

Neuropsychiatric symptoms can be part of Covid-19 illness (Ahmad, 2020).

There is no report in the literature so far of a tic disorder developing in an adult after Covid infection.

CASE REPORT

50 yo man with panic disorder and generalized anxiety disorder, in partial remission on escitalopram 20 mg daily and clonazepam 0.5 mg prn

March 2020: Covid-19 acute illness lasted 16 days, with fatigue, headache, confusion, and fever. He worried in a ruminative manner about job security. Did not require hospitalization.

Three weeks after onset of Covid: Spitting tics, approximately once every 15 minutes, with just one spitting at a time. There was no salivary accumulation. No urge, "it happened just like a spasm". He carried a paper towel with him all the time to spit into, or would swallow the spit if social circumstance did not allow spitting. If he tried to stop the spitting he could not. No thoughts or feelings preceding or following the tic.

Prior history of similar tics at age 8 that remitted after 2 months without treatment. No history of Tourette's disorder. Thus criteria for provisional tic disorder met.

REFERENCES

- 1) Ahmad I, Rathore FA. Neurological manifestations and complications of COVID-19: A literature review. Journal of Clinical Neuroscience. 2020; 77:8-12
- 2) Heyman I, Liang H, Hedderly T. COVID-19 related increase in childhood tics and tic-like attacks. doi: 10.1136/archdischild-2021-321748
- 3) Mataix-Cols D, Ringberg H, Fernández de la Cruz L. Perceived worsening of tics in adult patients with Tourette Syndrome after the COVID-19 outbreak. Movement Disorders Clinical Practice 2020;7:725–726

Because of prior adverse reaction to aripiprazole prescribed for anger control, instead of trying a dopamine receptor blocking agent, escitalopram was increased to 25 mg daily. Because spitting did not improve, **escitalopram** was further increased to **30 mg** daily, at which point spitting **tics disappeared** completely. Because of anorgasmia on this dosage, he reduced escitalopram to 25 mg daily. Ability to orgasm returned, but so did the tics. Upon increasing escitalopram to 30 mg daily again, the tics disappeared, but anorgasmia returned. Cyproheptadine 4 mg 90 minutes before sexual intercourse restored his orgasm without interfering with remission of tic disorder, but caused too much sedation.

Remission of tics for 9 months till 8/21

3/30/21 Second dose of Moderna vaccine.

4/13/21 Intense anxiety for one week – no articulated psychological triggers. Tics remained in remission. Started on gabapentin 300 mg tid to relieve anxiety..

4/26/21 Gabapentin very helpful. Anxiety considerably lessened over several days. Over the next 3 months escitalopram tapered from 30 mg to 20 mg daily. Tics still in remission, and anxiety was minimal on **8/2/21**. Decided to **reduce escitalopram to 15 mg** daily. Twelve days later spitting **tics relapsed** without any increase in anxiety. After 3 days, **increased escitalopram to 20 mg** daily. Over the next 10 days the tics gradually faded.

9/23/21 Tics in remission.

DISCUSSION

Is it Tic Disorder or Obsessive-Compulsive Disorder?

A tic is a sudden, rapid, recurrent, nonrhythmic motor movement or vocalization. It is a movement disorder.

Why is it not OCD? No urge, no compulsion, it was like a spontaneous spasm. Just spat. No thoughts.

Each time there was just one spitting. Not ritualistic. No relief following it.

Did Covid brain pathology lead to reactivation of tics by damaging the frontal inhibitory circuits to the basal ganglia?

An increase in tics in adolescents (Isobel, 2020), and perceived worsening of tics in adult patients with Tourette Syndrome (Mataix-Cols, 2021) in the context of increased anxiety in the Covid pandemic have been reported. In this case it is not clear **if a latent tic disorder got reactivated by Covid encephalopathy or anxiety.**

Usually dopamine-blockers, not SSRIs, are the treatment for tics.

Escitalopram in this case – direct **effect** on tics neurocircuitry, or Indirect effect by reducing anxiety? Even though conscious anxiety was not associated with tics in this case.

The author is grateful to the patient for consenting to the presentation and publication of his case.