

Reversible Oral Dyskinesia Associated with Quetiapine in an Adolescent: A Case-Report

Dear Editors,

There are published reports (Mehler-Wex, Roamnos, Kircheiner & Schulze, 2008; Court et al., 2010) of promising results using quetiapine for treatment of anorexia nervosa. Quetiapine-related movement disorders are rare compared to other neuroleptic agents. We report the case of a young male who developed orolingual dyskinesia after long-term quetiapine treatment, with complete remission of symptoms following quetiapine discontinuation.

A 17-year old male being treated for aggressive and self-damaging behaviours, anorexia nervosa (restricting type) with Body Mass Index (BMI) of 19.9, chronic anxiety, panic attacks and depression was receiving fluoxetine 40 mg and immediate-release quetiapine 100 mg daily upon entry to day hospital. He is the elder of two brothers. His father had previously been diagnosed with alcohol abuse and aggressive behaviour. His mother, with whom he has a difficult relationship, receives treatment for anxiety and depressive symptoms. He was first referred to a psychiatrist at age 13 for treatment of depression and anxiety after his parents separated. He was started on treatment with paroxetine, quetiapine and diazepam. At age 14 increasing food restriction and weight loss added to his depression. His usual introspective mood changed and he became overtly aggressive at home and developed self-harming behaviours.

When the patient entered the Eating Disorders day hospital program he was restricting intake and exercising excessively, but was not purging. He reported insomnia and nightmares, sad, touchy and unstable mood and loss of interest in daily activities. He kept injuring himself by repeatedly cutting his wrist, had frequent panic attacks and had more frequent aggressive outbursts at home. At day hospital, pharmacotherapy was progressively adjusted. Fluoxetine was changed to sertraline 150 mg daily (50 mg in the morning and 100 mg in the evening), quetiapine was increased to 200 mg daily in three divided doses (50 mg morning and noon and 100 mg in the evening), and methotrimeprazine (known elsewhere as levomepromazine) 20 mg daily (5 mg morning and noon and 10 mg in the evening) was introduced to control anxiety. He was prescribed lorazepam 1 mg at bedtime for insomnia. In addition, he was treated with psychotherapy and environmental control measures. Depressive symptoms improved and self-harm became less frequent, while restricting behaviours and anxiety persisted. Eight months later, BMI was 21. While facing stressful adaptive events he reported an increase in impulsive thoughts of self-harm, so quetiapine was temporarily increased to 400 mg daily (as 50 mg morning and noon and 200

mg in the evening) and methotrimeprazine was temporarily increased to 70 mg daily (as 15 mg morning, noon and evening and 25 mg at bedtime). One week after these dose increases he reported abnormal tongue movements which hindered speech. Tongue fasciculations were verified and quetiapine was gradually tapered and discontinued over a two week period. No other abnormal movements were noticed or reported, and no abnormalities in laboratory data were identified. Based on a Medline search and published literature recommendations (Gupta, et al. 1999), the patient received single doses of medications including diazepam 5 mg, biperiden 8 mg, tetrazepam 50 mg and clonazepam 1 mg. None of these treatments showed any effect on his symptoms. Tocopherol (vitamin E) 800 international units daily was recommended because of its reported promising effect in dyskinesia treatment and prevention (Gupta, et al. 1999). Abnormal movements improved one week after stopping quetiapine and prior to the patient starting tocopherol. Five weeks later only slight involuntary movements of the tongue tip remained, and after another month they remitted. Although anxiety and emotional outbursts persisted, at six months follow-up he remained stable on sertraline 150 mg daily, methotrimeprazine 62.5 mg daily (as 12.5 mg in the morning, 25 mg at noon and 25 mg in the evening) and lorazepam 2.5 mg at bedtime.

This patient presented with an eating disorder, conduct disorder, panic attacks and a dysthymic-like mood disorder. Treatment of chronic anxiety is a common pharmacological challenge for psychiatrists. Comorbidity is common and conduct disorders often reflect difficult family environments. Although antidepressants are a good choice for the chronic anxious patient, they may be insufficient to control high levels of maintained anxiety, and sedative agents may be required. Potential risk for benzodiazepine dependence may lead clinicians to consider use of antipsychotics as alternative agents for treatment of anxiety. Amongst them, quetiapine has both sedative and mood stabilising effects and is rarely associated with movement disorders because of limited dopamine₂-receptor blockade. Quetiapine may even be recommended when dyskinesic effects appear with other antipsychotics (Peritogiannis & Tsouli, 2009). Sertraline is a moderate CYP3A4 inhibitor and quetiapine is metabolized via CYP3A4. It is possible that sertraline may have contributed to increased quetiapine levels and the appearance of dyskinesia symptoms. Use of first-generation antipsychotics, long-term treatment, higher dosages and sudden antipsychotic withdrawal are related to development of tardive dyskinesia, and second generation antipsychotics are not excluded from an association with this condition (Michaelides, Thakore-James & Durso,

2005). Use of benzodiazepines is associated with risk for dependence, and must be balanced against known adverse effects of antipsychotic agents, especially in younger patients or in those with increased risk of dependence. GABA-ergic medications like pregabalin may be helpful, although in our experience their effect is only moderate. Risks and benefits of treatment must be carefully considered. Judicious use of pharmacotherapy is encouraged. Methods such as relaxation, family therapy, physical and anger management techniques are approaches that may help avoid drug abuse/dependence and adverse drug reactions.

Conflicts of Interest: None declared. Informed consent for publication of this report was obtained from both the patient and his mother.

Sonia Sarró, MD

Psychiatrist, ABB Eating Disorders Centre,
Barcelona, Spain

Corresponding email: 31554ssa@comb.cat

References

1. Court, A., Mulder, C., Kerr, M., Yuen, H. P., Boasman, M., Goldstone, S., et al. (2010). Investigating the effectiveness, safety and tolerability of quetiapine in the treatment of anorexia nervosa in young people: A pilot study. *Journal of Psychiatric Research*, 44(15), 1027-1034.
2. Gupta, S., Mosnik, D., Black, D.W., Berry, S., & Masand, P. S. (1999). Tardive dyskinesia: Review of treatments past, present and future. *Annals of Clinical Psychiatry*, 11 (4), 257-266.
3. Mehler-Wex, C., Romanos, M., Kircheiner, J., & Schulze, U. M. (2008). Atypical antipsychotics in severe anorexia nervosa in children and adolescents: review and case reports. *European Eating Disorders Review*, 16(2), 100-108.
4. Michaelides, C., Thakore-James, M., & Durso, R. (2005). Reversible withdrawal dyskinesia associated with quetiapine. *Movement Disorders* 2005, 20(6), 769-770.
5. Peritogiannis, V., & Tsouli, S. (2009). Can atypical antipsychotics improve tardive dyskinesia associated with other atypical antipsychotics? Case-report and brief review of the literature. *Journal of Psychopharmacology*, 24(7), 1121-1125.