CASE REPORT

Citalopram-induced dyskinesia of the tongue: a video presentation

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SUMMARY

We describe a 51-year-old man with sudden onset involuntary movements of the tongue 2 weeks after initiation of citalopram. The movements were continuous and isolated to the tongue. Speech was minimally dysarthric. Further examination revealed no abnormalities. Citalopram was continued and spontaneous improvement was noticed in the following weeks. There was complete recovery 5 weeks after symptoms had started. We argue that the involuntary tongue movements were a side effect of citalopram. Furthermore, our patient used concomitant citalopram and methylphenidate, a combination which potentially elicits side effects. We include a video of the tongue movements in this patient.

BACKGROUND

Citalopram is a widely prescribed selective serotonin reuptake inhibitor (SSRI) for the treatment of depression and anxiety disorders, among others. Movement disorders, such as akathisia, parkinsonism and tardive dyskinesia, are known side effects of citalopram,[1] presumably caused by a serotonergically mediated inhibition of the dopaminergic system.[2] However, isolated involuntary movements of the tongue as a side effect have not been reported. Involuntary muscle jerks of the tongue are a rare finding that can easily be confused with fasciculations, an ominous symptom of motor neuron disease.

CASE PRESENTATION

A 51-year-old man was referred to our outpatient department with troublesome involuntary movements of the tongue. Ten days before he woke up with mumbling speech and noticed continuous movements of the tongue. Swallowing and general muscle strength were not affected. The patient also reported worsening of a long-standing tremor of his hands. This tremor was present for many years and was somewhat relieved by consuming alcohol. Other symptoms were a general feeling of restlessness and inability to sit still since 2 weeks.

Two weeks before the onset of symptoms he started taking citalopram 10 mg daily, which was prescribed to him by his primary care physician because of stress and anxiety due to problems related with his business. Concomitant he used methylphenidate 10 mg each day for an attention deficit hyperactive disorder and acetylsalicylic acid 80 mg daily for secondary prophylaxis after a transient ischemic attack. Despite a positive family history for cardiovascular diseases, the patient has been smoking for 30 years. His father was diagnosed with Parkinson's disease at the age of 50.

Inspection of the tongue showed continuous, irregular, small jerks of the tongue muscle, without the involvement of the palatum. He was unable to keep his tongue still and the amplitude of the movements increased with tongue protrusion (video 1). His speech was minimally dysarthric. No dystonia or torticollis was observed. There was an asymmetrical (left more than right), postural and intentional, high frequency tremor of the hands. Further neurological examination was unremarkable, especially no muscle weakness or atrophy.

INVESTIGATIONS

CT of the cerebrum and biochemical investigations revealed no anomalies. Electromyography of the tongue was performed and showed no signs of denervation or fasciculations. Since the patient was unable to keep his tongue still it was not possible to differentiate between voluntary movement and myoclonic jerks or tremor.

DIFFERENTIAL DIAGNOSIS

- Citalopram-induced dyskinesia of the tongue, and worsening of an essential tremor
- Psychogenic movement disorder
- Tongue tremor
- Motor neuron disease (amyotrophic lateral sclerosis (ALS) or spinobulbar muscle atrophy)

TREATMENT

Since the symptoms were improving spontaneously after 1 week, an expectant policy was agreed on. Citalopram was continued after consultation with the Dutch Pharmacovigilance Centre, assuming that, if the symptoms were caused by citalopram, they should improve after the first few weeks.

OUTCOME AND FOLLOW-UP

Our patient continued citalopram because his symptoms had already started to diminish. There was complete recovery of the involuntary tongue movements 5 weeks after the symptoms had started.

DISCUSSION

In classifying movement disorders, the phenotypical description of the observations is crucial. Among clinicians there is often a large interobserver disagreement in interpreting the clinical findings. Fasciculations are described as intermittent activation of some or all of the muscle fibres innervated by one or more motor units.[3] Patients with

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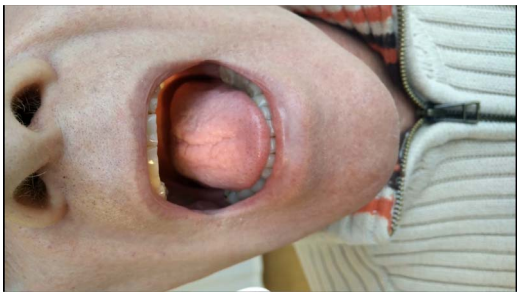

Video 1 Inspection of the tongue showed continuous, irregular, small jerks of the tongue muscle. The patient was unable to keep his tongue still and the amplitude of the movements increased with tongue protrusion.

fasciculations are commonly not aware of these muscle twitches. Electromyography showed no signs of denervation. Tremor of the tongue, or psychogenic movement disorder could not be excluded by neurological or additional investigations, but since the initiation and residing of symptoms so clearly fits a pattern frequently seen after SSRI initiation, we classify the tongue movements as a dyskinesia.

Methylphenidate is increasingly prescribed for an expanding number of disorders. Awareness should be raised in the case of concomitant use of methylphenidate with other psychoactive drugs. This could result in increased drug effects or enhance or facilitate (unknown) adverse effects. Clinical findings demonstrate that the effect of antidepressants inhibiting serotonin and/or norepinephrine reuptake can be amplified with adjunctive use of psychostimulants, such as methylphenidate.[4] This could be a potential factor in our patient.

Taking into account the time course and the presence of other known side effects of citalopram (ie, akathisia and worsening of tremor) we consider the involuntary tongue movements to be most likely a side effect of citalopram. This notion concurs with the follow-up of our patient. As expected by the Dutch Pharmacovigilance Centre, 5 weeks after symptoms started, the movements vanished completely. Naranjo's probability scale was used to determine the likelihood of an adverse drug reaction in this case. Based on the facts that the reaction followed a temporal sequence after the drug and possibly followed a recognised pattern to the suspected drug, a score of 4 was determined, suggesting that this was a possible adverse drug reaction.[5] We have no definite proof of the side effects of citalopram, by means of complete disappearance of symptoms after the cessation of therapy and reoccurrence of symptoms after the reintroduction of the drug.

Similar case reports on this subject have been published. Tarlaci[6] reported a patient with citalopram-induced jaw tremor that subsided shortly after discontinuing citalopram. Serrano-Duenas[7] reported on a cohort of 21 patients who developed tremor after receiving an SSRI that lasted for a mean 449 days after the initiation of the drug. Tardive dyskinesia and akathisia during treatment with citalopram has been reported by Birthi *et al*,[8] with rapid improvement after tapering the drug therapy.

Learning points

- In new onset movement disorders, selective serotonin reuptake inhibitor (SSRI) should be considered as a possible causative agent.
- A special caution should be given when prescribing an SSRI in combination with other substances which influence neurotransmitters, especially with monitoring side effects.
- Patients with involuntary tongue movements may have unwarranted concern when the movements of the tongue resemble fasciculations, an ominous symptom.

Contributors All three authors interviewed and examined the patient, collected case data and analysed the case. MG drafted the manuscript. JK and WL revised the manuscript.

Competing interests None declared.

Patient consent Obtained.

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