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Lurasidone Treatment in a Delusional Disorder Patient with Atrial Fibrillation: A Case Report

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Introduction

Delusional Disorder is characterized by the presence of either bizarre or non-bizarre delusions that have persisted for at least one month. The delusions cannot be better accounted for by another disorder, such as schizophrenia or a mood disorder if the mood disturbances have been relatively brief. Who has this disorder generally doesn't experience a marked impairment in their daily functioning in social, occupational, or other important settings. Diagnosis of a specific type of delusional disorder can sometimes be made based on the content of the delusions. The Diagnostic and Statistical Manual of Mental Disorders fifth edition (DSM-5) enumerates seven types: erotomanic, grandiose, jealous, persecutory, somatic, mixed, and unspecified. The lifetime prevalence of delusional disorder was estimated to be around 0.2% [1].

Atrial fibrillation is one of the most common atrial arrhythmias and is associated with an increased risk of stroke and long-term mortality [2]. Antipsychotic treatment increases the risk of atrial fibrillation. Notably, patients taking multiple antipsychotic drugs demonstrated the greatest risk and higher doses of antipsychotics seem to be associated with a higher incidence of atrial fibrillation [3].

To the best of author's knowledge, no data has been published about the safety and the efficacy of lurasidone treatment in elderly psychotic patients with comorbid atrial fibrillation.

Case Report

An 81-year-old male patient with persistent atrial fibrillation, hypertension, and prostatic hypertrophy in treatment with amiodarone 100mg/day, furosemide 25mg/day, rivaroxaban 15mg/day, clopidogrel 75mg/day, bisoprolol 1,25mg/day, tamsulosin 0,4mg/day presented delusional ideas of jealousy for not real betrayal by his wife, social and emotional withdrawal, lack of energy and reduced sleep. Blood pressure 130/80mmHg, heart rate 70bpm, Qtc 420msec. The blood chemistry tests did not show notable alterations. At the time of the first visit, the patient was alert, conscious, and oriented. He had neither qualitative and quantitative alterations of memory nor obvious motor and neurological alterations. Family history was negative for psychiatric disorders and cardiovascular events. The patient was drug-naïve to any psychotropic treatment. The authors decided to start lurasidone treatment at the dosage of 18,5mg/day taken one hour before sleep.

On the same evening as the first administration of lurasidone treatment at the dosage of 18,5mg/day, sleep was resolved. After one week of treatment, delusional ideas, and emotional and social withdrawal were markedly improved but not completely resolved. The authors decided to increase the lurasidone dosage to 37mg/day. At the follow-up visit after one week, the delusional ideas and the social withdrawal had been resolved and the night's rest was constant. After six months of treatment blood pressure, heart

rate and Qtc remained almost stable. Nuanced symptomatology of anergy and emotional withdrawal persisted. No notable side effects were reported by the patient except for nausea resolved after two weeks at the dosage of 37mg/day.

Discussion

Lurasidone is a second-generation antipsychotic, initially approved by the U.S. Food and Drug Administration (FDA) for the treatment of adults with schizophrenia and in 2013 also for the treatment of bipolar depression [4]. Lurasidone possesses a full antagonist at dopamine D2 and serotonin 5-HT2A and 5-HT7 receptors and a partial agonist at serotonin 5-HT1A receptor, low activity on muscarinic M1, histamine H1, alpha-1, and 2A adrenergic receptors. Thanks to this receptor profile, lurasidone has a low risk of orthostatic hypotension, sedation, weight gain, and cognitive blunting associated with other antipsychotic agents [5-7].

Past literature suggests that few antipsychotics can be used quite safely in psychotic patients comorbid with atrial fibrillation. Moreover, recently D'Urso et al. [7] reported aripiprazole-induced atrial fibrillation in a patient with concomitant risk factors [8], reducing treatment options even more. In this case, D2, 5-HT2A, and 5-HT7 receptors full antagonism and 5-HT1A receptor partial agonism of lurasidone has been useful in simultaneously treating psychotic symptoms and the negative aspects of delusional ideation. Low cholinergic and histaminergic activities were useful for not altering the cognitive aspects, always delicate in elderly patients.

Considering the receptor profile and the few side effects, the authors think lurasidone should be considered for the treatment of elderly patients with psychotic symptoms and medical comorbidities especially if they take polypharmacy. In fact, with a single molecule, it was possible to modify several psychopathological aspects without pharmacological interference.

Permission was given by the patient for treatment and publication.

Conclusion

Lurasidone has shown safety and efficacy in the treatment of this patient with delusional disorder and comorbid atrial fibrillation and prostatic hypertrophy. This is a preliminary data that requires follow-up and further studies to confirm the usefulness of lurasidone in psychotic patients with atrial fibrillation and cardiovascular risks.

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