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Methylphenidate Induced Obsessive-Compulsive Symptoms Treated with Sertraline

To the Editor;

Methylphenidate (MPH) has rarely been reported to cause obsessive-compulsive symptoms (OCS) in young subjects with attention deficit hyperactivity disorder (ADHD) (1-3). Here we report a 10 year-old girl with a diagnosis of ADHD combined type who developed distressing OCS during MPH treatment. Her OCS were managed successfully with the addition of sertraline.

Case

A 10 year-old girl was referred for attention problems, forgetfulness, irritability, and excessive worries. Upon psychiatric examination she was given diagnoses of ADHD combined type and subsyndromal social and generalized anxiety disorders. She did not have any obsessive-compulsive symptoms or tics. Her developmental history was within normal limits. The parents reported that she had been taking OROS MPH (Concerta) 18 mg/day for more than one year, but they had discontinued the medication for the last six months due to a partial response. She generally tolerated OROS MPH 18 mg/day well, except for some level of decreased appetite and initial headache.

She was started on treatment with OROS MPH 27 mg/day. According to the parents' report she began to experience some OCS such as long-lasting hand washing, smelling people, food or clothes, ordering and symmetry compulsions, and reassurance seeking after the first week of OROS MPH 27 mg/day treatment. She also developed a facial grimace, nail picking/biting, and some level of decreased appetite. Her parents discontinued the medication after three weeks and her OCS, facial grimace, and nail picking/biting began to gradually disappear. She was seen after three weeks of discontinuation. She did not exhibit a facial grimace or nail picking/biting. Some of the OCS were considered subsyndromal because she was still preoccupied about the smell of people and things and the order of her room. The parents and the child reported that her ADHD symptoms, particularly attention problems, showed much improvement on the Clinical Global Impression-Improvement (CGI-I) scale with OROS MPH 27 mg/day. After a 3-week medication free period, we negotiated to restart OROS MPH 27 mg/day. After several days similar OCS began to emerge. She developed a mild facial grimace without nail picking/biting. She was seen after three weeks of restarting the medication. The severity of the OCS was assessed with the Children's Yale-Brown Obsessive-Compulsive Scale (CY-BOCS). Her total score was 21 (the maximum score is 40). Because her ADHD symptoms showed significant improvement, we added sertraline 25-50 mg/day (rather than discontinuing the OROS MPH) to treat her OCS and subsyndromal social and generalized anxiety disorders. On the next visit, four weeks later, her OCS showed very much improvement on the CGI-I scale with her CY-BOCS total score decreasing to 8. Her anxiety symptoms also showed "moderate" to "much" improvement with sertraline 50 mg/day. Her weight was 37 kilograms and OROS MPH was increased to 36 mg/day for further improvement in her ADHD symptoms. On the next visit, four weeks later, her ADHD symptoms showed further improvement without any significant worsening in her OCS.

Discussion

MPH has been the first line psychopharmacological treatment in children and adolescents with ADHD and results in significant improvement in 70–80% of affected children (4). Nausea, decreased appetite, weight loss, and sleep disturbances are among the most frequently reported side effects during MPH treatment (4). Besides these common side effects, MPH has also been reported to cause some unusual side effects such as hallucinations (5,6), hyper sexuality or inappropriate sexual behaviors (7), skin eruptions (8), manic/psychotic reactions (9), and obsessive-compulsive symptoms (1-3). These side effects may cause treatment noncompliance and may have important medical and/or mental health consequences. Therefore clinicians treating children should be familiar with the emergence and management of these unusual side effects. MPH has also been known to trigger or worsen tics (4). Co-emergence of tics and OCS in this case may imply common neurobiological mechanisms underlying tics and OCS.

Several authors reported management of MPH-induced OCS by discontinuation of medication (1) or switching to dexamphetamine (3). To our knowledge this is the first report, on the management of MPH-induced OCS by adding a selective-serotonin-reuptake-inhibitor (SSRI) rather than

discontinuing or switching to another stimulant medication. We were dissuaded from discontinuing the medication because her ADHD symptoms showed significant improvement with OROS MPH treatment. The addition of sertraline was helpful in treating both OCS and other anxiety symptoms. She also tolerated the increase in MPH dosage up to 36 mg/day without any worsening in OCS symptoms.

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