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Case Report

Long-acting injectables for management of bipolar disorder in cerebral palsy-a case report

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ABSTRACT

Cerebral palsy (CP) is a neurodevelopmental disorder characterized by permanent and non-progressive brain injury, typically associated with motor impairments and epilepsy. Psychiatric manifestations, though prevalent, often remain underrecognized and undertreated in patients with CP. Treatment choices in these individuals are particularly challenging due to their complex clinical presentations and increased vulnerability to medication side effects. While long-acting injectable antipsychotics (LAIAs) are established treatment options for various psychiatric conditions, evidence supporting their use in patients with CP is notably scarce. A 24-years-old patient with spastic quadriplegia presented with complaints of increased energy and grandiosity. She is a known case of bipolar disorder which was diagnosed at the age of 15 after overshadowing of symptoms for a long time. Despite these challenges she remains to be a high functioning adult pursuing college degree and continues participating in physical, occupational, language and speech therapy. In spite of trial of different antipsychotics and mood stabilizers, they failed to stop the cycling of moods. She also mentions unique effects of mood on her muscle spasticity and strength. She was started on Risperidone LAI which helped improve her mood and was apparent on the mental status examination after 2 weeks. This case highlights the promising role of LAIA formulations in psychiatric management of individuals with CP and this represents the first documented use of a LAIA in a CP patient with bipolar disorder. Further longitudinal studies are necessary to substantiate the long-term safety and efficacy of LAIAs in this special patient population.

Keywords: Cerebral palsy, Bipolar disorder, Long acting injectable, Antipsychotic

INTRODUCTION

Cerebral palsy (CP) is a permanent and non-progressive injury to the brain caused in infancy due to ischemia, which can be from various causes. It is commonly associated with movement disorders and can be categorized as spasticity, dyskinesia, ataxia, or mixed/other.[1] CP is frequently linked with movement disorders, but studies suggest that it is also commonly associated with psychiatric manifestations, and bipolar is one of them.[2]

Long-acting injectable forms of antipsychotics have been available in the market for quite some time. Still, the overall attitude seems to be negative towards this treatment modality, which has been suggested due to different reasons, including lack of information, insufficient insurance coverage, fear of liability and perceived stigma, preference to oral antipsychotics in major guidelines and perception of LAIs to be the last resort in non-compliant patients.[3] There seems to be a gap between the perceived disadvantage and the actual situation, and the literature suggests that they are superior

to their oral counterparts.[4] Not only do LAIAs provide improved adherence, but they also serve to be advantageous because of stable pharmacokinetics. Hence, they should be considered in patients where long-term antipsychotic therapy is recommended.[3] Studies also suggest that switching to the LAI instead of classic depot injections is beneficial and can be done safely without many breakthrough symptoms.[5,6]

The literature seems to be more focused on schizophrenia, but some studies support its use for bipolar disorder as well.[7] Although cases have been reported for using antipsychotics in CP, the literature seems to be sparse, and none of them used LAIA.

This is a rare case of CP and co-existing bipolar disorder and its management with Risperidone LAI.

CASE REPORT

A 24-year-old female presented to the clinic with a history of increased energy and grandiosity. She has a known diagnosis of cerebral palsy (spastic quadriplegia type) and bipolar disorder.

Her birth history revealed that she was born prematurely at 28 weeks with low birth weight due to placental rupture. It led to hypoxic changes in the brain, and she was ultimately diagnosed with CP. She received early management of CP with occupational, physical, speech, and language therapy. She also received a trial of Botox therapy for spasticity, which was discontinued after a year due to ineffectiveness.

She was diagnosed with bipolar disorder at 15 years old during her first manic episode. At that time, she initially faced admission refusal at a hospital due to her disability and limited insurance coverage. She was subsequently admitted to another hospital, where she received inpatient treatment, including behavioral and physical therapy, for several months. Upon discharge, she was prescribed oral medications and returned to high school, which proved challenging due to both her disability and the recent loss of a sibling.

She subsequently experienced two more manic episodes, both managed on an outpatient basis, with the latest prompting her current presentation. According to interviews with the patient and her mother, her manic episodes were characterized not only by mood symptoms (increased energy, decreased need for sleep, grandiosity) but also by increased muscle strength and decreased stiffness, evident by her improved ability to rise from a chair and better performance in physical therapy, including walking with the assistance of a robotic exoskeleton. She also reported diffuse muscle aches during these times. She has experienced depressive episodes as well, marked by a sad mood, crying spells, amotivation, and apathy.

On mental status examination at presentation, she appeared well groomed with appropriate clothing and seemed to be the stated age. She was alert, oriented, and attentive. Psychomotor agitation was observed, along with forthcoming responsiveness and appropriate eye contact. Her speech was spontaneous, loud, and rapid. She reported her mood to be “great” and had a euphoric effect with normal variability that was reactive and mood congruent. Her thought process seemed tangential, with loose associations and impaired insight and judgment.

Due to oropharyngeal dysmotility and difficulty swallowing, she was started on Risperidone 75 mg IM (long-acting injectable), along with continuation of her prior medications.

She was seen again after 2 weeks in the clinic and showed improvement in her mood symptoms. She felt much better and reported improvement in sleep as well. Her psychomotor agitation improved, and she felt much calmer with a linear thought process and a logical flow of ideas. Her stiffness also seemed to improve, but she reported restlessness and muscle pain in her area, which she attributed to her inability to lie down for long to rest.

The treatment plan was decided to continue Divaloprex sodium (Depakote sprinkles) 1000 mg PO per day in 2 divided doses, Iloperidone (Fanapt) 2 mg PO, Prazosin HCl 2 mg PO and lithium 8 MEW/5 ML oral solution-10 ml PO. The patient was planned to receive another Risperidone (Uzedy) 75 mg IM after every 30 days.

DISCUSSION

Patients with cerebral palsy face unique challenges, not only in daily living but also in the diagnosis and management of psychiatric comorbidities. Access to appropriate psychiatric care and inpatient facilities can be limited, often due to a lack of resources and the need for specialized support.

In individuals with neurological disabilities like spastic quadriplegia, psychiatric symptoms such as mania or psychosis may be challenging to diagnose and treat. Antipsychotics are the first-line treatment for mania but are frequently associated with motor side effects, including extrapyramidal symptoms and akathisia, which are particularly difficult to manage in patients with pre-existing movement disorders and limited mobility.

In this case, the patient experienced restlessness and muscle pain after starting LAI risperidone, symptoms that may represent akathisia. Management options for such side effects are limited in patients who are wheelchair-bound, as their ability to relieve restlessness through movement is compromised. Although dose reduction or adjunctive therapy (e. g., benzodiazepines or anticholinergics) may be considered, these must be approached cautiously due to the underlying cerebral palsy and associated risks.

Despite these challenges, LAIAs present an important therapeutic option, particularly for patients with difficulties in oral medication adherence, as seen here due to oropharyngeal dysmotility. The evidence base for LAIAs in schizophrenia is well-established and there is emerging support for their use in bipolar disorder.[3.5-7] However, there is a significant gap in the literature regarding their use in patients with cerebral palsy, and no prior reports have documented their use in this population.

CONCLUSION

This case illustrates the need for individualized, multidisciplinary management for patients with co-existing cerebral palsy and psychiatric disorders, as well as the importance of developing guidelines for the use of antipsychotics, especially LAIAs, in individuals with complex physical disabilities. By documenting a previously unreported scenario, this study contributes to a nascent area of clinical literature and underscores the urgent need for further research, tailored guidelines, and multidisciplinary approaches to support informed, safe psychiatric care for individuals with complex neurological disabilities.

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