

Worsening Tics as a Possible Side Effect of Memantine

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Dear Dr. Malecki,

Recently, our clinic has observed a 26 year old male patient with severe treatment resistant obsessive compulsive disorder (OCD) who has developed a greater frequency of tics, as a possible side effect of memantine as an add on to his other medications.

This patient also met criteria for social anxiety disorder, generalized anxiety disorder, Tourette's syndrome, alcohol abuse and attention deficit disorder with hyperactivity. At the time of initiating memantine he was also receiving fluoxetine 60 mg PO od and risperidone 2.5 mg qhs, having remained at those doses for over two years with no changes in tics. Prior to the initiation of treatment with adjunctive memantine, the treatment plan was reviewed with the patient including potential risks and benefits of medication usage. Although the patient initially agreed to this pharmacotherapeutic addition of memantine, this treatment was discontinued due to the severity of tics. Verbal consent was obtained from the patient to release background history related to this treatment course and what was experienced with adjunctive memantine in publication.

Subsequent to entering treatment with adjunctive memantine, beginning at 5 mg qhs and then increasing by 5 mg aliquots to a total of 10 mg bid, the patient noted substantial improvement in his OCD, with a 6-point drop in his Yale-Brown Obsessive Compulsive Scale assessment from a score of 28. However at the same time he noted significant worsening of his facial tic, the severity of which left him choosing to lower the memantine even if it worsened his OCD.

Reducing memantine weekly by 5 mg aliquots to 5 mg qhs, the tics were brought down to a high baseline level. Although lowering his memantine did not initially worsen his OCD, within eight weeks symptoms returned subjectively to his before memantine levels. He then agreed to a second challenge with a higher dose of memantine, of up to 10 mg bid, but again experienced the improved OCD symptoms in addition to the significantly worsened facial and body tics. It was later decided to return to 5 mg qhs, where again his OCD worsened but his tics significantly subsided. This was the only side effect that the patient reported during his use of adjunctive therapy with memantine. Treatment was subsequently discontinued with no placebo agent being administered. It should be noted that tics were assessed by patient self-report when in session with the treating physician. Assessing this event with the Naranjo Adverse Drug Reaction Probability scale resulted in a score of 11 points, suggesting that it is highly probable the introduction of this pharmaceutical provoked these events.

It has been found that involuntary movements may be a potential side effect (experienced in 1/100 to 1/1000 patients) of memantine [1]; however, there is no other mention in the literature of memantine increasing the frequency of tics. As memantine has a unique method of action as a low to moderate affinity N-methyl d-aspartate antagonist [1], its interaction with adjunct pharmacological treatments should be carefully monitored as Ghaleiha et al. [2] highlight. Although adjunct memantine demonstrates significant improvements with OCD symptoms and appears very tolerable [2], this report reveals that various side effects can occur based on an individual's treatment history. The authors speculate that the current observations are related to findings supporting the attribution of OCD to dysfunctional glutamatergic neurotransmission in the central nervous system [3-5]. Augmenting glutamatergic hyperactivity, with memantine, may therefore be beneficial for patients with OCD [2,4], however as a second-line treatment this still needs to be monitored. Any reported adverse events as a result need to be detailed, such documentation accordingly being required. Hence the present case study is a valuable observation that should be noted in the literature.

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