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Case Report

ESCITALOPRAM-INDUCED DYSKINESIA: CASE REPORT

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A B S T R A C T

Antidepressants are one of the main classes of drugsprescribed in Western countries. Escitalopram is the active Senantiomer of the antidepressant citalopram, and is in the class of selective serotonin reception inhibitors. It is believed that the greater availability of this neurotransmitter in the synaptic cleft may lead to indirect inhibition of the release of dopamine in the striatum, affecting the control of motor skills, generating side effects such as movement disorders.

We report a case of a 82-year-old woman, that presented generalized involuntary movements, after escitalopram treatment. The current literature is deficient in terms of evidence related to movement disorders induced by antidepressants, it is necessary that prospective studies properly designed to detect movement disorders in patients using these medications to be carried out to estimate the real incidence of these disorders.

INTRODUCTION

Antidepressants are one of the main classes of drugs prescribed in Western countries. [1,2] These drugs act through neurotransmitters, especially serotonin, monoamines and norepinephrine. [3,4] Drugs in the class of Selective Serotonin Reuptake Inhibitors (SSRIs) have varied therapeutic implications, ranging from depression, anxiety and obsessive-compulsive disorders, to enuresis, chronic pain and eating disorders. [5]

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Escitalopram is the active S enantiomer of the antidepressant citalopram, and is in the class of selective serotonin reception inhibitors. [6] The mechanism of action of these drugs consists of inhibiting the reuptake of serotonin by the presynaptic neuron through the binding with the serotonin transporter protein, making it available in greater quantity in the synaptic cleft. [7,8] It is believed that the greater availability of this neurotransmitter in the synaptic cleft may lead to indirect inhibition of the release of dopamine in the striatum, affecting the control of motor skills, generating side effects such as movement disorders.[9.10] Movement disorders comprise clinical syndromes composed of unusual and excessive movements that happen involuntarily. [11] A study based on

data from a multicentric drug surveillance program showed that extrapyramidal symptoms, such as akathisia and dystonia, were mostly observed in patients using SSRIs, especially escitalopram, when compared to other classes of antidepressants.[12]

Although movement disorders induced by antidepressants are rare conditions, they can lead to severe and even disabling conditions. [13,14] Thus, the objective of the present study is to report a case of an 82-year-old patient who evolved with involuntary choreic / dystonic movements after starting the use of escitalopram.

CASE REPORT

MSS, 82-year-old woman, in 2015-December, began to suffer from anxiety, sought medical attention when the use of escitalopram was suggested. After starting the medication, he started to present generalized involuntary movements, a little more accentuated in the left dimidium. Then, she went to the neurologist who, in the presence of involuntary movements, started pramipexole, but the patient presented a worsening of the condition. Treatment with levodopa was also attempted, which led to adverse gastrointestinal effects and, finally, amantadine, with no satisfactory clinical response. In February 2018, he sought our service when we observed generalized dyskinetic movements (choreic \ dystonic) on physical examination, without rigidity or any other symptoms of parkinsonism, without sensitive complaints and with preserved cognitive functions. MRI-showed only foci of microangiopathy, without other changes. Laboratory tests, including thyroid function, vitamin B12 dosage, hepatogram, copper dosage and ceruloplasmin, showed no changes. We advise the removal of escitalopram and amantadine, as well as, we suggest symptomatic treatment with risperidone 0.5mg \ night. However, the patient interrupted the treatment due to constipation.

In May \ 2018 the patient returns, with the same symptoms, risperidone was reintroduced at a dose of 0.25mg \ night with partial reduction of symptoms in 2 weeks. After the initial improvement, the medication was adjusted to 0.25mg bid. There was an increase in response, with some discrete movements persisting after 2 weeks. Thus, risperidone was adjusted to 0.25mg \ morning and 0.5mg \ night with an important reduction in movement.

The treatment was maintained for 6 months and then the gradual removal of 0.25mg of risperidone started every 2 weeks. During the reduction of risperidone, he complained of insomnia, which improved with melatonin 5mg \ night. The patient remained asymptomatic, even after risperidone was removed. In the last evaluation in June \ 2020 (more than 12 months without using risperidone), there were no complaints.

DISCUSSION

Due to temporal association, and the absence of an alternative explanation, we believe that the dyskinesia presented by the patient was secondary to the use of escitalopram. It is postulated that extra pyramidal side effects, such as dystonia, are due to the indirect modulating effect of dopamine function, through the inhibition of serotonin reuptake. This leads to an imbalance between reduced dopamine and increased cholinergic activity in the base nuclei, resulting in involuntary movements. 15,16 With regard to dystonia, when induced by medication, it consist so fan extremely unusual adverse effect. A study by Stubner *et al*., Estimated that among 100,000 patients using drugs with a psychotropic effect, only 9 develop this condition. Another retrospective study estimated a proportion of 48 per 100,000 patients. This difference was associated with nationality, race, deficiencies in the diagnosis of dystonia, or different initial doses of the drug. 17.18 In contrast, choreic movements can be induced by different classes of drugs. Although the most frequently reported is the association between chorea and dopaminergic drugs, this dyskinesia can also be triggered by Selective Serotonin Reuptake Inhibitors. Korea is an involuntary movement, without regularity, that happens in an accelerated and abrupt way, without rhythm or sustain. It is unpredictable, so it appears to flow from one part of the body to the other. 19 The first report of an adverse reaction to serotonin reception inhibitors is dated 1982. As for the adverse effects associated with Escitalopram, the most frequently encountered are gastrointestinal disorders and sexual dysfunction. Evenso, the most serious manifestations related to medication involve prolongation of the QT interval, which can trigger potentially fatal cardiac arrhythmias, and Serotonin Syndrome, which is more frequent in patients who use high doses of the drug. As for neuromuscular symptoms, stiffness, clonus, hyperreflexia, tremor and hypertonicity are described. 7.20 Drug-induced movement disorders encompass syndromes with very different phenomenology, the most prevalent of which are parkinsonism, dystonia, dyskinesia and akathisia. 21 The treatment of these cases is essentially based on the suspension of medication, with resolution of the clinical picture in most patients.[19]

The current literature is deficient in terms of evidence related to movement disorders induced by antidepressants. This is associated with the use of generic terms in older medical literature, such as "extrapyramidal syndrome", the underreporting of these disorders, the difficulty in identifying the cause of movement disorders in patients who use antidepressants concomitantly with psychoactive medications, such as humor, antipsychotics and antiepileptics. [22]

Considering that movement disorders induced by antidepressants, especially Escitalopram, are conditions poorly described in the literature, it is necessary that prospective studies properly designed to detect movement disorders in patients using these medications are carried out so that estimate the real incidence of these disorders, and the ways in which they present clinically.

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