CASE REPORT

Aripiprazole Monotherapy for Tourette Syndrome Accompanied by Obsessive-Compulsive Symptoms

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Abstract

Aripiprazole is a widely used atypical antipsychotic agent with unique pharmacological properties. We describe here the case of a young patient suffering of both Tourette syndrome and obsessive-compulsive disorders who showed a quick and dramatic recovery of symptomatology following a low-dose aripiprazole monotherapy. Aripiprazole treatment was well tolerated and allowed a long-term therapeutical response. This reveals new pharmacological targets for treating both the Tourette syndrome and obsessive-compulsive disorders (German J Psychiatry 2008; 11: 123-125).

Keywords: aripiprazole, Tourette syndrome, obsessive-compulsive symptoms

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Introduction

Tourette syndrome (TS) is a neuropsychiatric disorder characterized by motor and vocal tics. Current treatments of TS consist in typical antipsychotics, substituted benzamides, atypical antipsychotics and adrenergic agonists (Sandor, 2003; Sallee et al., 1997). Recently, aripiprazole, a partial dopamine and serotonin agonist, has successfully been used in TS, as documented in a number of case reports in adolescents (Duane, 2006; Yoo et al., 2007) and adults (Hounie et al., 2004; Davies et al., Murphy et al., 2005). TS is frequently associated with attention deficit hyperactivity disorder (ADHD) and obsessive-compulsive symptoms (OCS). For TS patients comorbid with OCS, usually atypical antipsychotics, such as sulpiride or risperidone, in combination with SSRIs/clomipramine are recommended (Jimenez-Jimenez and Garcia-Ruiz, 2001; Lombroso and Seahill, 2008). Here, we report the case of a young patient suffering from TS and OCS, who showed a remarkable recovery of symptomatology after low-dose treatment with aripiprazole. We monitored his improvement using standardised rating scales such as the physician rated Yale Global Tic Severity Rating Scale (YGTSS) and the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS).

Case Report

The 20-year-old patient suffered from motor and vocal tics since he was six years old. He had a history of both simple and complex motor tics including blinking, facial grimacing, and involuntary arm and hand movements. His vocal tics included grunting, snorting, neighing, echolalia, palilalia and coprolalia. These tics occurred on a daily basis and exacerbated under stressful conditions; nonetheless, a TS has not been diagnosed before 2005.

Pharmacotherapy 3 months prior to admission included 600 mg/day of tiapride, leading to an insufficient level of tic improvement (YGTSS score: 31). After initiation of tiapride medication, he was increasingly suffering from obsessive-compulsive symptoms, especially the fear that he might harm himself or others (Y-BOCS score: 24). Because of persistent obsessions of biting his tongue, it was necessary to adjust a custom-made tongue protection device.

We started aripiprazole treatment with 10 mg/day while discontinuing tiapride. Within the first week of aripiprazole treatment, the motor and vocal tics showed a quick and dramatic improvement with a sustained response during the next 10 months of continued treatment. After 2 months of
Due to severe auto-aggressive OCS, we initiated an augmentative treatment with 20 mg/day paroxetine and 1 mg/day clonazepam 2 weeks after we had started aripiprazole administration. This augmentation strategy, however, caused unbearable sexual side effects which prompted us to reduce paroxetine to 10 mg/day and then stop paroxetine and clonazepam treatment. The Y-BOCS score showed significant reductions at weeks 1, 6 and 8 of the treatment period, i.e. 48.4% (16), 61.3% (12) and 90.32% (3) respectively.

Aripiprazole is an atypical antipsychotic, described as a stabilizer of the dopamine/serotonin system, showing D2 receptor partial agonism, as well as 5-HT2A antagonism and 5-HT1A partial agonism. Recent PET studies showed an unusually high occupancy of striatal D2 receptors (>80%) even at low therapeutic doses of aripiprazole, without the emergence of extrapyramidal side effects or hyperprolactinemia (Yokoi et al., 2002; Mamo et al., 2007). The striatum with its dense dopaminergic innervation is a key structure in the pathophysiology of TS which is considered a striatal organization and/or function (Albin and Mink, 2006). The efficacy of both aripiprazole and typical antipsychotics in TS reveal striatal D2 receptors as therapeutic targets in TS. However, the superiority of aripiprazole over typical D2 antagonists in treating TS shown here suggests that D2 agonism and/or the D2 receptor stabilizing properties of aripiprazole may be critical in the therapeutic response. Interestingly, aside from typical neuroleptics, D1/D2 agonists such as pergolide have also been shown to be effective in the treatment of TS (Gilbert et al., 2003; Cianchetti et al, 2005). The case presented here shows the quick and sustained relief of both tics and obsessive-compulsive symptoms under aripiprazole treatment, even administrated at low doses. Data about the effect of aripiprazole in the treatment of OCS suggest a possible intrinsic anti-obsessive effect of this substance: Aripiprazole was shown to be effective in both OCS treatment (Connors et al., 2005; Storch et al., 2007) and, interestingly, in schizophrenic patients with secondary OCS (Rocha and Hara, 2006; Zink et al., 2007). Therefore, the administration of low-dose aripiprazole in patients with co-morbid TS and OCS may induce a significant and long-lasting symptom relief without a high burden of side effects. Prospective studies are needed to draw definite conclusions on chances and risks of the proposed strategy.

References


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