome to second-generation antipsychotics including risperidone¹ and aripiprazole³. Here, we describe Rabbit Syndrome in a patient receiving lurasidone.

Case Report

31-year-old Caucasian female with a history of major depressive disorder, attention deficit-hyperactivity disorder, developmental delay, and epilepsy was admitted psychiatrically for worsening depression and suicidality. Six months prior to admission, lurasidone was started at 40 mg and titrated to 80 mg for mood stabilization. One month prior to admission, the dose was increased to 120mg and she developed intermittent fine, rhythmic, vertical movements of her lips, bilateral resting hand tremor, and akathisia. The dose was tapered down from 120 to 20 mg over one month prior to admission to address these side effects. However, per clinical assessment during inpatient admission, these movements persisted. There was no involvement of her tongue except for passive, lip-associated secondary movements. Other medications included lamotrigine 100 mg b.i.d., venlafaxine 150 mg/day, ergocalciferol 50,000 IU/week, and omeprazole 40 mg/day. Prior antipsychotic trials included quetiapine and risperidone in the year prior to admission with no recorded history of movement disorders. To reduce these movements and address the exacerbation of her mood symptoms, lurasidone was replaced with olanzapine 2.5 mg b.i.d. Movement symptoms improved in 4–5 days.

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Discussion

This case demonstrates Rabbit Syndrome attributable to lurasidone, a second-generation antipsychotic previously not associated with this reaction. Rabbit Syndrome is differentiated from tardive dyskinesia by its rhythmicity, sparing of the tongue, and lack of irregular choreoathetotic extra-buccal muscle movements⁴. Rabbit Syndrome is a form of *drug-induced parkinsonism; risk for such side effects increases once 80% of nigrostriatal D2 receptors are occupied*⁵. However, Rabbit Syndrome is distinct from other forms of drug-induced parkinsonism as that it is exacerbated by physostigmine, a cholinesterase inhibitor, while tardive dyskinesia improves with physostigmine⁵. This is consistent with the observation that Rabbit Syndrome improves in response to agents with high anticholinergic activity including benztropine, clozapine, and olanzapine¹. Lurasidone has relatively low anticholinergic activity⁶, which may have contributed to the risk for developing Rabbit Syndrome during treatment.

This case serves as an important reminder that uncommon extrapyramidal side effects can occur even with the use of newer second-generation antipsychotic agents such as lurasidone.

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